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++ [SFP+21]. ² [CF22]. $\frac{2}{2}$ [GZ24]. A^3 [LPS+24]. $\mathrm{FS}^3_{\mathrm{change}}$ [JM23]. $\mathcal{K}$ [EFHT21]. n [DLC+22]. t [BCL+24].

-Branching [EFHT21]. **-CodGen** [LPS+24]. **-Gram** [DLC+22]. **-KG** [GZ24]. **-Wise** [BCL+24].

19 [dMS+22].

2.0 [SdSS+21, TKD22]. **2Abs** [CF22].

3Erefactor [LJZ+24].

5 [SRG+23].

A3 [LSC22]. **AAA** [WXY+23b]. **Abandonment** [LYW+22]. **Abbreviations** [JLZZ20a, JLZZ20b, JLJZ22]. **Abstract** [BSV24, JHA+20, LGC+22]. **Abstraction** [SSSC22, WSQJ21, YDLW20]. **Abstractions** [SKR25]. **Accelerated** [LZL+22]. **Accelerating** [CWH+21, GEJM22, HLGX23, THEF+24, XYWX24]. **Acceptance** [IYNH21, WPGB22]. **Access** [JLJ+22]. **AccessFixer** [ZLC+24a]. **Accessibility** [CCF+22, ZLC+24a]. **Accessible** [CCF+22, ZZX+23]. **Accessing** [YLC+21]. **Accuracy** [CGC25]. **Accurate** [JLZZ20a, JLZZ20b, XXCL19, YBKB23, XXCL21]. **Achieve** [YCM24]. **Achieving** [ZWL+23a]. **Across** [BFP+23, CXLX21, CXTZ24, JZC+24, MAP+22, SRS23, WXH21]. **Actionable** [GSN23, YKT+23]. **Active** [HGX+24, KL22, YTWM21, ZWX+23]. **Activities** [EMM24, MKJ21]. **Actually**

[PPP+22]. **Ad** [AHH22]. **Adapt** [ZLY+24a]. **Adaptation** [SJR+22, ZLXY23]. **Adaptations** [ZLY+24a]. **Adapters** [SHM21]. **Adaptive** [BMPR21, CHM24, GLPP21, HSX+21, HCL+24, MM22a, THBEF23, WXG+21, WNP+20, XZL+22, aFbPS22]. **Additional** [LZL+22, XCM24]. **Addressed** [HSH+22]. **Addressing** [KSO+23, ZWB+21]. **AddressWatcher** [MAN+24]. **Adequacy** [ADBL24]. **Adherence** [KPTJ25]. **Admitted** [EOH23, LSAS23, XWM+22, YFTM22]. **Adobe** [JBS+22]. **Adoption** [LVEY+23, MEW22, SFC22a, TAV20]. **ADPTriage** [JCMB23]. **Advanced** [DAM23]. **Advances** [PSV25]. **Adversarial** [GZZ+22, LWBG24, MWW+25, ZWS+22, ZRDD22, vSSE23]. **Affect** [WWW+22]. **Affecting** [APHL22, KGvDG22]. **Affects** [MTR21]. **After** [GSXH22, She25]. **AGA** [LZL+22]. **Again** [dAAvdH23]. **Against** [CAAB23, DAM23, UO22, WCG+21, ZWH+24]. **Age** [FA25, LMHWH24]. **Agent** [MWW+25]. **Agents** [ZAB+23, ZABS25]. **Agile** [BHMS23, EWC22, FT23, HSH+22, KTH+22, KGvDG22, Lic25, MHG22, MHG23b, MHB22b, RCMB22, TKF23, TMS23]. **Agnostic** [JTDG22, ODTS23, SAK+23, WTT+22, ZXW24]. **Agreement** [PGPa+22]. **Agreements** [CAAB23]. **AI** [AAT+22, DC24, HLX+24, SXM23, UCD+24, ZLA+23, ZWH+24]. **AI-Enabled** [SXM23, ZLA+23, AAT+22]. **AIM** [CMPB24]. **Airspaces** [VBW+21]. **Alerts** [LLZ+25]. **Algorithm** [DGY+22, DPZL20, GXD+24, HB21, LZL+22, LAY24, NPZL20, PMKY23, PWA+21, TII22, WAYA24, WYGL24, aFbPS22]. **Algorithmic** [QTL+22]. **Algorithms** [AMDD22, BCL+24, BDR+20, BS24]. **Alignment** [FSC+24, WLY+21]. **Alignments** [MWTV24]. **Allocation** [BLQ21, BMPR21, ZLS+23]. **Alloy** [ED23]. **Almost** [GF23]. **Amandroid** [ZWQR22]. **Ambidexterity** [WLMR21]. **Among** [MMZ+22]. **Amplified** [BKWZ24]. **Analogical** [CXLX21]. **Analogies** [She25]. **Analyses** [QZCP22]. **Analysing** [DMZD22]. **Analysis** [AYY+22, BSK+22, BCJ+22, BLS21, CF22, CGSV22, CZW+23, CPB22, CBWV22, DKH+20, DB22, DWA22, Ebb23, FCGA23, FYS+23, FMBtB22, FTH+21, FFT21, GBDF22, GdLCS22, GTL+23, HNJA24, HLGX23, HSR21, Hol25, HJL+22, HSW+25, IWD23, JHA+20, KGZS24, KTSS20, KKC+23, KGS23, LvL25, LS23, LTL+24a, LLC+22, MDX+21, NSMMA23, PLHR23, PC20, PCY22, PAV21, RBB23, SABZ22, SAC23, SXS+24, SX20, SWF+24, SR21, TNHB24, TLLV20, TSBB20, VCPB23, WCG+21, WDNH22, WCZ+25, WXL+23, WNP+21, XYAA24, YKT+23, ZYZY23, ZMH+21, ZWQR22, ZSM23, ZZC+23, ZPX+21, dCC+22]. **Analyst** [ADPJ23]. **Analytics** [AFC+21, AYA+22]. **Analyze** [UBGK21]. **Analyzing** [CXL+22a, DDCC23, HFG+23, MMZ+22, NWCS20, SGJ20, SVOJ21, ZWQR22]. **Android** [ABLVL21, BBS24, CR21, CCF+22, CFCL23, EVLVB+22, FYS+23, GZLW24, GYF+23, HFG+23, HDW+23, HXJ+23, LSC22, LWW+20, LBK21, LDL+22, MCY23, MM22b, MHAZ24, PMVA24, SMA+21, SFC+22b, SSL+23, SAK+23, SCL+23, WLGT23, WWW+23, WLC+20, XZL+22, YLC+21, ZLF+22, ZLL+22, ZWQR22, ZLW+23, ZLC+24b]. **Animation** [GZLW24]. **Animation2API** [WLGT23]. **Animations** [WLGT23]. **Annotating** [NDA+22]. **Annotation** [NMAR24]. **Annotations** [YBSM21]. **Annotative** [SAC23]. **Anomaly** [ALT22, CWQ+25, MZH+25, ZWLD24]. **Anonymous** [MHDH+22]. **Answer** [NLM23, ZYZ+20]. **Answering** [BWAH22, BCBA24, HLX+24, ZLG+23].

Answers [WCH20, ZWC+21, ZWCH21, vdLWHR22]. **Anti** [MCK+21, TEM22]. **Anti-Discrimination** [TEM22]. **Anti-Patterns** [MCK+21]. **Anticipatory** [MPM21]. **Antipatterns** [SGP+22, TPBF23]. **Any** [MMT22]. **Any-Horizon** [MMT22]. **Anymore** [LTL+24b]. **Apache** [RKM22]. **API** [AXR+23, CXLX21, CPX+22, CGR+23, CYC+24, CVGA22, EBM22, FXP+24, GZLW24, GMWL22, HLX+24, JLJ+22, KL22, KMSH22, LLS22, LSC22, LWCK21, LPM+22, MXC+21, MCY23, NDD+22, PLG+23, UBGK21, WLGT23, ZJR+21, ZKX+23, ZFC+24, ZWY+20, ZYC+22]. **API-Related** [LPM+22, UBGK21]. **API2Vec** [CYC+24]. **APIMatchmaker** [ZLW+23]. **APIs** [AMLS+23, AST23, CXLX21, KSA+21, LJKC20, TCA+23, UK21, ZZX+23, ZLW+23]. **App** [ASSB+21, BCCH+23, DDCC23, FYS+23, FMBC+23, GZW+22, HLC+22, NZZ21, SFC+22b, TCS+23, TZL+22, WFL+24, YFZ+23, YFD+24, ZCZ+21, CCF+22]. **Applicable** [Wey25a]. **Application** [CR21, GWMZ23, GLZ+23, TWZ+22, ZLC+24b]. **Applications** [AME+23, BCL+24, BLQ21, ESvE+22, EFB21, FCGA23, GBJ+23, HKSH22, JHA+20, KZWS25, LSVS+24, LFZ+22, LC23a, MM22b, MHAZ24, MBdlRT24, PBJ24, PBC+22, SHWA23, SMA+21, TSBB20, TPBF23, XSQ+23, ZSC+21, ZBA23]. **Applying** [FW23]. **Approach** [AMS21a, AKA+22, AKM+20, AKT22, BSK+22, BK23, CGN+23, CHM24, DHMP23, FCT+25, FT23, GLK+20, GLPP21, GStZ+23, GLZ+23, HWZ+21, HCL+24, IAM+20, JLL+23, KSA+21, LY24, LV22, LWL+23, LLZ+25, MBV+25, MBD+25, NDA+22, NNNV22, NMA+23, NNL+20b, PMC+21, PT23, SGP+22, SLS+24, TPK21, TCS+23, TNHB24, TSBB20, VDBP+22, WPGB22, WXY+23a, YFTM22, ZLM+22, ZLG+23, ZYF+23, ZAB+23, ZABS25]. **Approaches** [CJL+21, EYW23, MSMG24]. **Appropriate** [SH21]. **Approximate** [HCL+24, JCMB23, PXY+23, WAYA24]. **Apps** [ABLVL21, AHH22, CFCL23, EVLVB+22, GZLW24, HBH20, KSO+23, LBK21, MBCC+20, PXP+22, PL21, SFC+22b, SSL+23, TWZ+22, WWW+23, WLC+20, XZL+22, YM23, YLC+21, YWL+23, ZLF+22, ZLZ+24, ZLW+23]. **APPT** [ZFS+24]. **ArchHypo** [SMS+25]. **Architects** [dAAvdH23]. **Architectural** [GKGM22, GSGM24, LJZ+24, PKH+21, SNNO22, SA23, XCK+22]. **Architecture** [DiFBK24, HSR21, JZC+23, MTD25, MCK+21, SKR25, SMS+25, SA21, TKF23, WXH21, XXCL19, XXCL21, ZLS+23, dAAvdH23]. **Architecture-Based** [ZLS+23]. **Architecture-Level** [JZC+23]. **Architectures** [AME+23, CCA+24, WZ24]. **Argue** [TFF+22]. **Arithmetic** [GXS+22, KDF24, SPK22]. **ARJA** [YB20]. **ARM** [JDZ+23, JZC+24]. **Armed** [LV22, RKH+22]. **Aroc** [JWW+22]. **Array** [GStZ+23]. **Art** [LY24, MHH+21, SBL21, TDM+24, YSSH22]. **ARTE** [AMLS+23]. **Articles** [LMHWH24]. **Artificial** [LLS22, OGK+23]. **Asking** [BCBA24]. **Aspects** [HPX+25, HGHM22, IBR23, PAA+21]. **Assembling** [JFW+25]. **Assembly** [LSZ+23a, UO22]. **Assertion** [ZHHA23]. **Assess** [TFF+22]. **Assessing** [NMA+23, SBV+21, SHWW24, LTL+24b]. **Assessment** [ADBL24, DPRVG+23, FFR+24, GPG21, LCLL+23, LDRK24, MNS+23, PATB23, TLZL24, TAJ21, ZLL+22, ZXK+24]. **Assessments** [SZ23]. **Assessor** [GCSHB21]. **Assignment** [MHB22b]. **Assignments** [LLL+23]. **Assist** [GYF+23, MWdA21]. **Assistance** [HSd25]. **Assistant** [EBM22]. **Assisted** [HLX+24, MHBS23, WCW+24].

Assisting [LLS22, LSC22, LLZ+25, LLC+22]. **Association** [CWQ+25, ZWB+21]. **Associations** [FRGCH20]. **Assuming** [SZ23]. **Assumptions** [GMN+22]. **Assurance** [Lev25]. **AST** [LWL+23, MFM23]. **AST-Path-Based** [LWL+23]. **ATL** [CBWV22]. **ATOM** [LGC+22]. **Attack** [AMG+23, QHL+23, YXZ+24, ZWC+23]. **Attacks** [WCG+21, ZWH+24]. **Attention** [LAY24, PPHZ24, WZS+22, ZLXY23, ZWS+24]. **Attentional** [WGY+24]. **Attributes** [Men25, PCM23]. **Attribution** [HFG+23]. **Augmentation** [GLZ+23, HPX+25, YHW20]. **Augmenting** [ESMM23]. **Author** [KGS23, MHDH+22]. **Authorship** [ODTS23]. **Auto** [HB21, MKJ21]. **Auto-Completion** [MKJ21]. **Auto-Scaling** [HB21]. **Automata** [PMGM22, PL21]. **Automated** [ABLVL21, ANS+22, AMG+23, AMLS+23, BDR+20, CAAB23, CMPB24, CXL+22a, CDMM24a, CHLV25, CXTZ24, GYF+23, GSXH22, HNJA24, JTA+23, JLJZ22, JLL+23, Kor25, LCLL+23, LNFW25, LCY+23, LHJ+24, LCC+23, LCW+23, LCP+24, MSV22, MSB+22, NM24, OMM+23, PBM22, SHWA23, SNET24, SSS24, TPK21, TCS+23, TZL+22, TPBF23, VSB24, XCP+22, XWY+24, YGM+22, YFD+24, YB20, ZTT+23, ZFS+24, ZXZ+24, ZLC+20, ZFC+24]. **Automatic** [Ala23, CLL+22, CQL+23, DTP+21, EFB21, GBP23, GSGM24, JLZZ20a, JWW+22, KYAY24, KMSH22, LWCK21, LN22, LKP+21, MBGC22, MBdlRT24, OD25, PMGM22, PZC22, SVTTB23, UK21, WGW+22, WPGB22, WXY+23a, WBC+23, WNB+23, ZWS+22, ZKX+23, ZQS+24, ZWLD24, ZWY+20, ZXK+24, JLZZ20b]. **Automatically** [AST23, ATJ+24, CCA+24, CHB+22, CFCL23, MCK+21, NTR20, NMAR24, SBV+21, WSQJ21, WXY+23b, YWL+23, ZXW24]. **Automating** [HHZZ23, HXLM20]. **Automation** [AAT+22, TDM+24]. **autoMPI** [AMG+23]. **Autonomous** [BSK+22, BT24, BBD+24, CIM+24, DZZ+23, HAC+23, LSZ+23b, LAY24, SSBA23, SPT23, VBW+21, ZKR23, ZST+23, vSSE23]. **Autoregressive** [LC23b]. **Aware** [AKA+22, AMG+23, BLDL24, END23, GLPP21, HTA24, HLX+24, LPS+24, LLZ+25, NXL+22, SAC23, SYW+24, WYW+22, ZBD+25, ZLM+23, ZLA+23].

Back [DMZD22, RX25, WWK+23]. **Backdoor** [YXZ+24]. **Backed** [LC23a]. **Backporting** [DMZD22]. **Bad** [CBLA21, HBH20, dPSDdAM21]. **Balanced** [WXH21]. **Bandit** [LV22]. **Based** [ARdNF+22, ANS+22, AKM+20, AKT22, BK23, BWR25, BMBB23, CGS+24, CCPP23, CAAB23, CKDR22, CDAR22, CAA+24, CPF21, CPX+22, CCW22, CSZ+24, CHM24, CDK20, CHLV25, DXFJ24, END23, FNS+24, FGB23, FFR+24, FT23, FNT+23, GJL+21, GXD+24, GLK+20, HSd25, HL25, HLT+21, HWZ+21, HFS+23, JM22, JLJZ22, JLJ+22, JLG+23, JWZ+24, JLC+21, KRB22, KSJ+21, LYA24, LLS22, LCY22, LZJ+23, LS23, LQG+25, LCL+22, LWL+23, LJX+21, LGC+22, LN22, LSZ+22, LDC+23, LL23, LZP+23, LZM+23, MZH+25, MMT22, MMT23, MAG+22, MBV+25, MBCC+20, MAN+24, NSMMA23, NSHL+23, OD25, PMC+21, PMKY23, PGB24, PC20, PCM23, PATB23, PGPa+22, PFAC22, PK25, PWA+21, PMVA24, QLH+24, RP23, RKH+22, RUM22, SA23, SvdALS23, SPK22, SRS23, SPv20, SXS+24, SX20, SFP+21, TYL+24, TC23, TPBF23, THEF+24, UC21, WPGB22, WPXM23, WMY+23, WYGL24, WCT+21, WGY+24, XLC+24a, XHL+22]. **Based** [XYWX24, XZY+23, XGW+24, XCM24, YM23, YZP+22, YNW24, YFD+24, ZLL+21, ZRDD22, ZLXY23, ZGZ+23,

ZLS+23, ZLH+23, ZLY+24a, ZRL+24, ZLH+24, ZSC+21, ZST+23, ZYF+23, ZZF+24, ZAB+23]. **Baseline** [CHLV25]. **Basic** [XZY+23]. **Batch** [BBR22]. **Batching** [WLT+23]. **Bayesian** [FFT21, SZ23]. **Be** [AMSR21, HSH+22]. **BEETLE** [KNJM21]. **Before** [HSW+25]. **Behaving** [RBZ22]. **Behavior** [CRAF23, EYW23, GBJ+23, HM25a, SRT+22, TMB24]. **Behavioral** [AMHW22, PMVA24]. **Behaviors** [CR21, HLR24]. **Behaviour** [KBD+22]. **Behavioural** [BLS21]. **Behind** [AMO24]. **Beholder** [APHL22]. **Benchmark** [CBLA21, FXP+24, LBK21, ZWC+23, ZPX+21]. **Benchmarking** [CGN+23, HGX+24, PLG+23, SFC+22b]. **Benchmarks** [AXR+23, CBLA21]. **Benefits** [EWL+22, LSA+21]. **BEQAIN** [ZLG+23]. **BERT** [ZLG+23]. **Best** [SHE+22]. **Better** [CCM+23, KTSR22, LY24, LJL+22, PCM23, TYM22, WWC+21, ZWS+24]. **Between** [ACC+25, BL23, GHZ23, HLPK22, JBL21, KMP23, LDRK24, NRPN22, TKF23, YMC+23, ZLWC24, ZWB+21, FRGCH20, LJKC20]. **Beyond** [Med25, PAA+21, WPXM23, XWY+24]. **Bi** [ZWH+24]. **Bi-Objective** [ZWH+24]. **BiAn** [ZYX+23]. **Bias** [AYY+22, LMHWH24, STRM23]. **Biased** [PMF+22]. **Biases** [MST+20]. **BiasFinder** [AYY+22]. **Big** [BLQ21, KTSR22]. **Big-Data** [BLQ21, KTSR22]. **Binaries** [ADS22]. **Binary** [GJL+21, HWZ+21, JFH+24, KKC+23, PLHR23, PXY+23, SHM21, UO22, WMY+23, XZY+23, XXCL19, XXCL21, YFL+22]. **BinCola** [JFH+24]. **BinDiffNN** [UO22]. **Biometric** [HDC+23]. **Bit** [KRB22]. **Bit-Vector** [KRB22]. **Bitcoin** [NNL23]. **Black** [AAB+23, AMHW22, FGB23, PGB24, VDBP+22]. **Black-Box** [AAB+23, AMHW22, FGB23, PGB24]. **Block** [HTA24, RKH+22]. **Block-Based** [RKH+22]. **Blockchain** [AB24, WXH21, WLT+23]. **Blocks** [FFR+24, RX25, XZY+23]. **Bloom** [HXJ+23]. **Boosting** [CYC+24, HJL+22, WSP+23, ZLL+21, ZFS+24, ZYC+22]. **Bootstrapping** [LCY+23]. **Both** [ZWH+24]. **Bottleneck** [WYN+23]. **Boundaries** [Nus25]. **Boundary** [BT24, CXTZ24, SSBA23]. **Bounds** [ZLS+23]. **Bounties** [ZWB+21]. **Bountysource** [ZWB+21]. **Box** [AAB+23, AMHW22, FGB23, PGB24]. **BPMN** [SvdALS23]. **Branches** [YZP+22]. **Branching** [EFHT21]. **Break** [HSB+23]. **Breakage** [GdCZH21]. **Breakages** [GHZ23]. **Breaking** [CMAS22, PDV23]. **Bridging** [LJKC20]. **Brief** [GK25]. **Bringing** [JSC+24]. **Broken** [LXL+22]. **Bug** [AST23, BWAH22, CAN24, CCW22, FXLH20, FMBC+23, GCSHB21, HML+24, HTL+21, JCMB23, JBS+22, JLL+23, JWZ+24, KYAY24, QZC+21, RPNR22, TNHB24, WBC+23, WZXL22, ZLH+21, ZWM22, ZLC+20, aFbPS22]. **Bug-Inducing** [TNHB24]. **BugBuilder** [JLL+23]. **Buggy** [aFbPS22]. **Bugs** [BLZ+19, BLZ+20, LLL+22, NWCS20, NMAR24, RPNR22, TZJ+24, WZS+23, WZS+24, ZYZY23, ZWM22]. **Build** [BBR22, GdCZH21, XWM+22]. **Building** [JLL+23, SSSC22, ZSC+24]. **Builds** [GHZ23, SWC+22, WAM24]. **Business** [MWX+24, vBGC+23]. **Bytecode** [CXL+22a, HHCZ25, LLZ+23, SAK+23]. **Bytecode-Level** [LLZ+23].

C [CKM23, CFM24, SX20, VSA+22, WHT+25, ZWL+22]. **C/C** [CFM24, WHT+25, ZWL+22]. **Caching** [GEJM22]. **CAGFuzz** [ZRDD22]. **Call** [ALL+21, BEK+23, DDP+23]. **Callback** [PL21]. **Caller** [KGZS24]. **Caller-Sensitive** [KGZS24]. **Calls** [NDD+22]. **Can**

[AMSR21, CGC25, DCAA22, HDW+23, HSH+22, KRB22, YLH+24]. **Candidate** [JLC+21]. **Canvas** [MVR+23]. **Capabilities** [APdS23, KMSH22]. **Capability** [LL23]. **Captioning** [XLC24b]. **Capture** [SAPGIM22, WXH21]. **Capturing** [LXS+23, YGL+25]. **Career** [YWR23]. **Case** [AAB+23, BKB22, BMPR21, BBD+24, COH22, CVGA22, DPZL20, GPG21, GLPP21, HSH+22, HPW+22, LZL+22, LSAS23, LV22, LAM22, LN22, MAP+22, NPZL20, PHL24, RPNR22, RMT20, SA21, SYW+24, TAV20, WXH21, WCH20, WPGB22, WAYA24, WZXL22, YHG+24, YBKB23, YKT+23]. **Cases** [ATZ22, RU25, VBW+21, VPBB23, WPGB22, WXY+23b]. **Categories** [FHB24]. **Categorizing** [NTR20]. **Causal** [TYL+24]. **Causal-Intervention-Based** [TYL+24]. **Causation** [PVC+24]. **Cause** [GRR+23]. **Caused** [BCJ+22]. **Causes** [LCL+22, LGL+23]. **Causing** [NNL+20a]. **CBGA** [PWA+21]. **CBGA-ES** [PWA+21]. **CBUA** [ZLM+22]. **CCFinder** [KKI25]. **Centered** [DWA22]. **Centric** [KSO+23, SMA+21]. **Cerebro** [GOD+23]. **CfgNet** [SRS23]. **CFL** [SLS+24]. **CFL-Reachability** [SLS+24]. **Chaff** [FXLH20]. **Chain** [JWW+22, WYGL24, YZC+24]. **Chain-of-Thought** [YZC+24]. **Chains** [BDR+20]. **Challenges** [DPH+22, EWL+22, GKS+23, GTL+23, HFG+23, HM25a, HMFL23, KLS+22, KUC+21, LvL25, LQG+25, MSMG24, PFR+22, VHFA22, WXH+20, WLL+22, YNWC24, ZLK+21]. **Challenging** [ZGZ+23]. **Change** [ARdNF+22, FWPG25, HJL+22, JM22, JM23, KSW25, KM25, MHG23b, SY21, WXLM21, WWC20, ZCZ+21, ZSC+21]. **Change-Patterns** [HJL+22]. **ChangeDistiller** [FWPG25]. **Changes** [DBP23, FXdC+21, MHG22, MHG23a, PKH+21, RKM22, WWK+23, WWC20, ZWDZ25]. **Changeset** [CDK20]. **Changeset-Based** [CDK20]. **Chaos** [ZMH+21]. **Characteristics** [RVK+22, SBDR22, ZLH+21]. **Characterization** [CBR+25, ESvE+22, LFaG+22, OMM+23]. **Characterizing** [BBS24, FXLH20, KLM24, RP23, SSL+23, VMA22, WWC+21, WAM24, XWM+22, YBSM21]. **Chase** [HPX+25]. **ChatAssert** [HSd25]. **Chatbot** [RCS+23]. **Chatbot4QR** [ZHX+22]. **Chatbots** [ABCS22]. **ChatGPT** [LTL+24b, TLZL24, YLH+24]. **Chatrooms** [EAGZ22]. **Checking** [AAT+22, BS24, CPJ21, CAAB23, FCGA23, GMN+22, GJX+21, MS22, TTO23, WMY+23, WTC24, vBGC+23]. **checsdm** [PEM21]. **Chief** [Kra25]. **Choice** [vdLWHR22]. **Choose** [FMN+22]. **CI** [AMS21a, AMSR21, CCW23, GM20]. **CirFix** [SHWA23]. **Citation** [ZTW21]. **Claims** [PDM+21]. **Class** [DDP+23, GZZ+23, HJC+22, QZC+21, THM20]. **Class-Level** [DDP+23]. **Classes** [FRGCH20, PMC+21]. **Classic** [MZH22]. **Classification** [CYC+24, KSW25, MS22, WGL+24b, YGM+22]. **Classifiers** [DLP+24, RWKH21, RWO+22, ZWS+22]. **Classifying** [LLZ+25]. **Clean** [DCAA22]. **Climate** [PHL24]. **Clone** [AS23, HFS+23, KKI25, MSJP23, SR21, YHG+24, ZGZ+23]. **Clones** [LCYS22]. **Cloning** [KDVM23]. **Clopper** [BS24]. **Clopper-Pearson** [BS24]. **Closed** [EVLVB+22, KKN+21, LAM22]. **Closed-Source** [EVLVB+22]. **Cloud** [HB21, LMN+24, PVB+21, SFC22a]. **CloudRaid** [LLL+22]. **Cluster** [PWA+21]. **Cluster-Based** [PWA+21]. **Clustering** [DGY+22, LFZ+22, LLZ+25, SABZ22, TII22]. **Coaster** [MHG23a]. **Code** [AS23, ACC+25, BEK+23, CGN+23, CDAR22, CPX+22, CKM23, CFM24, CCP+22, DDPT22, DBP23, DCAA22, FNS+24, FRGCH20, FSC+24, dAFdOBT21,

FHB24, FWPG25, GJX+21, GPG21, GRR+23, HMMR24, HDC+23, HMIM22, HWZ+21, HFS+23, HGX+24, HJC+22, IW23, JM22, JKS23, JFW+25, JSW+23, JFH+24, JZS+24, KKI25, KGZS24, KR24, KDVM23, KKC+23, KMCA25, LSC22, LCYS22, LY24, LQG+25, LPS+24, LJX+21, LXS+23, LCP+24, LZZ+24, LTL+24b, LCS+25, MNS+23, MCP+23, MAG+22, MSJP23, Men25, MHDH+22, NH22, NDA+22, NDD+22, OSdO+25, ODTS23, PKH+21, PVC+24, PAA+21, PPHZ24, PCY22, PMVA24, QLH+24, RKP+21, RdWT23, Roc25, RVSP20, RYZ+24, SSGG23, SBV+21, SBFW22, SHM21, SCZ+23, SXYG25, SY21, SSS24, SGY+24, TDM+24, VSA+22, WW22, WZS+22, WPXM23, WMY+23, WYG+23, WZS+23, WZS+24, WFL+24, WGL+24a, XHT+24, XSQ+23, XGW+24, XCM24, XXCL19, XXCL21, YFL+22, YZC+24, YHG+24]. **Code** [YZW+24, YXZ+24, YGM+22, YGL+25, YMC+23, YLH+24, ZJR+21, ZWL+22, ZYX+23, ZGZ+23, ZLH+23, ZXZ+24, ZLY+24a, ZYF+23, ZLY+24b, ZBA23, TZZ23]. **Code-Comment** [JSW+23]. **Code-Level** [GRR+23]. **Code-Related** [MCP+23, YLH+24]. **Code-Summary** [FSC+24]. **Code2Img** [HFS+23]. **Codee** [YFL+22]. **Coder** [PGPa+22]. **CodGen** [LPS+24]. **Coding** [GMWL22]. **CODIT** [CDAR22]. **Coevolutionary** [SSBA23]. **Cognitive** [HSEW24, MST+20]. **Coin** [MSG21]. **Coincidental** [XLY+24]. **Collaboration** [SBDR22]. **Collaborative** [CFP+21, MWX+24, RML+23]. **Collect** [KMCA25]. **Collection** [ESvE+22]. **Collections** [FIY+23]. **Collisions** [LSZ+23b]. **Colored** [VDBP+22]. **Colosseum** [MN22]. **Combatting** [ZWC+23]. **Combination** [CPX+22, JWZ+24]. **Combinations** [ZLX+21]. **Combinatorial** [EFM+23, GLK+20, GStZ+23, MJY22, NNL+20b, NSW+22, NWN+22, RLL+22, WNP+20, WNP+21]. **Combining** [GMN+22, ZZF+24]. **CombTransformers** [BC23]. **Comment** [HHCZ25, JSW+23, LWL+23, LXL+23, XGW+24]. **Comments** [RYZ+24, ZZC+23]. **Commercial** [SWC+22]. **Commit** [HTA24, LGC+22, RKM22, TNHB24, XWY+24, ZQS+24]. **Commits** [AMS21a, AMSR21, CSS22, JM22, SOM22, WGH+24]. **Common** [KLS+22]. **Communication** [HM25b, JSC+24]. **Communities** [APCs22, BKR+20, BSFR22, HMIM22, TZZ23, WXH21]. **Community** [BGL+21, ESvE+22, FEA23, NLM23, PAA+21, TPK21]. **Companies** [ZZMJ21]. **Company** [BGL+21]. **Comparative** [MM22a, TLZL24, WNP+21]. **Compare** [PPJ22]. **Comparing** [EWC22, EYW23, RKH+22]. **Comparison** [ABCS22, HWZ+21, WCXG22, WNP+20]. **Comparisons** [LKP+21]. **Compatibility** [MCY23, WLC+20]. **Competitive** [MWW+25]. **Compiler** [CWH+21, JZR+22, TJZ+22, TZL+25, TZJ+24]. **Compiling** [NBO22]. **Complementary** [LLS22]. **Complete** [Ala23]. **Completeness** [AAT+22, MBV+25]. **Completion** [CCP+22, MKJ21, XSQ+23, ZZC+23]. **Complex** [AFC+21, BCCH+23, PMC+21, VDBP+22, WSQJ21]. **Complexity** [BL23, Kaf25, QTL+22, Wey25b]. **Compliance** [CAAB23, vBGC+23, BBS24]. **Component** [OSKH23, PC20, SPK22]. **Component-Based** [PC20]. **Components** [CIM+24, DTP+21, EFB21]. **Composing** [JBS+22]. **Composition** [EYW23, QZCP22, ZBD+25]. **Compositional** [BSK+22, CGSV22, LDC+23, VDBP+22]. **Compound** [XCK+22]. **Comprehension** [HDC+23, WW22]. **Comprehensive** [DXFJ24, GZZ+23, JDZ+23, LDL+22,

ZLC+24b, HDW+23]. **Compression** [YSSH22, ZWH+24]. **Computational** [SGG+24]. **Computer** [BSMM22, CVGA22]. **Computing** [Mas23, MPM21, PVB+21, ZZH23]. **Concept** [FCT+25, WPXM23]. **Concepts** [NR23]. **Conceptual** [BDP+22]. **Concise** [LLL+23]. **Concretely** [TJH+24]. **Concretization** [BSV24]. **Concurrency** [LLL+22]. **Concurrent** [YHW20]. **Conditional** [GBDF22]. **Conditions** [WGW+22]. **ConEx** [KTSR22]. **Confidence** [RBB23, XGW+24]. **Confidentiality** [DHB21]. **Config** [SH21]. **Config-Related** [SH21]. **ConfigMiner** [SH21]. **Configurable** [KNJM21, TLLV20]. **Configuration** [ANS+22, CCL24, CGC25, GCB25, HSB+23, SKAP20, SH21, SRS23, ZHX+23]. **Configuration-Based** [ANS+22]. **Configurations** [KTSR22, LSZ+23b, NYM+20]. **Confirmation** [STRM23]. **Confirmatory** [SRT+22]. **Conflict** [VR24]. **Conflicts** [GMBv20, GF23, VHFA22, WWW+22]. **Conformance** [LN22]. **Confounders** [WW22]. **Confuse** [ZLZ+24]. **Congruence** [MJT+22]. **Congruent** [WWK+23]. **Consensus** [ESvE+22, NNL23]. **Consider** [JZZ+21]. **Considering** [SNNO22]. **Consistency** [HLPK22, LJZ+24, MBV+25, PEM21, WFL+24, YFZ+23, HSB+23]. **Consistency-Preserving** [HSB+23]. **Consistent** [KZWS25, MSV22]. **Constant** [EK21]. **Constant-Space** [EK21]. **Constrained** [MMT22, WNP+21]. **Constraint** [MWW+25, OD25, TSBB20, WZS+23, WZS+24, WNP+21, YDLW20, ZWL+23a]. **Constraint-Based** [OD25]. **Constraint-Guided** [MWW+25]. **Constraints** [KDF24]. **Construct** [SB23]. **Constructing** [CCW22, ZWX+23]. **Construction** [ALL+21, EA22, HSEW24, SGY+24, ZWC+23]. **Constructs** [NRZ21]. **Containerization** [ZZH23]. **Containers** [LSVS+24]. **Contemporary** [HMFL23]. **ConTesa** [YHW20]. **Context** [BEK+23, CPX+22, HLGX23, HLPK22, LYZ+22, LTL+24a, LLZ+25, WXG+21, WYW+22, ZLM+23, ZLY+24a, ZLY+24b]. **Context-Aware** [LLZ+25, WYW+22, ZLM+23]. **Context-Based** [ZLY+24a]. **Context-Dependent** [HLPK22]. **Context-Sensitivity** [HLGX23]. **Contexts** [MHG22, YBKB23, YGL+25, ZLY+24a]. **Contextual** [BTR22]. **Continuous** [EWL+22, GM20, GEJM22, GHZ23, LV22, LZM+23, PCY22, SOM22, WAM24, YBKB23]. **Continuously** [SM23, WLL+22]. **Contract** [CPF21, CXL+22a, CXL+22b, KLS+22, LCW+24, MXR+22, QHL+23, SXYG25, WLT+23, WCZ+25, ZYX+23, ZSC+24, ZLK+21]. **Contract-Based** [CPF21]. **Contract-Related** [LCW+24]. **ContractCheck** [WTC24]. **Contracts** [AB24, CPF21, CLL+22, EOH23, GJX+21, JWW+22, KDVM23, LLZ+23, LSZ+23a, LCW+24, WTC24, ZWC+23, ZWLD24]. **Contrasting** [HPW+22]. **Contrastive** [JFH+24, TYL+24, XHT+24]. **Contribution** [YWR23]. **Contributions** [BGL+21, LMZ+22, NRPN22, WWK+23]. **Contributor** [BXLM21]. **Contributors** [KACS24, TGW+22]. **Control** [BSK+22, HML+24, JM22, JZZ+21, KBD+22, Lev25, Mas23, PL21, RCP+21, Roc25, WZS+23, WZS+24, ZLA+23]. **Controlled** [KTJ21, LMHWH24]. **Controller** [CIM+24]. **Controllers** [EFB21, NBD+20]. **Controlling** [PBM22]. **Conversations** [RX25]. **Convolutional** [YGL+25]. **Cooperative** [SSBA23]. **Coordination** [BHMS23, WLMR21]. **core** [QZC+21]. **Cores** [GWGH21]. **Correct** [KSA+21, SGP+22]. **Corrections** [BLZ+20, JLZZ20b, SGP+22, WZS+24].

Correctness [Lam25, LCLL+23, MWX+24, WZXL22, XLY+24, ZFS+24, ZXK+24]. **Correlated** [JTH21, WXL+23, ZHX+23]. **Correlation** [KMSG22, SGY+24]. **Correlations** [ZLWC24]. **CoSS** [SCZ+23]. **Cost** [HB21, HCL+24, SNNO22, SPK22, WMY+23, WLT+23, WLMR21]. **Cost-Effective** [HCL+24, WLT+23]. **Cost-Effectiveness** [WLMR21]. **Cost-Efficient** [HB21]. **Costs** [Her21, LSA+21, XCK+22]. **Counterexample** [BLS21]. **Countermeasures** [GXS+22]. **Counting** [PPP+22]. **Coupling** [JZZ+21]. **Coverage** [BCL+24, BMPR21, CWH+21, EFM+23, IW23, MN22, RBB23, SGP+23, WZS+23, WZS+24, WCW+24, XCM24, ZRDD22, ZLA+23, ZWL+23a, ZLWC24, ZZF+24]. **Coverage-Guided** [ZRDD22]. **Covered** [VMA22]. **Covering** [GStZ+23]. **COVID** [dMS+22]. **COVID-19** [dMS+22]. **CPVD** [ZLXY23]. **Crash** [MHAZ24, MC22, SPv20]. **Crashes** [SFC+22b]. **Creativity** [MTR21, MRTM22]. **Criteria** [EFM+23, Wey25a, ZLA+23, ZLWC24, ZZF+24]. **Critical** [Hol25, LCY22, MG20, MCG24, PEM21, ZTT+23, ZQS+24]. **Cross** [FEA23, GJL+21, JSC+24, KGZS24, LZJ+23, LTH22b, MSJP23, NXL+22, TMF23, TZL+24, XXCL19, XXCL21, ZLXY23, vBGC+23]. **Cross-Architecture** [XXCL19, XXCL21]. **Cross-Community** [FEA23]. **Cross-Instance** [vBGC+23]. **Cross-Language** [KGZS24, MSJP23]. **Cross-OS** [XXCL21, XXCL19]. **Cross-Platform** [GJL+21, JSC+24]. **Cross-Project** [LZJ+23, LTH22b, NXL+22, TMF23, TZL+24]. **Crossover** [KMSG22]. **Crowd** [VSA+22, WCXG22, ZJR+21]. **Crowd-Scale** [WCXG22]. **Crowd-Sourced** [VSA+22]. **Crowds** [WWC+21]. **Crowdsourced** [FYZ+25, GYF+23, LFZ+22, SCL+23, WWC+21, YFZ+23]. **Crowdtesting** [WYW+22]. **CRPWarner** [LCW+24]. **Crypto** [TCA+23]. **Cryptographic** [AXR+23, FXP+24, KSA+21, XSQ+23, ZKX+23]. **CrySL** [KSA+21]. **CTOS** [JZR+22]. **Cultural** [APHL22]. **Curation** [OMM+23]. **Current** [IBR23]. **Custom** [LDL+22]. **Cyber** [APM+22, Cat23, CPB22, LM23, MMT23, SXM23, VCPB23, XYAA24, YLA+21, ZWX+23]. **Cyber-Physical** [APM+22, CPB22, LM23, MMT23, SXM23, VCPB23, XYAA24, YLA+21, ZWX+23]. **Cyber-Resilience** [Cat23]. **Cyberphysical** [ALT22]. **Cycles** [HLPK22]. **Cyclomatic** [Kaf25].

D [CF22]. **D3** [WPL+25]. **Daily** [MBBZ21]. **DApp** [ZSC+24]. **DAppSCAN** [ZSC+24]. **Darcy** [GSGM24]. **DASP** [LVEY+23]. **Data** [Ala23, BCJ+22, BK23, BLQ21, CAAB23, CWQ+25, CDMM24a, CXB23, DiFBK24, FYS+23, FFT21, GdCZH21, GKS+23, GRR+23, GLZ+23, Kor25, KTSR22, LZJ+23, LTH22b, LCS+25, MZH+25, Men25, NM24, NRZ21, OD25, RTJ+22, SGTY22, TYM22, VCPB23, WFL+24, WCW+24, WYGL24, Wey25a, WZXL22, YZP+22, YCM24, YPW24, ZYZ+20, dCC+22]. **Data-Driven** [VCPB23]. **Data-Informed** [RTJ+22]. **Data-Intensive** [GKS+23]. **Database** [ABON22, JHA+20, LSVS+24, LC23a]. **Database-Backed** [LC23a]. **Datalog** [SAC23]. **Dataset** [LCS+25]. **Datasets** [CAA+24, PR22, ZSC+24]. **Date** [SRG+23]. **Day** [HSS+25, MBBZ21, MBD+25]. **DBInputs** [CDMM24a]. **Dead** [MNS+23, RVSP20]. **Dealing** [AFG+21, GKS+23]. **Debloating** [ANS+22, TZL+22]. **Debt** [ABON22, AGT+23, DCAA22, EOH23, LSAS23, SA23, TMC+22, TMA+24, XWM+22, ZBA23]. **Debts** [XCK+22, YFTM22]. **Debugging** [BLS21, BLLZ22, DKH+20, HSEW24,

MBdlRT24, SPv20, ZH25, ZPX+21]. **Decay** [GKGM22]. **Decision** [GGMD23, LTH+22a, MBD+25, RAK+22, SHE+22]. **Decision-Making** [SHE+22]. **Decisions** [ZYGR23]. **Declarative** [DZZ+23]. **Decompilation** [PLHR23]. **Decomposition** [AME+23, QZC+21]. **Deconstructing** [SBDR22]. **Deep** [ADBL24, AAB+23, AMHW22, CIM+24, CKDR22, CAA+24, CBR+25, GWMZ23, HZL+24, HMC+22, HLT+21, HTL+21, JFW+25, LJX+21, LSZ+22, LC23b, MZH+25, NSHL+23, PT23, QGX+22, RBPS20, RBB23, SYLL23, WLNT20, WHG+23, WPL+25, XLY+24, YLA+21, YM22, YFZ+23, ZRDD22, ZLWC24, ZAB+23, ZABS25, dMS+22]. **Deep-Learning** [CIM+24]. **DeepLineDP** [PT23]. **DeepManeuver** [vSSE23]. **DeepMerge** [DMS+23]. **Defect** [BK23, CM23, CJL+21, CXL+22a, DDPT22, FXdC+21, GRHJ22, GZZ+23, Her21, JTH21, JTDG22, LZJ+23, LTH22b, LGL+23, Men25, NXL+22, PM22, PATB23, PT23, QGX+22, RWO+22, SM23, TMF23, THM20, TLW21, TZL+24, TYM22, WXH+20, WLNT20, YXF+22, YHG+24, YYW24, YM22, YGL+25]. **DefectChecker** [CXL+22a]. **Defective** [WTT+22]. **Defects** [CXL+22b, KCVM22, MSB+22, SSL+23, TJZ+22, TZL+25, WWC20, ZWY+20, ZTW21]. **Defense** [PHL24, WCG+21]. **DeFi** [LCW+24]. **Defined** [JDS23]. **Defining** [CXL+22b]. **Definite** [ZYZ+20]. **Definition** [MCG24]. **Degradation** [TC23]. **Degrees** [YZP+22]. **DeLag** [TC23]. **Delivering** [GKS+23]. **Delivery** [KGvDG22]. **Delta** [MN22, ZH25]. **Demand** [SX20]. **Demand-Driven** [SX20]. **Demystified** [LDL+22]. **Demystifying** [QHL+23, ZXL+23]. **Density** [DCAA22, NC24]. **Dependabot** [HHZZ23]. **Dependence** [CF22]. **Dependencies** [DM21, GEJM22, IW23, JZC+23, LXS+23, PPP+22, PCY22, RML+23, SNNO22, SRS23, SVTTB23]. **Dependency** [CCM+23, COH21, DMZD22, GRHJ22, HHZZ23, IW23, JCA+22, JHA+20, Mas23, QZC+21, WDNH22, WWW+22, WWK+23]. **Dependent** [FIY+23, HLPK22, LS23, RWKH21]. **Deploy** [MXC+21]. **Deployment** [ZWH+24, dASC21]. **Deprecation** [COH22]. **Deprivation** [FSRJ20]. **Depth** [SABZ22]. **Derivation** [EFB21, SLS+24]. **Describing** [HM25a]. **Description** [KTJ21, MTD25]. **Descriptions** [HPX+25]. **Design** [APHL22, FCT+25, FMBtB22, Lev25, LJL+22, MCK+21, MTR21, MBdlRT24, Par25, PEM21, PHL24, TEM22, VFX+21, ZLH+24, ZLZ+25]. **Designing** [IAM+20, MPM21, ZSM23]. **Detect** [ZWM22]. **Detectable** [MCK+21]. **Detecting** [BLZ+19, BLZ+20, CXTZ24, FIY+23, FXP+24, HXJ+23, JLG+23, LBK21, LLL+22, MCY23, MSZ+22, NMAR24, QCL+24, RP23, SOM22, TJZ+22, TZL+25, WDNH22, WLC+20, XCK+22, ZYZY23, ZRL+24]. **Detection** [AMS21a, AXR+23, ALT22, AS23, CKDR22, CAA+24, CXL+22a, CWQ+25, CYC+24, GSXH22, HML+24, HFS+23, JFH+24, JZS+24, JWZ+24, KL22, LLS22, LWCK21, LWW+20, LJX+21, LXL+23, MZH+25, MSJP23, MC22, MS22, MBD+25, NSHL+23, PMVA24, QHL+23, QLH+24, SdSS+21, SR21, TC23, TPBF23, TJH+24, VSB24, WXG+21, WGW+22, WFL+24, WGH+24, WCZ+25, WGY+24, XLY+24, XGW+24, YHG+24, YFZ+23, ZLL+22, ZKX+23, ZLXY23, ZLH+23, ZFC+24, ZWY+20]. **Detector** [KKI25, NLCK+23, ZWC+23]. **Detectors** [ZGZ+23]. **Determining** [AB24, FXLH20]. **Determinism** [CDMM24b, SGP+23]. **Deterministic** [EFHT21, THBEF23]. **Developer** [DWA22, GSN23, LPM+22, NRPN22, PPHZ24, SBDR22, SBFW22, SZB+21,

VFX+21, XYWH22]. **Developers** [ATZ22, BKWZ24, DWA22, EAGZ22, FMN+22, FSRJ20, GLNS22, HSS+25, KTJ21, KSO+23, KMCA25, KTP+20, LSA+21, LMZ+22, MMZ+22, MM22b, MMZF21, MBBZ21, MSZ+22, MHJS+21, NH22, NLM23, NZZ21, RdWT23, SPS+24, SRG+23, TCS+23, UBGK21, WBC+23, WNB+23, ZLY+24a]. **Developing** [KKI25, NH22]. **Development** [AFG+21, Boo25, CBR+25, DC24, EWC22, HLC+22, HM25b, JLG+23, JSC+24, KLS+22, KTJ21, KTH+22, KGvDG22, LLM+23, NDD+22, NLGZ23, PDM+21, PPJ22, PGSS22, SBDR22, SM23, TDV+21, WXLM21, WLMR21, YNWC24, ZZMJ21, ZLW+23, ZLK+21, dMS+22]. **Device** [BCJ+22]. **DevOps** [APdS23, LFaG+22, PGPa+22]. **DevRec** [XYWH22]. **DexBERT** [SAK+23]. **Diagnosability** [PAV21]. **Diagnosis** [MDX+21, ZHX+23]. **Diagnostics** [BMBB23]. **Dialogue** [HLX+24]. **Dialogues** [EBM22]. **Dictionaries** [DLC+22]. **Did** [MM22b]. **Differences** [MCY23, RS22, UO22]. **Differencing** [FWPG25, MFM23, WCXG22]. **Different** [JZC+24, LAM22, SHE+22]. **Differential** [LDC+23, WPL+25]. **Diffing** [UO22]. **Diffs** [ESMM23]. **DiffSearch** [DBP23]. **DiffTech** [WCXG22]. **Digital** [MWTV24, TEM22, XYAA24]. **Dilemma** [GCSHB21]. **Directed** [UC21, YHW20]. **Directions** [SBL21, ZQS+24, WBC+23]. **Directive** [ZWY+20]. **Disassembly** [JDZ+23]. **Discipline** [BCJ+22]. **Disconfirmatory** [SRT+22]. **Discovering** [BLZ+19, BLZ+20, MBE+23]. **Discovery** [KBD+22]. **Discrete** [NBD+20, WSQJ21]. **Discrete-Time** [WSQJ21]. **Discretization** [RWKH21]. **Discrimination** [TEM22]. **Discriminative** [KL22]. **Discuss** [WXH21]. **Discussions** [VFX+21, WXH21, WCXG22]. **Displacement** [MN22]. **Display** [LCW+23]. **Dissecting** [ASC+23]. **Distillation** [FNT+23]. **Distilling** [CFCL23, RYZ+24]. **Distinguished** [Uch24]. **Distinguishing** [THBEF23]. **Distributed** [CF22, GF23, HM25b, LLL+22, UO22, WPL+25, XHS+22, ZWL+23b]. **Distribution** [CCPP23, Ebb23, KLM24, WYGL24]. **Distributions** [SPK22]. **Dive** [dMS+22]. **Divergent** [HMIM22]. **Diverse** [HAC+23, KYAY24, YPW24]. **Diversified** [HLC+22]. **Diversity** [AAB+23, BL23, FEA23, JFH+24, MWW+25, MC22, MBGC22, TJZ+22, VR24]. **Diversity-Guided** [TJZ+22]. **Diversity-Oriented** [MWW+25]. **Diversity-Sensitive** [JFH+24]. **Dividable** [GCB25]. **DL** [LZP+23]. **DNN** [WMY+23, YPW24]. **DNN-Based** [WMY+23]. **Do** [DM21, EMM24, HPX+25, LZL+23, PAA+21, WXH21, WCH20, WFL+24, WWC20, ZLY+24a, FMV+22, WBC+23]. **Docker** [MWdA21]. **Documentation** [ABLVL21, ACC+25, BTR22, CVGA22, DPV+21, GMWL22, LWCK21, NHSR22, PMKY23, ZJR+21, ZWY+20]. **DoD** [RCMB22]. **DODGE** [AFC+21]. **Does** [AKA+22, BL23, HSEW24, KPTJ25, KTP+20, ZFC+24, WXLM21]. **Domain** [CPJ21, CPB22, LZJ+23, MVDS20, WXH21, ZLXY23, ZLH+24, vdMTH23]. **Domain-Driven** [ZLH+24]. **Domain-Specific** [MVDS20]. **Domains** [SFP+21]. **Dominance** [YZP+22]. **Dominated** [PWA+21]. **Dominoes** [dCC+22]. **Don't** [ZLZ+24]. **Double** [VR24]. **Double-Edged** [VR24]. **Downgrades** [COH21]. **Download** [AHH22, HBH20]. **DPWord2Vec** [LJL+22]. **Driven** [AFG+21, AST23, CCPP23, FNS+24, KTJ21, MIL+24, PDM+21, PPJ22, PGSS22, PFAC22, SX20, TDV+21, VCPB23, WGW+22, ZLS+23, ZLH+24]. **Driver**

[DiFBK24]. **Drivers** [BCJ+22]. **Drives** [MHB22b]. **Driving** [BT24, DDCC23, DZZ+23, LVEY+23, SPT23, ZTT+23, ZST+23]. **DroidSafe** [ZWQR22]. **DSSDPP** [LZJ+23]. **Duality** [Mas23]. **DupHunter** [JLG+23]. **Duplicate** [JLG+23, LYZ+22, LCYS22]. **Duplication** [LCS+25]. **Duration** [KLM24]. **Durations** [GHZ23]. **During** [BCBA24, SM23, ZYZ+20]. **DynAlloy** [CRAF23]. **Dynamic** [AKM+20, BCJ+22, BLQ21, CF22, CHB+22, CZW+23, CRAF23, HSEW24, JCMB23, KTSS20, KM25, NBD+20, PMVA24, YWR23, ZHHA23]. **Dynamics** [TH21, PMVA24].

Early [YWR23]. **Easy** [GLZ+23, MXC+21]. **Easy-to-Deploy** [MXC+21]. **Economies** [RBPS20]. **Economy** [TEM22]. **Ecosystem** [COH21, HFG+23, HDW+23, TDWB23, WSP+23, WWK+23]. **Ecosystems** [COH22]. **Edged** [VR24]. **Editing** [CDAR22, LCP+24]. **Editor** [Kra25]. **Editor-in-Chief** [Kra25]. **Effect** [ADPJ23, EA22, JZB21, Lic25, RVK+22]. **Effective** [GStZ+23, HCL+24, LJZ+24, MÇS+24, SAK+23, TSBB20, TZJ+24, WLT+23, WXL+23, ZLG+23]. **Effectiveness** [AMDD22, ADPJ23, CFA+24, FRS+23, GPG21, GSFO23, LHJ+24, QZCP22, SSGG23, WLMR21, ZLM+22]. **Effects** [ASSB+21, BDP+22, HGHM22, IYNH21, NWCS20, PBM22, SGG+24]. **Efficiency** [BBC23, CDMM24b, CFA+24, FRS+23, YTWM21]. **Efficient** [BS24, CPJ21, CBWV22, DLC+22, HYC22, HB21, HSB+23, HGX+24, KTSR22, LJZ+24, MHAZ24, MPH23, NM24, SLS+24, WXG+21, ZLG+23, aFbPS22]. **Effort** [CCPP23, JBL21, LDRK24, NXL+22, PMKY23, RCMB22, SMPH22, She25, TSPH22, TMS23, XSSM22]. **Effort-Aware** [NXL+22]. **Electronic** [BBD+24]. **Electrum** [CRAF23]. **ElementRank** [PMC+21]. **Elements** [VMA22]. **Elicitation** [ADPJ23]. **Elimination** [MNS+23]. **Elitist** [PWA+21]. **Ellipsis** [ZZC+23]. **Embedded** [LSAS23, WGW+22, XYWH22]. **Embedding** [CXLX21, GJX+21, LJKC20, LQW+24, MXC+21, TLW21, XHT+24, YFL+22]. **EMBLEM** [TYM22]. **Emerging** [GZW+22, LvL25]. **Emotion** [MHG23b]. **Emotion-Oriented** [MHG23b]. **Emotional** [MHG23a]. **Emotions** [GLNS22]. **Empirical** [BXL+22, CJL+21, CCF+22, CASA22, CCP+22, COH21, CMAS22, EAGZ22, END23, FNS+24, FFT21, GM20, GCSHB21, GSFO23, HM25b, HMIM22, HLR24, IGLP23, JCHT21, JSW+23, JTDG22, KCVM22, LYZ+22, LYW+22, LCB23, LHJ+24, LSZ+23a, LMZ+22, LKW+24, MNS+23, NLGZ23, OMM+23, OSKH23, PPHZ24, PAV21, QZCP22, RKM22, RCMB22, SNET24, SHC+22, SY21, TAJ21, TCA+23, VSA+22, WNP+20, XWY+24, ZZMJ21, ZLL+21, ZWC+21, ZYGR23, ZZX+23, ZLY+24a, ZXB+23, ZLWC24, ZPX+21, ZLX+21]. **Empirically** [EA22]. **Empowering** [PFAC22]. **Emulation** [GJL+21, XXCL19, XXCL21]. **Emulators** [JZC+24]. **Enabled** [AAT+22, SSBA23, SXM23, ZLA+23]. **Enabling** [EVLVB+22, LSVS+24, MMZF21, RAK+22]. **Encoding** [BEK+23]. **End** [CKT+21, SvdALS23, TGW+22]. **End-to-End** [CKT+21, SvdALS23]. **Energy** [CA21]. **Enforcing** [KZWS25, MHAZ24, MWX+24]. **Engagement** [TZZ23]. **Engine** [DBP23]. **Engineer** [ATZ22]. **Engineering** [ABCS22, ASSB+21, BSMM22, BWR25, CCPP23, CCZX21, Dwy25, FAB+22, FW23, FMV+22, FGMS22, FFT21, GWMZ23, GZ24, GRZS23, HL25, HGHM22, Hod22, HMFL23, HPW+22, IBR23, KKC+23, KMB23a,

KMB23b, KUC+21, Kor25, KGS23, LvL25, LCY22, LZL+23, LMHWH24, MHG23a, MHG23b, MHH+21, MIL+24, MG20, Med25, MCG24, MST+20, MRTM22, MHDH+22, NRZ21, NSHL+23, Nus25, PBJ24, PFAC22, PK25, PBC+22, PR22, RWKH21, RUM22, SKAP20, SBL21, SVOJ21, SHF25, SMS+25, SB23, SFC22a, TFF+22, UCD+24, VCMG20, WHG+23, YHG+24, ZMH+21, vdMTH23, Ano20a, Ano21, Ano22, Uch25]. **Engineers** [FdS20, JZB21, RS22]. **Enhance** [NSW+22, SXYG25, TC23]. **Enhanced** [FYZ+25, PC20, SMPH22]. **Enhancement** [DGY+22, LLL+22, SXM23]. **Enhancing** [CHB+22, FSC+24, FMBC+23, LL23, LXS+23, RYZ+24, SMA+21, TNHB24, WMY+23, WCZ+25, WYN+23, XCP+22, ZLC+24a, ZSCT20]. **Enough** [ZWCH21]. **Enriching** [ZJR+21]. **Ensemble** [NDA+22, SGTY22, TLW21, TZL+24]. **Ensuring** [MGW20, PEM21]. **Entity** [CWQ+25]. **Enumeration** [MMT22]. **Environment** [GMN+22, KBD+22, LSZ+23b]. **Environments** [CHM24, GEJM22, HB21, JZB21, LV22]. **Epigenetic** [LAY24]. **Episodic** [BKR+20, BSFR22]. **EpiTESTER** [LAY24]. **Equality** [SRS23]. **Equality-Based** [SRS23]. **Equalized** [YCM24]. **Equivalence** [KMP23, MS22, WMY+23]. **Era** [KSW25]. **Erratum** [XXCL21]. **ErrHunter** [ZYZY23]. **Erroneous** [HLR24]. **Error** [TZL+25, TJH+24, ZYZY23]. **Error-Handling** [ZYZY23]. **Errors** [ALD23, NH22, YWL+23]. **Esale** [FSC+24]. **ESLint** [TAV20]. **Essence** [LGL+23]. **Estimates** [JBL21, SMPH22]. **Estimating** [She25]. **Estimation** [BS24, FT23, NC24, RCMB22, SPK22, SGTY22, TSPH22, TMS23, WYGL24, XSSM22]. **Estimator** [BCL+24]. **Ethereum** [CXL+22b, EOH23, KDVM23, LSZ+23a, QHL+23, WTC24, ZWLD24]. **Ethnicity** [NRPN22]. **Evaluate** [LCY22, SM23]. **Evaluating** [BLLZ22, EA22, JKS23, JZC+23, KYAY24, KMSH22, LYA24, LKW+24, PDM+21, SR21, ZLM+22, Wey25b, YZW+24]. **Evaluation** [AXR+23, BBD+24, DAM23, DXFJ24, END23, FNS+24, FMBtB22, HDC+23, JTA+23, KR24, LDL+22, NRPN22, PBCV21, PVB+21, PGSS22, SNET24, SHWW24, SY21, WYG+23, YNW24, ZWC+23]. **Event** [AST23, CZ20, GLZ+23, NBD+20, SLZR22, VDBP+22, XYAA24, vBGC+23]. **Event-Driven** [AST23]. **Event-Streaming** [SLZR22]. **Events** [MHAZ24]. **Everyone** [PFR+22]. **Everywhere** [PFR+22]. **Evidence** [PK25, ZLH+24]. **Evidence-Based** [PK25, ZLH+24]. **EVM** [CXL+22a, LLZ+23]. **Evolution** [LNFW25, LY24, NNL23, SA21, YBSM21]. **Evolutionary** [DPRVG+23, GKGM22, SOM22, SGP+23, ZKR23, ZLZ+25]. **Evolving** [dAFdOBT21, XYAA24]. **Evos** [CCW23]. **Examiner** [JZC+24]. **Examiner-Pro** [JZC+24]. **Example** [LLS22]. **Example-Based** [LLS22]. **Examples** [LLS22, LSC22, VSA+22]. **Exception** [LZWH22, SWF+24, ZMH+21]. **Exception-Handling** [ZMH+21]. **Exceptions** [SFC+22b]. **Exchange** [BWAH22, WXH21]. **Executable** [HM25a, LJZ+24, WWP+23]. **Execution** [AMG+23, BKJD22, CHB+22, CCW22, CCW23, Cla25, CBWV22, JLC+21, PXY+23, XYWX24, ZLH+23]. **Expansion** [JLZZ20a, JLZZ20b, JLJZ22]. **Expectations** [BLZ+19, BLZ+20, WXH+20, ZZX+23]. **Experience** [ADPJ23, GSN23, LCL+22, NBO22, SAPGIM22, SWC+22]. **Experiences** [PMF+22]. **Experiment** [ATFJ22, KTJ21, KPTJ25, LMHWH24, MHDH+22, TDV+21]. **Experimental** [PGSS22, PATB23, WYG+23]. **Experimentation** [MEW22]. **Experiments** [ADPJ23, BDP+22, FRS+23, KMSG22,

PDM+21, PPJ22, RCS+23, STRM23, SGJ20]. **Expert** [SMPH22]. **Expertise** [HMMR24]. **Explain** [MEW22, WPXM23]. **Explainability** [TMA+24]. **Explainable** [ARdNF+22, AB24]. **Explained** [ZYGR23]. **Explaining** [DB22, FNT+23, WLY+21]. **ExplanaSC** [AB24]. **Explanation** [FCT+25]. **Exploit** [GSXH22]. **Exploiting** [CDMM24a, CDMM24b, DPV+21]. **Exploration** [CDMM24b, KTSR22, PPHZ24, RAK+22, TZL+25]. **Exploratory** [CFA+24, EOH23, HHZZ23, HSW+25, LSAS23, SA21, dCC+22]. **Exploring** [EAGZ22, LHJ+24, PLG+23, PHL24, TPK21, WGL+24b]. **Exposing** [MXR+22, ZTW21]. **Expressed** [UK21]. **Expressions** [MPH23]. **Expressive** [AMS+21b]. **Extended** [CPF21, EFB21, KDVM23, MM22a, PMGM22]. **Extending** [JHA+20]. **Extensible** [KSA+21]. **External** [HSd25, LXL+22, TDV+21]. **Extract** [AMO24]. **Extracted** [YGM+22]. **Extraction** [Ala23, DXFJ24, FWPG25, MXC+21, SB24]. **Extrinsic** [RPNR22]. **Eye** [APHL22]. **Eyes** [SBFW22].

FA [GXD+24]. **FA-Fuzz** [GXD+24]. **Faceted** [MHG22]. **Facilitating** [MDX+21]. **Factoring** [HMMR24]. **Factors** [APHL22, KGvDG22, ZTW21]. **Failure** [CCW23, NNL+20b, NNL+20a, ZH25]. **Failure-Causing** [NNL+20a]. **Failure-Inducing** [NNL+20b, ZH25]. **Failures** [DHMP23, LS23]. **FairBalance** [YCM24]. **FairMask** [PCM23]. **Fairness** [PCM23, ZWS+22, ZLWC24]. **False** [GTL+23]. **FalsifAI** [ZLA+23]. **Falsification** [YLA+21, ZMH+21, ZLA+23]. **Families** [SGJ20, ZLX+21]. **Family** [ADPJ23, FRS+23, MS22, PDM+21, PPJ22, RCS+23, STRM23, Wey25a]. **FAQs** [TDWB23]. **Far** [GSXH22, PLG+23]. **Fast** [FCGA23, SWF+24, TII22, IKW23]. **Faster** [NYM+20]. **Fault** [CSZ+24, GLK+20, KSJ+21, NNNV22, SY21, WCT+21, WXL+23, WYN+23, XCP+22, ZLL+21, ZLM+23, ZPX+21, ZLX+21]. **Fault-Correlated** [WXL+23]. **Fault-Tolerance** [WYN+23]. **Faults** [MBdlRT24, NNL+20a, OGK+23]. **FeatRacer** [MHBS23]. **Feature** [DTP+21, FYZ+25, HPX+25, KKC+23, MXC+21, MMGB25, PQM+21, PZC22, RWO+22, RVK+22, RMT20, RUM22, TZL+22, WLNT20]. **Feature-Oriented** [TZL+22]. **Features** [CFCL23, GM20, HJC+22, MBE+23, MHBS23, SXYG25, YGM+22, YMC+23, ZZX+23, vdLWHR22]. **Federated** [YHG+24]. **Feedback** [BBR22, FEA23, ZYC+22]. **Feel** [WBC+23]. **Fees** [WLT+23]. **FERPSO** [WCW+24]. **FERPSO-IMPR** [WCW+24]. **Fewer** [GLPP21]. **Fidelity** [MWTV24]. **Field** [CGS+24, LCL+22, MHDH+22, XLC+24a]. **Field-Based** [CGS+24]. **Field-Replay** [XLC+24a]. **Fight** [YLH+24]. **File** [ZSC+21]. **Files** [aFbPS22]. **Filtering** [HXJ+23, PMKY23]. **Find** [ADS22, YKT+23]. **FindBugs** [LKB+21, YKT+23]. **Finding** [AST23, MAM23, NYM+20, PDV23, SHM21, SSL+23, ZTT+23, ZKR23]. **findOSSLicense** [KC21]. **Fine** [BLQ21, FWPG25, NM24, SAK+23, TNHB24, WTC24, ZFS+24]. **Fine-Grained** [BLQ21, FWPG25, SAK+23, TNHB24, WTC24]. **Fine-Tuning** [NM24, ZFS+24]. **Finger** [LTL+24b]. **Fingerprints** [AS23]. **Finite** [PL21, PDV23, THEF+24]. **Fire** [YLH+24]. **Firefly** [GXD+24]. **Firmware** [Ebb23, FTH+21, HDW+23]. **First** [CCM+23, Dwy25, KACS24, KZWS25, NZZ21]. **Fitness** [CCPP23, PFAC22]. **Fix** [CQL+23, FHB24, LKB+21, RKM22]. **Fix-Inducing** [RKM22]. **Fixes** [MAN+24, NLCK+23, RBPS20, WSP+23]. **Fixing** [ALD23, WBC+23]. **Flakify**

[FGB23]. **Flakily** [VMA22]. **Flakiness** [BFP+23]. **Flaky** [FGB23, FHB24, SGG+24]. **FlakyFix** [FHB24]. **FLASH** [NYM+20]. **Flexible** [MJY22, SMA+21]. **Flight** [HML+24]. **Flow** [PL21, SX20, WZS+23, WZS+24, Wey25a, ZLZ+24]. **FlowDroid** [ZWQR22]. **Fly** [PWSG25]. **FM** [MMGB25]. **FM-PRO** [MMGB25]. **Follow** [LYW+23, PPHZ24]. **Follow-Up** [PPHZ24]. **Follower** [KDF24]. **Footprint** [CA21]. **Foraging** [RCP+21]. **Forecasting** [GKGM22, ZBA23]. **Fork** [JLG+23]. **Fork-Based** [JLG+23]. **Formal** [FMBtB22, GXS+22, LN22, LL23, MMT22, MS22, MPH23, WWP+23]. **Formalized** [CZ20]. **Formatting** [LFBM23]. **Former** [Kra25]. **Forum** [MWdA21, TDWB23]. **Forums** [SH21]. **Forward** [WWW+23]. **Fragment** [YM23]. **Fragment-Based** [YM23]. **Fragmentation** [SCL+23, WLC+20]. **Fragmentation-Induced** [WLC+20]. **Framework** [AB24, BBD+24, CF22, CZW+23, DZZ+23, GSN23, JWZ+24, JWW+22, LVEY+23, LMN+24, LPS+24, MHG23b, MVDS20, SRS23, SXM23, SXS+24, SFC+22b, SR21, TLLV20, XHT+24, YXF+22, ZXW24]. **Framework-Specific** [SFC+22b]. **Frameworks** [CA21]. **Framing** [MTR21]. **Free** [AHH22, BKR+20, BSFR22, GSXH22, HBH20]. **Free-to-Download** [AHH22, HBH20]. **Free/Libre** [BKR+20]. **Free/Libre/Open** [BSFR22]. **Front** [ZWC+23]. **Front-Running** [ZWC+23]. **FSMs** [EFHT21, THBEF23]. **Fully** [HAC+23, LCW+23]. **Function** [BEK+23, CCPP23, CLL+22, NDD+22, PXY+23, PFAC22, WMY+23, YWL+23]. **Functional** [AFG+21, LN22, MAG+22, MBE+23, MC25]. **Functionality** [ODTS23]. **Functionality-Agnostic** [ODTS23]. **Functions** [ADS22]. **Fusing** [HJC+22, WGL+24a]. **Fusion** [MBD+25, YYW24, YFZ+23]. **Future** [SHF25, ZQS+24]. **FutureWare** [MPM21]. **Fuzz** [MZH22, GXD+24]. **Fuzzing** [GXD+24, HML+24, JFW+25, MHH+21, MC22, PBS+21, ZRDD22, ZWX+23, ZKR23, ZWL+23b, ZWS+24]. **Fuzzy** [DGY+22, GGMD23].

GALS [ZSM23]. **Game** [GCSHB21, MWW+25]. **Gamification** [LMZ+22]. **Gamified** [CFA+24]. **Gan** [ODTS23]. **Gap** [SPT23]. **Gaps** [LJKC20]. **GCN** [ZLC+24a]. **GDPR** [CAAB23]. **Gender** [LMHWH24, PMF+22, PFR+22, RS22]. **Gender-Biased** [PMF+22]. **Gender-Inclusion** [PFR+22]. **General** [KYAY24]. **Generalisation** [PWSG25]. **Generalized** [EFM+23]. **Generate** [CFM24, GMN+22, LCP+24, ZLY+24b]. **Generated** [CCA+24, TMB24]. **Generating** [ATJ+24, DDP+23, HAC+23, KGZS24, LLL+23, LC23b, NHSR22, RTJ+22, TZJ+24]. **Generation** [AMLS+23, AYY+22, BMPR21, BT24, CGN+23, DPRVG+23, EVLVB+22, FNS+24, FYS+23, FA25, GLPP21, GSKV22, GStZ+23, HSd25, HHCZ25, JTA+23, JSW+23, Kor25, LHJ+24, LPS+24, LGC+22, LN22, LSZ+22, LTL+24b, MSV22, MBGC22, OD25, RLL+22, SNET24, SHWW24, SYW+24, SGTY22, SGP+23, TLZL24, WPGB22, WCW+24, WPL+25, WYGL24, XWY+24, YM23, YZC+24, YZP+22, ZHHA23, ZQS+24, ZZF+24, vSSE23]. **Generative** [ZRDD22]. **Generic** [LTL+24a, WXG+21]. **Generics** [LTL+24a]. **Generics-Guided** [LTL+24a]. **Genetic** [ATJ+24, DGY+22, DPZL20, GMN+22, NPZL20, PZC22, PWA+21, YB20]. **GenMorph** [ATJ+24]. **GenProgJS** [CHLV25]. **Geographic** [PFR+22]. **Geometric** [SPK22]. **Gestures** [BCCH+23].

Ghost [RKM22]. **GitHub** [BXLM21, GMBv20, HHZZ23, JSC+24, KKN+21, LYW+23, ZWB+21]. **Gitter** [EAGZ22, JSC+24]. **Giving** [WWK+23]. **Global** [LPS+24, LXS+23, TMA+24]. **Global-Aware** [LPS+24]. **Globally** [HM25b]. **GNNs** [LXS+23]. **Go** [dAAvdH23, CMAS22]. **Goal** [MMZF21, ZZF+24]. **Goal-Setting** [MMZF21]. **Goals** [KUC+21]. **Gold** [TGW+22]. **Gone** [GSXH22]. **Gonna** [HSB+23]. **Good** [MMZF21, MBBZ21, YWR23]. **Google** [HBH20, PIFJ22, TZZ23]. **Gotcha** [YZW+24]. **Governance** [APCs22]. **GPT2SP** [FT23]. **Grained** [BLQ21, FWPG25, SAK+23, TNHB24, WTC24]. **Gram** [DLC+22]. **Grammar** [UC21]. **Granular** [GRR+23]. **Granularity** [KTJ21, NLCK+23]. **Graph** [AS23, ALL+21, BLDL24, BEK+23, CGR+23, CSZ+24, CWQ+25, GZ24, HB21, JM22, LQW+24, LDP+24, LZP+23, MSV22, MAG+22, MSJP23, QLH+24, WGY+24, YGL+25, ZLXY23]. **Graph-Based** [CSZ+24, MAG+22]. **Graph-of-Code** [AS23]. **Graphical** [MBCC+20]. **Graphs** [DB22]. **GraphSearchNet** [LXS+23]. **Greedy** [LZL+22]. **Grey** [KMB23a]. **Greybox** [PBS+21]. **Grounded** [FEA23, Hod22, MHB22a]. **Groups** [SVOJ21, SHE+22]. **Guarantees** [MM22a]. **Guess** [CDMM24b]. **GUI** [CDMM24a, CDMM24b, CFA+24, PXP+22, ZLC+24a, ZLZ+24]. **GUI-Guided** [PXP+22]. **Guidance** [LCY22]. **Guide** [PATB23, ZWDZ25]. **Guided** [DPZL20, FTH+21, LTL+24a, MWW+25, NPZL20, PXP+22, SXM23, TJZ+22, WZS+22, ZRDD22, ZLA+23, ZKR23]. **Guidelines** [KMB23b, MCG24, PK25, SVOJ21].

Habits [MMZF21]. **Handling** [LL23, MHG23b, WNP+21, ZYZY23, ZMH+21]. **Hard** [HM25a]. **Hard-to-Specify** [HM25a]. **Hardware** [SHWA23]. **Hashing** [MC22]. **Hazard** [SSBA23]. **Heads** [PSA+20]. **Heavy** [IKW23]. **Hell** [SPH+22]. **Help** [KRB22, KTP+20]. **Heterogeneous** [BLDL24, BK23, CJL+21, CGR+23, CSZ+24, FYS+23, HB21, PEM21, TLW21, ZWH+24, dASC21]. **HetFL** [CSZ+24]. **Heuristic** [GSKV22, JLJ+22, SYW+24, ZXW24]. **Heuristics** [CHB+22, LWL+23]. **Hidden** [ZTW21]. **Hierarchical** [CGSV22, FNT+23, HLT+21, WZS+22]. **High** [GStZ+23, JWZ+24, ZWL+23a, ZZH23]. **High-Level** [JWZ+24]. **Highlighting** [PWSG25]. **Highly** [MMT23, TLLV20]. **Highly-Parallel** [MMT23]. **Historical** [FRGCH20, HNJA24, WCT+21]. **Histories** [ZWDZ25]. **History** [ARdNF+22, GKGM22, HTA24]. **hmCodeTrans** [LZZ+24]. **Holistic** [CPX+22, FCT+25]. **Home** [MWB+21]. **Homogeneous** [MBD+25]. **Horizon** [MMT22]. **Horizons** [ZHML22]. **Hosted** [ALL+21, GMBv20]. **HPC** [PBC+22]. **HSTCG** [SYW+24]. **HTML5** [MVR+23]. **Human** [CCPP23, FW23, GBP23, HGHM22, HMFL23, HLX+24, HSH+22, HPW+22, KSO+23, LZZ+24, PFAC22, SMPH22, ZHHA23]. **Human-Centric** [KSO+23]. **Human-in-the-Loop** [GBP23, ZHHA23]. **Hunting** [LLZ+23]. **Hybrid** [BCJ+22, CCPP23, HSS+25, HWZ+21, LGC+22, TSBB20, ZLA+23, ZLY+24b]. **Hyper** [GSKV22]. **Hyper-Heuristic** [GSKV22]. **Hyperparameter** [AYA+22, MFM23]. **Hypervolume** [DPZL20, NPZL20]. **Hypotheses** [SMS+25].

IBM [NBO22]. **Identification** [GZW+22, HLT+21, JLC+21, MNS+23,

NNL+20b, QHL+23, SFP+21, TNHB24, TMC+22, TMA+24, YXF+22]. **Identifier** [HSEW24, ZLG+23]. **Identifiers** [NDA+22]. **Identify** [FRGCH20]. **Identifying** [DHB21, DPH+22, NR23, NNL+20a, RKM22, SH21, SSBA23, VPBB23, XZY+23, YFTM22, ZXW24, ZHX+23]. **Idiomatic** [ZXZ+24]. **Idioms** [ZXZ+24]. **IEEE** [Kor25, Ano20a, Ano21, Ano22]. **II** [HL25]. **Image** [FYZ+25, HFS+23, LSVS+24, LFZ+22, XLC24b, YFZ+23, ZRDD22]. **Image-and-Text** [FYZ+25, YFZ+23]. **Image-Based** [ZRDD22]. **Image-Level** [XLC24b]. **Impact** [AKA+22, CGC25, FXdC+21, FRS+23, FSRJ20, GdCZH21, GRHJ22, GZZ+23, HJL+22, JTH21, JZC+23, KKI25, KTJ21, KPTJ25, KGS23, LTH22b, PKH+21, PCY22, RWKH21, RWO+22, RPNR22, SBDR22, SPv20, THM20, TH21, TDV+21, VR24, Wey25a, Wey25b, YBSM21, ZTW21, dMS+22, vdLWHR22]. **Impacted** [FRGCH20]. **Impacts** [MHDH+22, TYM22]. **Impaired** [ZLZ+24]. **Implementation** [APHL22, MEW22, PHL24, WLGT23]. **Implementations** [LKW+24, MWB+21]. **Implications** [FW23, LFaG+22]. **Implicit** [WPXM23, ZYC+22]. **Importance** [APHL22, KMSG22, RWO+22]. **IMPR** [WCW+24]. **Imprecision** [XCM24]. **Improve** [AMS21a, AJBTMN23, BSMM22, CDMM24a, CDMM24b, MC22, PZC22, QZC+21]. **Improved** [ALD23, JBS+22, RML+23]. **Improvement** [BT24, JCHT21, RTJ+22]. **Improvements** [OSdO+25]. **Improving** [AKA+22, BLDL24, BLLZ22, CCW22, GCSHB21, GSN23, HHCZ25, JK21, MSJP23, WCW+24, YSSH22, YTWM21]. **In-Depth** [SABZ22]. **Incentivizing** [RBPS20]. **Incidents** [APM+22]. **Include** [KMB23a]. **Including** [PFR+22]. **Inclusion** [PFR+22]. **Incomplete** [THBEF23]. **Inconsistency** [GSGM24, WXG+21, XGW+24]. **Inconsistent** [BCJ+22, LGL+23]. **Increasing** [RBB23]. **Indeed** [LZL+23]. **Independence** [DXFJ24]. **Independent** [KTSS20, SZ23]. **Index** [Ano20a, Ano21, Ano22, SA23]. **Indicator** [DPZL20, NPZL20]. **Indicators** [GPG21, GSFO23, JBL21]. **Induced** [WLC+20]. **Inducing** [NNL+20b, RKM22, TNHB24, ZH25]. **Inductive** [GWGH21]. **Industrial** [HNJA24, PGSS22, RMT20, ZPX+21]. **Industry** [FGMS22, LSAS23, MG20, TDV+21]. **Infer** [NND22]. **Inference** [AMHW22, CHM24, GLZ+23, HPX+25, PMGM22]. **Inferring** [GEJM22, ZWM22]. **Influence** [CCPP23, Kor25, LGL+23, MZH+25, PAA+21]. **Influential** [Par25]. **Informal** [DPV+21]. **Information** [AB24, CPX+22, CCW22, DDP+23, ESMM23, GMWL22, HHCZ25, KMCA25, LPM+22, RCP+21, VFX+21, YYW24]. **Informed** [MMS+21, RTJ+22]. **Infrastructure** [DDPT22, LLM+23, RP23, SSS24]. **Infrastructure-as-Code** [DDPT22]. **Inheritance** [WXY+23a]. **Inhibit** [MRTM22]. **Injection** [SR21, TSBB20, WYN+23, ZWLD24]. **Injections** [ZRL+24]. **Inline** [LSZ+23a, ZZC+23]. **Input** [CMPB24, DLP+24, LDP+24, MC22, RLL+22, SFP+21, ZH25]. **Inputs** [AMLS+23, SPH+22]. **Insights** [MZH+25, SPS+24, TMS23]. **INSPECT** [KR24]. **Inspection** [LS23, YTWM21]. **Inspections** [PSV25]. **Inspired** [RBZ22]. **Instability** [BL23]. **Instance** [LLZ+23, NSMMA23, vBGC+23]. **Instrumentation** [CZW+23]. **Integer** [MMS+21]. **Integrated** [IAM+20, TSBB20]. **Integrating** [GMWL22, SAPGIM22, SGTY22]. **Integration** [AHH22, DDP+23, EWL+22,

FYZ+25, GM20, GEJM22, GHZ23, JZZ+21, LV22, LZM+23, SOM22, WAM24, YBKB23]. **Integrations** [MWB+21]. **Integrity** [DHB21]. **Intelligence** [LQG+25, WW22, WYG+23]. **Intelligent** [ARdNF+22, AGT+23, HDC+23]. **Intensity** [PAA+21]. **Intensive** [GKS+23, RMT20]. **Intent** [AMO24]. **Intention** [HXLM20]. **Inter** [BHMS23, LCS+25, MXR+22, PGPa+22]. **Inter-Coder** [PGPa+22]. **Inter-Contract** [MXR+22]. **Inter-Dataset** [LCS+25]. **Inter-Team** [BHMS23]. **Interaction** [ASC+23, BJ22, MJY22, NNL+20b]. **Interactive** [AKM+20, DPRVG+23, FNS+24, LZZ+24, RAK+22, ZHX+22, dCC+22]. **Interacto** [BJ22]. **Interception** [XYWX24]. **Interception-Based** [XYWX24]. **InterEvo** [DPRVG+23]. **InterEvo-TR** [DPRVG+23]. **Interfaces** [MBCC+20, NWCS20]. **Interleaved** [CWQ+25]. **Interleaving** [NNL+20b]. **Interlocking** [VBW+21]. **Internet** [FAB+22]. **Interns** [PGSS22]. **Interoperations** [HLR24]. **Interplay** [GHZ23]. **Interpretable** [KKC+23]. **Interpretation** [JHA+20, JSW+23, JTH21, LTH22b, RWO+22, THM20]. **Interpreter** [MSG21]. **Interpreting** [PVC+24]. **Interrupt** [WGW+22]. **Interrupt-Driven** [WGW+22]. **Intervention** [TYL+24]. **Interview** [MG20]. **Interviews** [SKAP20]. **IntRepair** [MMS+21]. **Intrinsic** [KR24]. **Introducing** [CSS22, MC22]. **Invalidator** [LCLL+23]. **Invariants** [KZWS25, NND22]. **Investigating** [TDV+21, IKW23]. **Investigation** [AMG+23, CCF+22, GZZ+23, HMFL23, LZM+23, RVSP20, ZLH+24]. **Invocations** [WLT+23]. **IoT** [ASC+23, Ebb23, LMN+24, MSMG24]. **IoTCom** [ASC+23]. **Isolating** [TZJ+24, ZH25]. **Isolation** [WXL+23]. **Issue** [GZW+22, LYW+23, RML+23, TDWB23, ZXW24, ZWB+21, BLDL24]. **Issue-Addressing** [ZWB+21]. **Issue-PR** [BLDL24]. **Issue/Pull** [LYW+23]. **Issue/Pull-Request** [LYW+23]. **Issues** [KSO+23, LCW+23, MVR+23, MCY23, QCL+24, WWW+23, WLC+20, YNWC24, ZZX+23, ZXB+23]. **iTCRL** [TYL+24]. **Iterative** [CBR+25].

Java [AXR+23, DHB21, GMBv20, GSGM24, KGZS24, LFBM23, MM22b, PMC+21, PBJ24, SVTTB23, TPBF23, YBSM21, YB20, ZKX+23, ZWY+20]. **Java-Based** [TPBF23]. **JavaScript** [AST23, CASA22, CHLV25, dAFdOBT21, JCA+22, KTSS20, MNS+23, MSG21, TAV20, ZBA23]. **Jitterbug** [YFTM22]. **JMH** [CBLA21, JTA+23]. **JNI** [HLR24, PLHR23]. **Job** [SZB+21]. **Joint** [GZW+22]. **Journal** [Dwy25, ZTW21]. **JUnit** [SRG+23]. **Just** [CM23, CSS22, FXdC+21, LTH22b, LXL+23, QGX+22, RPNR22, SM23, TMF23, WGH+24, YXF+22, GMWL22]. **Just-In-Time** [LTH22b, LXL+23, QGX+22, RPNR22, SM23, TMF23, WGH+24, YXF+22, CM23, CSS22, FXdC+21]. **JVM** [ALL+21, ZMH+21]. **JVM-Hosted** [ALL+21]. **JVMs** [HLR24].

K-core [QZC+21]. **K-ST** [WWP+23]. **Keep** [SRG+23]. **Kernel** [HLT+21, LKW+24, MAP+22, PQM+21, TLW21, ZYZY23]. **Key** [HPX+25, RMT20, XZY+23]. **KG** [GZ24]. **Knowledge** [APM+22, BLDL24, CPJ21, CHM24, FGMS22, GZ24, HJC+22, HLX+24, KNJM21, LQW+24, LZP+23, WPXM23, ZJR+21]. **Knowledge-Aware** [BLDL24, HLX+24]. **Knowledge-Based** [CHM24]. **Kotlin** [MM22b].

Label [WZXL22]. **Labeled** [TTO23]. **Labelling** [TYM22]. **Labels** [LGL+23]. **Lack** [SHE+22]. **Laid** [SHE+22]. **Lamppost**

[Med25]. **Landscape** [WHC+24]. **Landscapes** [ZHML22]. **Language** [ABCS22, CZ20, DPV+21, FGB23, FHB24, HSW+25, KGZS24, KYAY24, KSW25, LZL+23, LCS+25, MSJP23, NM24, NMAR24, PGB24, SNET24, SdSS+21, SXS+24, TZJ+24, VSB24, VPBB23, WWP+23, WHC+24, XWY+24, YZC+24, YNWC24, ZXK+24, vdMTH23]. **Languages** [ALL+21, BFP+23, GdLCS22, LJKC20, ZLH+21]. **Large** [BXLM21, BHMS23, CXLX21, CCW23, Ebb23, EOH23, EWC22, FHB24, HB21, HSW+25, IGLP23, KYAY24, KSW25, KGvDG22, LWW+20, LSZ+23a, LCS+25, MJT+22, RML+23, SNET24, SWC+22, SXS+24, TII22, TZJ+24, WHC+24, XWY+24, ZZX+23, ZXB+23, ZSC+24, ZXK+24]. **Large-Scale** [BHMS23, CXLX21, CCW23, Ebb23, EOH23, EWC22, HB21, IGLP23, KGvDG22, LWW+20, LSZ+23a, MJT+22, SWC+22, TII22, ZZX+23, ZXB+23, ZSC+24]. **Latency** [KACS24, TC23]. **Latent** [VFX+21]. **Later** [HL25]. **Layered** [HSR21, NC24]. **Layering** [SSSC22]. **LDA** [WXH21]. **Leader** [KDF24]. **Leader/Follower** [KDF24]. **Leads** [SRT+22]. **Leak** [MAN+24]. **Leakage** [LCS+25, MPH23, YZW+24]. **LeakageVerif** [MPH23]. **Leaks** [CXTZ24]. **Lean** [LMN+24]. **Leap** [HSW+25]. **Learn** [KNJM21, Men25]. **Learned** [KKC+23]. **Learning** [AMS21a, ADS22, APM+22, AMDD22, AST23, BKB22, BLDL24, CIM+24, CHB+22, CKDR22, CAA+24, CAN24, CKT+21, CGR+23, CKM23, CPP+23, CFM24, CQL+23, DTP+21, DLP+24, DMS+23, FSC+24, FTH+21, GJL+21, GWMZ23, GCB25, GF23, HZL+24, HMC+22, HLT+21, HGX+24, JDS23, JFW+25, JFH+24, KL22, KMP23, LLZ+23, LWL+23, LWBG24, LJX+21, LSZ+22, LSZ+23b, MXC+21, MZH+25, MIL+24, MAP+22, MCP+23, MSJP23, MBCC+20, MYAA24, NSHL+23, ODTS23, PXY+23, PT23, PR22, RWKH21, SSGG23, SMPH22, SA23, SPK22, SAK+23, SGY+24, TYL+24, TZL+24, TMC+22, THEF+24, UC21, UO22, WXLM21, WLNT20, WSQJ21, WZS+22, WHG+23, WPL+25, WXY+23b, WWC20, WGY+24, XHT+24, XLY+24, XHS+22, XGW+24, YLA+21, YHG+24, YYW24, YM22, YTWM21, YMC+23, ZHML22, ZRDD22, ZGZ+23, ZLH+23, ZYF+23, ZLY+24b, ZAB+23, ZABS25]. **Learning-Based** [CAA+24, HLT+21, MZH+25, MBCC+20, NSHL+23, ZGZ+23]. **Legacy** [MBE+23]. **Legion** [JBS+22]. **Length** [XLC+24a]. **Lessons** [FW23, KKC+23]. **Let** [WNB+23, dAAvdH23]. **Level** [CSS22, CZW+23, DDP+23, GRR+23, JWZ+24, JZC+23, LLZ+23, LPS+24, MXC+21, OSKH23, PT23, SGY+24, WTC24, XLC24b, YGL+25]. **Leveraging** [FRGCH20, GYF+23, SHC+22, SCZ+23, SXYG25, ZXK+24]. **Libraries** [CXLX21, HXJ+23, JFW+25, TWZ+22, ZLF+22, ZFC+24]. **Library** [AHH22, ADS22, HLC+22, LWW+20, LQW+24, LPS+24, LZP+23, WWK+23, ZLL+22]. **Libre** [BKR+20, BSFR22]. **Licenses** [KC21]. **Lie** [CGC25]. **Life** [HLPK22, IGLP23, MBBZ21, ZXB+23]. **Lifetime** [NMAR24]. **Lift** [LTL+24b]. **Light** [IKW23]. **Lightweight** [GPG21, SCL+23, YZC+24]. **Like** [BKWZ24, NLM23, PMKY23]. **Likelihood** [ZWB+21]. **Likely** [CXLX21]. **Limited** [MEW22]. **Line** [HSB+23, KMP23, PT23, SAC23, XHL+22, YGL+25]. **Line-Level** [PT23, YGL+25]. **Linear** [CZ20]. **Lines** [GdLCS22, NNNV22, WTT+22]. **Linguistic** [ZXW24]. **Link** [BLDL24, BL23, SGY+24]. **Linkage** [JSW+23]. **Linking** [TDWB23, WPXM23]. **Links** [ACC+25, LXL+22]. **Linters** [TAV20]. **Linux** [HLT+21, LKW+24, MAP+22,

PQM+21, ZYZY23]. **List** [Ano23, Ano24, Ano25]. **List*** [Ano20b]. **Listen** [AST23]. **Literal** [WPXM23]. **Literature** [AMO24, APdS23, CXB23, EWC22, HGHM22, LBK21, MIL+24, SKAP20, SABZ22, dPSDdAM21, TEM22, WHG+23, ZLF+22]. **LIVABLE** [WGL+24b]. **Live** [LSVS+24, ZMH+21]. **LLM** [FNS+24, HSd25, YNW24]. **LLM-Based** [FNS+24, HSd25]. **LLMs** [FA25, LHJ+24]. **LLVM** [JZR+22]. **Load** [dAFdOBT21, XLC+24a]. **Local** [KZWS25, LPS+24, TMA+24]. **Local-Aware** [LPS+24]. **Local-First** [KZWS25]. **Localisation** [SY21]. **Localization** [CAN24, CCW22, CSZ+24, GLK+20, GRR+23, HTL+21, JBS+22, MAN+24, NNNV22, QGX+22, WCT+21, XCP+22, YXF+22, ZLL+21, ZCZ+21, ZLM+23, ZSC+21, ZLX+21, aFbPS22]. **Localizing** [LCW+23, LC23a, YWL+23]. **Locating** [LCL+22, MHBS23, VFX+21, ZRL+24]. **Location** [HJC+22, PZC22, RVK+22]. **Locations** [TJH+24, XCK+22]. **Locking** [BCJ+22]. **Log** [CWQ+25, DLC+22, LXL+21, LLC+22, LLL+22, MZH+25, OSKH23, XCM24, YSSH22]. **Log-Based** [XCM24]. **Log-Entity** [CWQ+25]. **LogAssist** [LLC+22]. **Logging** [GRZS23, LSA+21, LCYS22, LZWH22, LHJ+24, XCM24]. **Logic** [CZ20, KRB22]. **Logical** [DXFJ24]. **Logram** [DLC+22]. **Logs** [CCW22, LCC+23, vBGC+23]. **Long** [BXLM21, HPX+25, LSVS+24, WGL+24b]. **Long-Tail** [HPX+25]. **Long-Tailed** [WGL+24b]. **Long-Time** [BXLM21]. **Longitudinal** [CR21, CCW23, MJT+22]. **Look** [CCM+23, HSW+25, NZZ21, PSA+20]. **looked** [GMWL22]. **Looking** [RX25, XHL+22]. **Loop** [GBP23, GY23, ZHHA23]. **Low** [WCG+21, WMY+23, ZLC+24a]. **Low-Cost** [WMY+23]. **Low-Overhead** [WCG+21]. **LTL** [KRB22]. **LTL-Based** [KRB22]. **LTM** [PGB24]. **LUNA** [SXS+24].

Machine [AMS21a, AMDD22, BKJD22, DLP+24, LDC+23, LZZ+24, MIL+24, MBCC+20, MYAA24, PR22, RWKH21, SMPH22, SA23, TMC+22, THEF+24, UC21, WXLM21, WHG+23, WXY+23b, ZHML22, ZGZ+23]. **Machine-Based** [THEF+24]. **Machine/Deep** [WHG+23]. **Machines** [EFB21, EMM24, GBJ+23, WH23]. **Macro** [NMA+23]. **Macro-Management** [NMA+23]. **Magnifier** [BSK+22]. **Maintainability** [JZC+23]. **Maintainable** [SSSC22]. **Maintainers** [KACS24]. **Maintenance** [BL23, XCK+22]. **Makes** [KTH+22]. **Making** [DC24, PR22, SHE+22]. **Malware** [CYC+24, MS22, MBD+25]. **Management** [BWAH22, CCM+23, CXTZ24, KM25, LDRK24, MÇS+24, NMA+23, RML+23, RP23, TWZ+22, TDWB23, YSSH22, ZLC+20]. **Managing** [ABON22, AGT+23, BSFR22, SMS+25, WLL+22]. **Manipulation** [vSSE23]. **Manual** [HNJA24]. **Many** [NZZ21, PDV23]. **Many-Sorted** [PDV23]. **MAP** [ZWL+23a]. **MAP-Coverage** [ZWL+23a]. **Mapped** [TJH+24]. **Mapping** [AGT+23, GRZS23, HJL+22, MST+20, SGJ20, ZTT+23, dASC21]. **MapReduce** [MBdlRT24]. **Markets** [LWW+20]. **Markov** [LTH+22a, WYGL24]. **Markovian** [PBCV21]. **Mask** [DiFBK24]. **Masking** [GXS+22]. **Massively** [JBS+22]. **MASTER** [TZL+24]. **Matching** [BK23, ZLW+23]. **Material** [KMB23a]. **Matter** [BL23, HSEW24]. **Matters** [WZXL22]. **Maximize** [LSZ+23b]. **McCabe** [Kaf25]. **Meaning** [WPXM23]. **Means** [SPK22]. **Meant** [APM+22]. **Measured** [JBL21]. **Measurement** [BWR25]. **Measurement-Based** [BWR25]. **Measurements** [HDW+23]. **Measures**

[Wey25b]. **Measuring** [BBS24, IW23, MWTV24]. **Mecha** [MBD+25]. **Mechanism** [LAY24, ZRL+24]. **Mechanisms** [BHMS23, FRS+23, RBZ22]. **Media** [YPW24]. **Mediator** [DiFBK24]. **Medical** [BBD+24]. **Meetings** [dAAvdH23]. **Member** [JLJ+22]. **Membership** [YZW+24]. **Memory** [BCBA24, CZW+23, CXTZ24, IWD23, MAN+24, TJH+24]. **Mending** [WLY+21]. **Mentors** [TZZ23]. **Merge** [CFP+21, DMS+23, GMBv20, LFBM23, SHC+22, VHFA22]. **Merging** [END23, LTH22b]. **Mesh** [DiFBK24]. **Message** [LGC+22, XWY+24, ZQS+24]. **Meta** [CCL24, WGY+24, ZYF+23]. **Meta-Learning** [ZYF+23]. **Meta-Path** [WGY+24]. **Metaheuristic** [BSV24]. **Metamodels** [HSR21]. **Metamorphic** [AJBTMN23, AYY+22, ATJ+24, CPGB23, CMPB24, DZZ+23, NSW+22, QZCP22, SFP+21, XLC24b, ZSCT20, ZTW21]. **Method** [AMO24, JM23, JSW+23, PPJ22, PEM21, PMVA24, SGP+22, SGY+24, TFF+22]. **Method-Level** [SGY+24]. **Methodological** [LCY22, PVB+21]. **Methodology** [ADBL24, MMZ+22, PPP+22]. **Methods** [EWC22, FMBtB22, FXP+24, HSH+22, NXL+22, RWO+22, SHF25, SJR+22]. **Metric** [KSJ+21, SFP+21]. **Metric-Based** [KSJ+21]. **Metrics** [BK23, DDPT22, GRHJ22, JTH21, MM22a, SHWW24, SY21]. **Microbenchmark** [JTA+23, LYA24]. **Microservice** [CCA+24, DXFJ24, GRR+23, LSVS+24, TYL+24, ZPX+21]. **Microservices** [AME+23, ZLH+24, ZLZ+25]. **Middleware** [MPM21]. **Migrate** [MM22b]. **Migrations** [LSC22]. **Million** [LSZ+23a]. **Mimicking** [TMB24]. **Mind** [SPT23]. **Mindfulness** [BDP+22]. **Mindset** [IBR23]. **Mini** [WFL+24]. **Mini-App** [WFL+24]. **Minimization** [CMPB24, PGB24]. **Mining** [ATFJ22, CXLX21, CWQ+25, HXLM20, JM22, JM23, LKB+21, LCC+23, LLL+22, Men25, NRZ21, SH21, SJR+22, UK21, VHFA22, ZWC+23, ZWDZ25]. **Mis** [BBS24, GM20]. **Misconfiguration** [ZHX+23]. **Mislabeled** [FXdC+21]. **Missed** [WGH+24]. **Missing** [WHT+25, HPX+25]. **Mission** [MTA+23]. **Missions** [MTP+21]. **Mistakes** [SMPH22]. **Misuse** [ATFJ22, GM20, KL22, LLS22]. **Misuses** [FXP+24, KMSH22, ZKX+23]. **Mithra** [ALT22]. **Mitigate** [NH22]. **Mitigating** [GTL+23, MYAA24, VMA22, XWM+22, XCM24]. **Mitigation** [GSXH22]. **Mixed** [HFG+23, SGP+22]. **Mixed-Method** [SGP+22]. **ML** [LZP+23, SSBA23]. **ML-Enabled** [SSBA23]. **ML/DL** [LZP+23]. **MLOps** [WZ24]. **MM** [SXYG25]. **MM-SCS** [SXYG25]. **MMO** [CCL24]. **Mobile** [Ala23, BCCH+23, CA21, FMBC+23, HLC+22, HKSH22, KSO+23, LFZ+22, MPM21, MTA+23, MS22, MBCC+20, PXP+22, PL21, YFZ+23, YWL+23, YFD+24, ZLZ+24, ZSC+21]. **Mockito** [WXY+23a]. **Mocks** [TMB24]. **MoCo** [JFW+25]. **Model** [AFG+21, AMHW22, BDR+20, BJ22, BS24, CPJ21, CCPP23, CGC25, CBWV22, EA22, FCGA23, FGB23, FTH+21, GMN+22, GZLW24, HL25, HSEW24, IAM+20, JZS+24, JTDG22, KUC+21, LS23, MIL+24, MEW22, PPHZ24, PDM+21, PPJ22, PCM23, PFAC22, PDV23, QZC+21, SXS+24, SYW+24, SGTY22, TTO23, WPL+25, WTT+22, WYGL24, WGY+24, XSSM22, YZW+24, ZLC+24a, ZXK+24, ZWH+24]. **Model-Agnostic** [JTDG22, WTT+22]. **Model-Based** [FGB23, HL25, PCM23, SXS+24]. **Model-Driven** [AFG+21, CCPP23, MIL+24, PDM+21, PPJ22, PFAC22]. **Model-Integrated** [IAM+20]. **Modeling** [BDP+22, CDK20, GZ24, HSR21, KC21, MMGB25, MKJ21, MAG+22, NMA+23, TLLV20, VDBP+22, ZSM23]. **Modelling**

[GdLCS22, MVDS20, RCS+23, WH23]. **Models** [AKT22, BKJD22, BLS21, CDAR22, CCP+22, ED23, FHB24, FFR+24, HLPK22, HGX+24, HSW+25, HHCZ25, IWD23, JTH21, JTDG22, KYAY24, KSW25, LZL+23, LTH22b, LC23b, LCS+25, MSV22, NM24, PVC+24, PGB24, PZC22, RLL+22, RKH+22, RPNR22, RCMB22, SNET24, SPK22, SM23, SXS+24, THM20, TZJ+24, WCW+24, WHC+24, WXY+23b, XWY+24, YZC+24, YZW+24, YXZ+24, ZFS+24]. **Modern** [BJ22, HDC+23, PR22]. **ModGuard** [DHB21]. **Modification** [LCC+23]. **Modify** [LCP+24]. **Modularization** [TII22]. **Modularly** [HLGX23]. **Module** [SABZ22, VCMG20]. **Modules** [DHB21]. **Modulo** [ADP21]. **Mole** [MHAZ24]. **MoMIT** [MSG21]. **Monitoring** [PBJ24, SLZR22, ZABS25]. **Monolith** [AME+23]. **Monolithic** [JLC+21]. **Most** [PR22]. **Motivation** [FdS20, LMZ+22]. **Motivations** [DWA22, LMZ+22]. **Moving** [KKN+21]. **MPI** [SGP+23, WCW+24]. **MR** [GZ24]. **Much** [BL23, YLH+24]. **Multi** [CGR+23, CCL24, DGY+22, GZ24, GRR+23, HJC+22, LV22, MXC+21, NLCK+23, OSKH23, PWA+21, RAK+22, RVSP20, SOM22, SLS+24, SdSS+21, SGP+23, TSPH22, TZL+24, TC23, XYWH22, YNWC24, YYW24, YDLW20, YB20, ZLS+23, ZHX+23]. **Multi-Armed** [LV22]. **Multi-Component** [OSKH23]. **Multi-Derivation** [SLS+24]. **Multi-Features** [HJC+22]. **Multi-Granular** [GRR+23]. **Multi-Granularity** [NLCK+23]. **Multi-Language** [SdSS+21, YNWC24]. **Multi-Level** [MXC+21]. **Multi-Misconfiguration** [ZHX+23]. **Multi-Objective** [PWA+21, RAK+22, SOM22, TSPH22, TC23, YYW24, YB20, ZLS+23]. **Multi-Objectivization** [CCL24]. **Multi-Path** [SGP+23]. **Multi-Population** [DGY+22]. **Multi-Rationale** [GZ24]. **Multi-Relation** [GZ24]. **Multi-Relationship** [XYWH22]. **Multi-Source** [TZL+24, YYW24]. **Multi-Study** [RVSP20]. **Multi-Task** [YYW24]. **Multi-Threaded** [YDLW20]. **Multi-View** [CGR+23, YYW24]. **Multigranular** [JZS+24]. **Multilayer** [PMC+21]. **Multimodal** [GZLW24, SXYG25]. **Multimorphic** [TAJ21]. **MultiPL** [CGN+23]. **MultiPL-E** [CGN+23]. **Multiple** [AMG+23, GRR+23, LLZ+23, NNL+20a, QLH+24, RLL+22, TZL+24, ZZF+24]. **Multiple-Graph-Based** [QLH+24]. **Multiplicity** [MSV22]. **Multiprocess** [Lam25]. **Multitask** [YNW24]. **Multitask-Based** [YNW24]. **Multivocal** [APdS23]. **Mutable** [HAC+23]. **Mutant** [EVLVB+22, GOD+23, GSKV22, YZP+22]. **Mutation** [CPB22, DGY+22, GXD+24, OGK+23, PIFJ22, SPS+24, SR21, TJZ+22, TZL+25, VCPB23, WYGL24, WXL+23, YZP+22]. **Mutation-Based** [GXD+24]. **Mutations** [YPW24]. **My** [CBLA21, SFC+22b, WWW+22, YZW+24].

Names [FMN+22, LWCK21]. **Native** [KGZS24]. **Natural** [ABCS22, DPV+21, LJKC20, VSB24, VPBB23, vdMTH23]. **Nature** [GMBv20, SBDR22]. **Navigation** [SBFW22, ZLZ+24]. **NCQ** [RdWT23]. **Nearest** [HCL+24]. **Necessary** [MHAZ24]. **Need** [FSRJ20, LTL+24b]. **Needs** [DWA22, GWMZ23, LPM+22]. **Neighbor** [HCL+24]. **Nested** [NMA+23]. **Nets** [EYW23, VDBP+22]. **Network** [GRHJ22, GZZ+22, JLJ+22, PMC+21, ZLXY23, ZLWC24, ZKR23]. **Network-Based** [PMC+21]. **Networks** [ADBL24, AAB+23, DMZD22, LDP+24, LC23b, MAG+22, MSJP23, QZC+21, RBB23,

SvdALS23, SYLL23, XSQ+23, YGL+25]. **Neural** [ADBL24, AAB+23, BEK+23, CGN+23, CDAR22, CKM23, GZZ+22, JLJ+22, JSW+23, LQW+24, LDP+24, LWL+23, MSJP23, MBD+25, NC24, PVC+24, PPHZ24, RBB23, SvdALS23, SHWW24, SYLL23, XSQ+23, YZC+24, ZWS+22, ZLM+23, ZLWC24, ZKR23, ZYF+23]. **Neural-Symbolic** [MBD+25]. **Neuron** [ZLWC24]. **Newcomer** [PMF+22, YWR23]. **Newcomers** [HZL+24]. **Newly** [LLL+23]. **Next** [GZLW24]. **NFRs** [WLL+22]. **Night** [FSRJ20]. **Nighthawk** [LCW+23]. **NLP** [CAAB23, WPGB22]. **NLP-Based** [CAAB23, WPGB22]. **No** [LTL+24b]. **Node.js** [RdWT23]. **Noise** [MYAA24, RWKH21]. **Noises** [GdCZH21]. **Non** [AFG+21, EFHT21, GMWL22, MC25, PBCV21, PWA+21, SGP+23, THBEF23, ZXZ+24]. **Non-Determinism** [SGP+23]. **Non-Deterministic** [EFHT21, THBEF23]. **Non-Dominated** [PWA+21]. **Non-Functional** [AFG+21, MC25]. **Non-Idiomatic** [ZXZ+24]. **Non-Markovian** [PBCV21]. **Non-Security** [GMWL22]. **None** [Nus25]. **Normalization** [ABON22, ZLG+23]. **Notations** [CRAF23, EA22]. **Note** [BXL+22]. **Novel** [GXD+24, JZS+24]. **Novelty** [XHL+22]. **Novice** [FSRJ20, KTJ21]. **npm** [CASA22, WSP+23, COH22, COH21]. **Null** [SWF+24]. **Number** [QHL+23]. **Numerical** [NND22].

Obfuscation [ZYX+23]. **Object** [Boo25, HLGX23, HLPK22, MBE+23]. **Object-Oriented** [Boo25, MBE+23]. **Object-Sensitive** [HLGX23]. **Objective** [PWA+21, RAK+22, SOM22, TSPH22, TC23, YYW24, YB20, ZLS+23, ZWH+24]. **Objectives** [MSMG24]. **Objectivization** [CCL24]. **Obligations** [MGW20]. **Oblige** [EYW23]. **Observability** [MGW20]. **Observable** [EFHT21]. **Observation** [PC20]. **Observation-Enhanced** [PC20]. **Observational** [ATZ22]. **Observations** [KKN+21]. **Obsolete** [LXL+23, ZWC+21]. **Obstacle** [LvL25]. **Odds** [YCM24]. **Off** [IWD23, YWR23]. **Off-the-Shelf** [IWD23]. **On-Chain** [JWW+22]. **On-the-Fly** [PWSG25]. **On-Time** [KGvDG22]. **Onboarding** [HZL+24]. **One** [MZH22]. **Online** [CM23, GZW+22, SH21, TMF23, WXH21]. **oo7** [WCG+21]. **Open** [APCs22, BKR+20, BSFR22, BGL+21, EVLVB+22, GMBv20, IKW23, JSC+24, KC21, KKN+21, LZWH22, LAM22, MBD+25, NSHL+23, SBDR22, SPS+24, TPK21, TGW+22, YNW24, ZXB+23]. **Open-** [EVLVB+22]. **Open-Set** [MBD+25]. **Open-Source** [LZWH22, SPS+24, TPK21, YNW24]. **OpenStack** [HMIM22, RPNR22, ZZMJ21]. **OpenStreetMap** [AJBTMN23]. **Operating** [LSZ+23b]. **Operation** [END23]. **Operation-Based** [END23]. **Operational** [BMPR21, IWD23]. **Operations** [LCL+22, LL23, PZC22]. **Operators** [ARdNF+22, HSB+23, LLZ+25]. **Opinions** [UK21, UBGK21]. **Opportunities** [GTL+23, LQG+25, PFR+22, WLL+22, ZLK+21]. **Optimal** [BDR+20]. **Optimization** [AYA+22, HNJA24, HKSH22, JZR+22, MFM23, PWA+21, SNNO22, TC23, WAYA24, XSSM22]. **Optimizations** [CFM24]. **Optimize** [WWC+21]. **Optimized** [ADS22, ZWH+24]. **Optimizing** [MMT23]. **Options** [SH21]. **Oracle** [ALT22, HSd25, JCHT21, LN22, SHWW24]. **Order** [JZZ+21, WH23, ZRL+24]. **Orderly** [YZP+22]. **Organizational** [APHL22, IBR23, LLM+23, NM24, TKF23]. **Organizations** [SBDR22]. **Oriented** [Boo25, LZP+23, MWW+25, MHG23b,

MBE+23, TZL+22]. **Origin** [LC23a]. **ORIS** [PBCV21]. **OSS** [DPH+22, LYZ+22, NRPN22, PMF+22, PFR+22, TZZ23, YWR23, ZZMJ21]. **Our** [ZFC+24]. **Outcome** [NRZ21]. **Outdated** [LWCK21]. **Output** [MBGC22, SFP+21]. **Overfitting** [YGM+22]. **Overflow** [BTR22, GZ24, LPM+22, LXL+22, LCC+23, LMZ+22, NLM23, RKP+21, UK21, WCH20, XHS+22, ZWC+21, ZWCH21, ZWL+22, ZZX+23]. **Overflows** [MMS+21]. **Overhead** [WCG+21]. **Overlap** [GZZ+23]. **Oversampling** [YM22]. **Overview** [ZYGR23]. **Oz** [EBM22].

Package [CMAS22, DM21, DMZD22, LCB23]. **Packages** [CASA22, COH22, IKW23, LL23, PMC+21, WHT+25]. **PackerGrind** [XZL+22]. **PackHunter** [WHT+25]. **PageRank** [PMKY23, ZLL+21]. **PageRank-Like** [PMKY23]. **Paper** [Kor25]. **Papers** [Par25]. **Parallel** [MMT23]. **Parallelism** [CBWV22]. **Parameterized** [EK21, KDF24]. **Parameters** [JLZZ20a, RLL+22, ZHX+23, JLZZ20b]. **Parametric** [CPJ21, FCGA23]. **Pareto** [LCY22]. **Pareto-Based** [LCY22]. **Parsing** [DLC+22]. **Part** [NDA+22]. **Part-of-Speech** [NDA+22]. **Partial** [BKJD22]. **Partially** [EFHT21]. **Participants** [CFP+21]. **Participation** [ZZMJ21]. **Partitioning** [AMG+23]. **Party** [CXLX21, HLC+22, HXJ+23, LWW+20, LPS+24, SVTTB23, ZLF+22, ZLL+22, ZFC+24]. **Past** [DMZD22, SHF25]. **Patch** [HLT+21, LCLL+23, XYWX24, XZY+23, ZFS+24, ZXK+24]. **PatchDiscovery** [XZY+23]. **Patches** [LLL+23, YGM+22]. **PatchNet** [HLT+21]. **Patent** [KGS23]. **Path** [BDR+20, SGP+23, WCW+24, WGY+24, LWL+23]. **Pathidea** [CCW22]. **Paths** [CCW22, ZLH+23]. **Pattern** [JM23, VDBP+22, WXY+23b, ZWL+23a]. **Patterns** [AST23, CZ20, EMM24, HJL+22, JM22, KL22, LKB+21, LJL+22, MTP+21, MTA+23, MCK+21, SFC22a, TKF23, TC23, YWR23, ZXW24]. **Pay** [ZWS+24]. **Peak** [HSS+25]. **Pearl** [SLS+24]. **Pearson** [BS24]. **Pegasus** [PBC+22]. **Pending** [NWN+22]. **Perceive** [FMV+22, ZLC+20]. **Perceived** [GLNS22, SZB+21]. **Perceptible** [NRPN22]. **Perception** [CIM+24, HJC+22]. **Perceptions** [NLM23, WXH+20, dAAvdH23]. **PerfJIT** [CSS22]. **Performability** [FCGA23]. **Performance** [BDP+22, CAA+24, CSS22, DXFJ24, FSRJ20, GCB25, GLPP21, HKSH22, HHCZ25, KTSR22, LCL+22, MM22a, PVB+21, PBC+22, QZC+21, RVK+22, SM23, TWZ+22, THM20, TPBF23, WLMR21, ZXL+23, ZXB+23, ZXW24, ZZH23, ZWH+24]. **Performance-Aware** [GLPP21]. **Periphery** [BKR+20]. **Permission** [BBS24, WWW+23]. **Permissions** [LDL+22, SMA+21]. **Persistent** [CDMM24a, DAM23]. **Personal** [APHL22, Cla25]. **Personality** [IYNH21, RS22, WW22]. **Personalized** [WYW+22]. **Perspective** [AMG+23, FAB+22, PCY22, RCP+21, UCD+24]. **Perspectives** [LSA+21]. **Petri** [EYW23, VDBP+22]. **Phase** [LWL+23, LDRK24, YXF+22]. **Phone** [HDW+23]. **Physical** [APM+22, CPB22, LM23, MMT23, MWTV24, SXM23, SPT23, VCPB23, XYAA24, YLA+21, ZWX+23]. **Physical-World** [SPT23]. **Physics** [EA22]. **Pipelining** [GY23]. **Planning** [HAC+23, LTH+22a, PM22, SNNO22]. **Plans** [MWX+24, RTJ+22, SHE+22]. **Platform** [BWAH22, GJL+21, JSC+24, KTSS20, KDVM23, MÇS+24, ZXW24]. **Platform-Agnostic** [ZXW24]. **Platform-Independent** [KTSS20]. **Platforms** [ABCS22, WXH21, dASC21]. **Play** [HBH20]. **PLCs** [WWP+23].

Plumber [WSP+23]. **Plus** [SFP+21]. **Pluto** [MXR+22]. **Point** [FT23]. **Pointer** [HLGX23, LTL+24a, SX20]. **Policies** [AAT+22, YLC+21]. **Policy** [WFL+24]. **Polyglot** [CGN+23]. **Polymorphism** [RBZ22]. **Polymorphism-Inspired** [RBZ22]. **POMP** [MDX+21]. **PopArt** [BBC23]. **Popular** [ZLH+21]. **Population** [DGY+22]. **Porting** [MSG21]. **Positive** [GTL+23]. **Possible** [JZC+23]. **Post2Vec** [XHS+22]. **Postmortem** [MDX+21]. **Posts** [XHS+22]. **Pots** [TGW+22]. **PPChecker** [YLC+21]. **PR** [BLDL24]. **Practical** [ADBL24, PIFJ22, QZC+21, TFF+22, YFD+24, ZLM+22]. **Practice** [BXL+22, FW23, HNJA24, HHZZ23, HPW+22, KGS23, Lic25, MHB22a, SKAP20, SPS+24, TAV20, WFL+24, WLL+22, YBSM21]. **Practices** [ASSB+21, APdS23, CBLA21, DMZD22, EWL+22, GMWL22, GRZS23, IBR23, KUC+21, LVEY+23, LZWH22, VCMG20, WXLM21, WWW+23]. **Practitioner** [FAB+22]. **Practitioners** [FMV+22, IBR23, MG20, ZLC+20]. **Pragma** [JWZ+24]. **Pragma-Related** [JWZ+24]. **Pre** [YCM24, ZFS+24, vdMTH23]. **Pre-Processing** [YCM24]. **Pre-Trained** [ZFS+24, vdMTH23]. **Precise** [DBP23, SWF+24, XLY+24]. **Precision** [WCZ+25]. **Predict** [DHMP23, JDS23, WWC20]. **Predicting** [AMDD22, DTP+21, FHB24, KACS24, WTT+22, XCK+22]. **Prediction** [BLDL24, BK23, BXLM21, CM23, CWH+21, CJL+21, CSS22, CXB23, DDPT22, FXdC+21, GRHJ22, GZZ+23, HLC+22, Her21, JLJ+22, JTDG22, KSJ+21, LZJ+23, NXL+22, OSKH23, PT23, QZC+21, RPNR22, SM23, TMF23, THM20, TLW21, TZL+24, TYM22, WXH+20, WLNT20, WZXL22, YHG+24, YYW24, YM22, YGL+25, YMC+23, ZFS+24]. **Predictive** [LWL+23, LZM+23, SM23, ZLM+22]. **Predictor** [FGB23, LZJ+23]. **Predictors** [Men25, PATB23]. **Predicts** [MHJS+21]. **Preference** [LTH+22a, LYZ+22, SB24]. **Preparation** [CXB23]. **Preprocessing** [SWF+24]. **Presence** [NNL+20a, XZY+23]. **Present** [SHF25]. **Preservation** [LFBM23]. **Preserving** [HSB+23, ZGZ+23]. **Pressure** [STRM23]. **Pretrain** [XYAA24]. **Pretrained** [JZS+24, LZL+23]. **Prevalence** [KLM24]. **Prevent** [DHMP23]. **Preventing** [ZRL+24]. **Pride** [PMKY23]. **Principal** [ZBA23]. **Principles** [MCK+21, PVB+21, SAPGIM22]. **Prioritization** [BKB22, DLP+24, DPZL20, FYZ+25, LYA24, LZL+22, LDP+24, LV22, LAM22, MN22, NPZL20, YBKB23]. **Prioritizing** [PMKY23, RU25]. **Privacy** [AAT+22, GSFO23, IBR23, WFL+24, YLC+21]. **Privileges** [JZC+24]. **Pro** [JZC+24, MMGB25]. **Probabilistic** [LTH+22a, MM22a, ZLM+22]. **Probing** [KR24]. **Problem** [LTH+22a, RKM22, TMS23]. **Problems** [QTL+22]. **Procedure** [SVOJ21, SM23]. **Process** [DDPT22, HZL+24, HGHM22, HLPK22, MMGB25, NLGZ23, WLMR21, vBGC+23]. **Processes** [EK21, JK21, LTH+22a, MWX+24, RCMB22]. **Processing** [BJ22, CAAB23, CZ20, HB21, YCM24, vdMTH23]. **Producing** [SWC+22]. **Product** [DDPT22, GdLCS22, HSB+23, Lic25, NNNV22, SAC23, XHL+22]. **Production** [BXL+22, DHMP23, LSVS+24, TMB24]. **Productivity** [BL23, GLNS22, JK21, JZB21, MHJS+21, SZB+21]. **Products** [RMT20]. **Professionals** [LLM+23]. **Profile** [BMPR21]. **Profilers** [WZS+23, WZS+24]. **Profiling** [BCBA24, ED23, QTL+22]. **Profit** [Her21]. **Program** [AMS+21b, Cat23, CPF21, CKT+21, CPP+23, GK25, GBP23, GBDF22, HDC+23, IWD23, JWZ+24, KMSH22, LSZ+22, MSB+22, MDX+21, PBM22, PAV21, SSS24,

TJZ+22, TZL+25, VMA22, WCG+21, WWW+22, WFL+24, WCW+24, WBC+23, WNB+23, XYWX24, XCP+22, YDLW20]. **Programmable** [BBD+24]. **Programmer** [JK21, PSA+20]. **Programmers** [WXH21]. **Programming** [Ala23, ATJ+24, BFP+23, GMN+22, JCMB23, JBL21, LZJ+23, LLL+23, RKH+22, YB20, ZLH+21]. **Programs** [CF22, CHLV25, DMS+23, GXS+22, GY23, KMP23, Lam25, Mas23, PLHR23, SGP+23, TZJ+24, YB20]. **Progress** [GTL+23]. **Progression** [KUC+21]. **Project** [DDPT22, JLJ+22, LZJ+23, LQW+24, LTH22b, NXL+22, PGSS22, She25, SRS23, TMF23, TZL+24, WLMR21, ZLXY23, RPNR22]. **Project-Library** [LQW+24]. **Project-Specific** [JLJ+22]. **Projects** [BXLM21, BGL+21, CCM+23, GM20, GMBv20, GF23, HZL+24, JCA+22, KCVM22, KKN+21, LYZ+22, LZWH22, LAM22, NR23, PMF+22, RML+23, RKM22, WHT+25, ZFC+24, ZXB+23, ZSC+24]. **Prompt** [WYG+23, XYAA24]. **Prone** [JKS23]. **Propagation** [RP23, WSP+23]. **Properties** [AGR24, BMBB23, CZ20, MTA+23]. **Property** [CZ20, GdLCS22]. **Propositions** [RMT20]. **Prospects** [ZZH23]. **Protected** [PCM23]. **Protecting** [IAM+20]. **Protocol** [FTH+21]. **Prototyping** [MBCC+20]. **Provably** [YPW24]. **Prove** [KMP23]. **Provenance** [SAPGIM22]. **Providing** [MTA+23]. **Proving** [Lam25]. **ProXray** [FTH+21]. **Proxy** [ZRL+24]. **Proxy-Based** [ZRL+24]. **PSSM** [EMM24]. **Psychological** [VR24]. **Publication** [Dwy25]. **Publicly** [ZZX+23]. **Pull** [APCs22, IYNH21, JLG+23, KACS24, LYZ+22, LYW+22, LCW+24, VFX+21, ZYGR23]. **Pull-Request** [LYW+23]. **Puppet** [RP23]. **Puppet-Based** [RP23]. **Pushdown** [PMGM22]. **Python** [CCM+23, CHM24, FXP+24, KCVM22, ZXZ+24]. **Pythonic** [ZXZ+24].

Q [NBO22]. **Q&A** [MWdA21, WCH20]. **QoS** [PC20, ZBD+25]. **QoS-Aware** [ZBD+25]. **Qt** [HMIM22]. **Qualitative** [BKR+20, LSA+21, MCG24, PGPa+22, SHF25]. **Quality** [AKA+22, AJBTMN23, GPG21, HSR21, HDC+23, KTJ21, Lic25, LTL+24b, MSB+22, PDM+21, RTJ+22, RYZ+24, TH21, TDV+21, WZXL22]. **Quantamorphisms** [NBO22]. **Quantifying** [VMA22]. **Quantitative** [DAM23, GBDF22, MTA+23, PBCV21, SLZR22, TLLV20]. **Quantum** [GY23, MYAA24, WAYA24]. **Quarter** [MSG21]. **Quasi** [ADPJ23]. **Quasi-Experiments** [ADPJ23]. **Queries** [HLX+24, LC23a]. **Query** [PZC22, ZHX+22]. **Question** [BWAH22, LCC+23, NLM23, ZHX+22, ZLG+23]. **Questions** [BCBA24, SH21]. **Quiescence** [KM25].

R [ZLC+24a]. **R-GCN** [ZLC+24a]. **Race** [NRPN22, WGW+22]. **Races** [BCJ+22]. **Railway** [FMBtB22]. **Rainbow** [TGW+22]. **Random** [HSX+21, HCL+24, MMT22, QHL+23, WNP+20]. **Range** [HML+24]. **Ranked** [BBC23]. **Rankers** [JBS+22]. **Ranking** [LGC+22, PMC+21]. **Rationale** [GZ24]. **rCanary** [CXTZ24]. **Re** [CCW22, TLLV20]. **Re-Constructing** [CCW22]. **Reachability** [SLS+24]. **Reactive** [HM25a, MKJ21, PBJ24]. **Readability** [DPRVG+23]. **Readers** [vdLWHR22]. **Reading** [LMHWH24, TCS+23, ZWCH21]. **Real** [AMS+21b, FMBC+23, GZLW24, MHB22a, MSB+22, OGK+23, PGSS22, QTL+22, QCL+24, SHWA23, YPW24, ZXB+23, ZWM22]. **Real-Life** [ZXB+23]. **Real-Time** [FMBC+23, GZLW24]. **Real-World** [AMS+21b, MSB+22, QTL+22, QCL+24, SHWA23, YPW24]. **Realistic** [AMLS+23, CAA+24, CHM24, LC23b].

Really [WBC+23]. **Reasoning** [LCLL+23, MSV22, MC25]. **Rebalancing** [PCM23, THM20]. **Rebooting** [LBK21]. **Recognition** [SvdALS23]. **Recommend** [SGP+22]. **Recommendation** [CPX+22, CGR+23, GZLW24, HMMR24, KTP+20, LQW+24, LZP+23, LJZ+24, PLG+23, RYZ+24, VSB24, WWC+21, WYW+22, WLGT23, XYWH22, ZWY+20, ZYC+22]. **Recommendations** [AKM+20, KLM24, MZH+25]. **Recommending** [CFP+21, KC21, NDD+22]. **Recordings** [BCCH+23]. **Recovering** [ACC+25, WHT+25]. **Recovery** [CLL+22, RX25, TZL+25]. **Recurrent** [GZZ+22]. **Redrawing** [ZLZ+24]. **Reduce** [BBR22, DCAA22, dAFdOBT21]. **Reducing** [XLC+24a]. **Reduction** [GSKV22, PM22, XLC24b, ZWL+23a]. **Redundancy** [LYZ+22]. **Reentrancy** [WCZ+25]. **Refactor** [JKS23]. **Refactoring** [AKA+22, ARdNF+22, AMO24, AKM+20, AKT22, AMDD22, END23, HTA24, LJZ+24, NLGZ23, RAK+22, SdSS+21, SRG+23, WXY+23a, ZXZ+24, ZLZ+25]. **Refactoring-Aware** [END23, HTA24]. **RefactoringMiner** [TKD22]. **Refactorings** [ARdNF+22, FIY+23]. **RefactorScore** [JKS23]. **RefDiff** [SdSS+21]. **Reference** [HSR21, WXH21]. **Referencing** [BTR22]. **Refinement** [EFB21, WSQJ21, ZHX+22]. **Reflection** [KSW25, PSV25]. **Reflections** [Kaf25, Kra25, She25]. **Reflective** [MMZF21, TTO23]. **Reformulation** [LCC+23]. **Reformulations** [PZC22]. **Registries** [ZZX+23]. **Registry** [LCB23]. **Regression** [CSS22, HYC22, LCL+22, MN22, RU25]. **Regressions** [WLY+21, ZXL+23]. **Regulatory** [vBGC+23]. **Reinforcement** [BKB22, CAN24, THEF+24, WZS+22, YLA+21, ZAB+23, ZABS25]. **Reinforcement-Learning-Guided** [WZS+22]. **Relate** [KMCA25]. **Related** [JWZ+24, KCVM22, LCW+24, LPM+22, MCP+23, SH21, SSL+23, UBGK21, YLH+24]. **Relation** [GZ24, JLJZ22, QZCP22, SFP+21, YMC+23]. **Relations** [ATJ+24, JBL21, NSW+22, ZSCT20]. **Relationship** [LDRK24, NRPN22, TKF23, XYWH22]. **Relationships** [LCYS22, dCC+22]. **Release** [BXL+22, SNNO22]. **Released** [LLL+23]. **Releases** [COH22, IKW23, LCB23]. **Relevance** [FMV+22, MZH22]. **Relevant** [BK23, GMWL22]. **Reliability** [SZ23, ZLS+23]. **Reliability-Driven** [ZLS+23]. **Reliable** [CM23]. **Repackaged** [LBK21]. **Repair** [AMS+21b, CPF21, CKT+21, CPP+23, CHLV25, FHB24, GCSHB21, GBP23, JWW+22, KMSH22, LNFW25, LKP+21, MSB+22, PXP+22, PBM22, SHWA23, WGW+22, WBC+23, WNB+23, XYWX24, XCP+22, YB20, ZWY+20]. **Repairing** [CKM23, MMS+21]. **Repeated** [CPP+23]. **Repeating** [APM+22]. **Replay** [XLC+24a]. **Replayable** [BCCH+23]. **Replication** [KDVM23, TSPH22, TMS23]. **Replications** [SVOJ21]. **REPM** [VCMG20]. **Report** [FYS+23, FYZ+25, LCL+22, SWC+22, WZXL22, YFZ+23, ZLC+20]. **REporting** [KMB23b, FMBC+23]. **Reports** [FXLH20, LFZ+22, ZXW24, ZWB+21]. **Repositories** [ATFJ22, CDK20]. **Repository** [JLL+23, LPS+24]. **Repository-Level** [LPS+24]. **Representation** [CGR+23, CYC+24, LJL+22, MSJP23, QLH+24, SAK+23, TYL+24, UO22]. **Representations** [BC23, LWBG24, ODTS23, XHS+22]. **Representing** [MC25]. **Reproducible** [PVB+21]. **Reproduction** [FMBC+23, KYAY24, MHAZ24, SPv20].

Request [APCs22, IYNH21, LYW+22, LYW+23, ZCZ+21, ZYGR23]. **Requests** [JLG+23, KACS24, LYZ+22, VFX+21]. **Requirements** [AB24, AFG+21, ADPJ23, CVGA22, FRGCH20, FMV+22, FGMS22, HM25a, HGHM22, LvL25, LS23, LSZ+22, MHG22, MHG23a, MHG23b, MG20, MBV+25, MTR21, MRTM22, MC25, TDWB23, VSB24, VCMG20, WDNH22]. **Requiring** [XCM24]. **Rerere** [GF23]. **Resampling** [MZH+25]. **Research** [ATFJ22, FMV+22, FFT21, KGS23, LBK21, MAM23, Med25, MCG24, PGPa+22, SBL21, SHF25, WNB+23, ZLF+22]. **Research-Based** [PGPa+22]. **Resilience** [Cat23]. **Resilient** [LSVS+24]. **Resolution** [GSGM24, ZLH+21]. **Resolve** [GF23]. **Resolving** [VHFA22]. **Resource** [BLQ21, ZLS+23, ZWL+23b]. **Resource-Saving** [ZWL+23b]. **Resources** [BBR22, GLPP21, HB21, SGG+24]. **Respect** [PDM+21]. **Responding** [MHG23a]. **Response** [KACS24, NC24]. **Responsive** [Ebn22]. **REST** [SGP+22]. **RESTful** [LCY+23]. **Restore** [XCP+22]. **Results** [CPB22, CBLA21, KPTJ25, MM22a]. **Retrieval** [CCW22, ZHX+22, ZYF+23]. **Retrieval-Based** [CCW22, ZYF+23]. **Retrospective** [ACC+25, Cla25, FWPG25, FA25, GK25, HM25b, KKI25, KMCA25, Lam25, LvL25, Men25, MC25, OD25, Roc25, XCP+22, ZH25, ZBD+25, ZWDZ25]. **Reusable** [MBE+23]. **Reuse** [HYC22, LPS+24, RdWT23, RBZ22]. **Reusing** [ADP21]. **Review** [AME+23, AMO24, APdS23, CXB23, EWC22, HMMR24, HGHM22, HMIM22, HJC+22, IW23, LBK21, LCY22, MIL+24, MCG24, MSMG24, MHDH+22, NM24, PKH+21, SKAP20, dPSDdAM21, TH21, TDM+24, TEM22, WHG+23, WNB+23, ZLF+22, ZQS+24, ZSC+21]. **Review-Based** [ZSC+21]. **Reviewed** [IW23]. **Reviewer** [KLM24, KTP+20, RYZ+24]. **Reviewers** [Ano20b, Ano23, Ano24, Ano25, Uch24]. **Reviews** [DDCC23, GLZ+23, HDC+23, HMIM22, NZZ21, OSdO+25, RYZ+24, TCS+23, YWL+23, ZCZ+21]. **Revise** [WCH20]. **Revisited** [Boo25, KM25, MTD25, PK25]. **Revisiting** [CAA+24, CHM24, GRHJ22, KKC+23, NXL+22, PCY22, PLG+23, SKR25]. **Rewrite** [KMP23]. **Rhythms** [HSS+25, NLGZ23]. **Rich** [CFCL23]. **Right** [ZLW+23]. **Rings** [Ebn22]. **Risk** [LCW+24]. **Risks** [YZW+24]. **RLocator** [CAN24]. **RNN** [GZZ+22]. **RNN-Test** [GZZ+22]. **Robotic** [CGS+24, MTP+21]. **Robotics** [GBJ+23]. **Robots** [MTA+23, RKH+22]. **Robust** [SYLL23, UO22]. **Robustness** [LQG+25, ZTW21]. **Role** [FA25, PHL24]. **Roller** [MHG23a]. **Root** [GRR+23, LCL+22]. **ROS** [CGS+24]. **ROS-Based** [CGS+24]. **Round** [PBJ24]. **Round-Trip** [PBJ24]. **Rug** [LCW+24]. **Rule** [DB22]. **Rules** [AKT22, KMP23, LDRK24, NNL23, PMKY23, SPK22]. **Running** [ZWC+23]. **Runtime** [CGS+24, CHM24, ESMM23, NNL23, TCA+23, WWW+23]. **Rust** [CXTZ24, LCB23, NMAR24, QCL+24].

SAFe [HSH+22]. **Safety** [CZW+23, CMAS22, Hol25, KZWS25, MG20, PEM21, QCL+24, SXM23, VR24, VBW+21, VCMG20, ZWH+24, ZABS25]. **Safety-Critical** [MG20, PEM21]. **Salient** [HJC+22]. **Salient-Class** [HJC+22]. **Sample** [HGX+24]. **Sample-Efficient** [HGX+24]. **Samples** [ZJR+21]. **Sampling** [LZJ+23, MMT22, MBGC22, ZWS+22]. **Sanitizer** [MAN+24]. **Sanitizer-Based** [MAN+24]. **SAST** [ZLC+24b]. **Satisfaction** [FRS+23, FdS20, JZB21, SZB+21]. **Satisfiability** [GdLCS22]. **Save** [BBR22]. **Saving** [WLT+23, ZWL+23b]. **Say** [EYW23, WFL+24]. **SBR** [ARdNF+22].

SBST [FA25, TLZL24]. **Scalable** [BCL+24, CGN+23, CPB22, DBP23, HFS+23, JM23, MPH23, PGB24, TTO23, XXCL19, XXCL21, YBKB23]. **Scalably** [HXJ+23]. **Scale** [BXLM21, BHMS23, CXLX21, CCW23, Ebb23, EOH23, EWC22, HB21, IGLP23, KGvDG22, LWW+20, LSZ+23a, MJT+22, PIFJ22, SWC+22, TII22, WCXG22, ZZX+23, ZXB+23, ZSC+24]. **Scaling** [HB21]. **Scanners** [DPH+22]. **SCAnoGenerator** [ZWLD24]. **Scattering** [PQM+21]. **Scenario** [YFD+24]. **Scenario-Based** [YFD+24]. **Scenarios** [BCCH+23, HAC+23, LN22, MXR+22, MMT22, SB24, ZJR+21, ZTT+23]. **Scene** [BSV24]. **scenoRITA** [HAC+23]. **Schedule** [LDRK24, RCMB22]. **Scheduling** [GXD+24, WXG+21, XYWX24, YDLW20, ZYZ+20]. **Schemas** [NNL+20a, NWN+22]. **Scheme** [GXD+24, YFL+22]. **Science** [MHH+21, NSHL+23]. **Scoping** [UCD+24]. **Scores** [HMIM22]. **Screencasts** [Ala23]. **Script** [PXP+22]. **Scrum** [MHB22a]. **Scrutinizing** [MWB+21]. **SCS** [ODTS23, SXYG25]. **SCS-Gan** [ODTS23]. **SE** [SGJ20]. **Seamless** [MÇS+24]. **Search** [ARdNF+22, AMS+21b, AKM+20, BSV24, CCPP23, CHB+22, DBP23, LYA24, LCY22, LXS+23, LCP+24, MJT+22, NSMMA23, PATB23, PFAC22, SOM22, SSGG23, SSBA23, SXYG25, SPv20, WMY+23, XHL+22, XXCL19, XXCL21, YFL+22, ZZF+24, ZAB+23]. **Search-Based** [ARdNF+22, AKM+20, CCPP23, LYA24, LCY22, NSMMA23, PATB23, PFAC22, SPv20, XHL+22, ZZF+24, ZAB+23]. **Search-Generate-Modify** [LCP+24]. **Searchers** [WGL+24a]. **Second** [WH23, ZRL+24]. **Second-Order** [WH23, ZRL+24]. **Secondary** [KMB23a, KMB23b]. **SECOs** [FEA23]. **Secret** [IGLP23]. **Sector** [PHL24]. **Secure** [GMWL22, WLT+23, vdLWHR22]. **Security** [AKA+22, APM+22, APHL22, CPGB23, CMPB24, CKM23, GMWL22, HMC+22, HDW+23, IKW23, LVEY+23, LDL+22, LLZ+25, PBJ24, PHL24, RP23, SHE+22, TSBB20, WDNH22, WZXL22, ZLC+24b]. **Security-Aware** [AKA+22]. **Security-Relevant** [GMWL22]. **Seek** [KMCA25, UBGK21]. **Seeker** [GJL+21]. **SEGRESS** [KMB23b]. **Selecting** [HLGX23]. **Selection** [BDR+20, BMPR21, GOD+23, JWZ+24, LZJ+23, PWA+21, RMT20, RUM22, SYLL23]. **Selector** [ZZF+24]. **Self** [EK21, EOH23, IAM+20, KMP23, LSAS23, MM22a, MHB22b, XWM+22, YFTM22]. **Self-Adaptive** [MM22a]. **Self-Admitted** [EOH23, LSAS23, XWM+22, YFTM22]. **Self-Assignment** [MHB22b]. **Self-Protecting** [IAM+20]. **Self-Stabilizing** [EK21]. **Self-Supervised** [KMP23]. **Semantic** [AMS+21b, AS23, CWQ+25, DM21, FYZ+25, GJL+21, HLPK22, JLJZ22, LCLL+23, LJKC20, LWBG24, LXS+23, OGK+23, SGY+24, TNHB24, UO22, WLNT20, XLY+24, ZGZ+23]. **Semantic-Preserving** [ZGZ+23]. **Semantics** [AMG+23, CXLX21, EMM24, HWZ+21, LJL+22, LDC+23, PXY+23, SCZ+23, SXM23, WWW+22, WWP+23]. **Semantics-Based** [HWZ+21]. **Semantics-Guided** [SXM23]. **Semi** [CXTZ24]. **Semi-Automated** [CXTZ24]. **Sense** [DC24]. **Sensitive** [HLGX23, JFH+24, KGZS24]. **Sensitivity** [HLGX23, LTL+24a]. **Sensor** [ZWX+23]. **Sentiment** [AYY+22, GZW+22]. **Sentiment-Topic** [GZW+22]. **Sentinel** [GSKV22]. **SeqTrans** [CQL+23]. **Sequence** [CKT+21, CQL+23, CYC+24, EFM+23, FFR+24, WWC20]. **Sequence-to-Sequence** [CKT+21]. **SequenceR** [CKT+21]. **Sequences** [EFHT21, JZR+22, THBEF23, WWC20]. **Sequencing** [VDBP+22]. **Sequential**

[NRZ21, XSSM22]. **Series** [BDP+22]. **Serverless** [ESvE+22]. **Service** [JLC+21, TC23, WYN+23, ZBD+25]. **Service-Based** [TC23]. **Services** [CVGA22, LCY+23]. **Sessions** [CFP+21]. **Set** [CMPB24, MBD+25, MDX+21]. **SEthesaurus** [CCZX21]. **Setting** [MMZF21, SSL+23]. **Setting-Related** [SSL+23]. **Shaken** [BKWZ24]. **Shape** [PMF+22]. **Shared** [RLL+22, VBW+21]. **Sharing** [APM+22, TEM22]. **Shelf** [IWD23]. **Shifted** [SPK22]. **Shortest** [BDR+20]. **Shortest-Path** [BDR+20]. **Should** [GZLW24, KMB23a, LXL+21, NZZ21, SRG+23]. **Siamese** [MAG+22]. **Side** [HMFL23, PBM22]. **SIEGE** [SXM23]. **Signal** [BMBB23]. **Signal-Based** [BMBB23]. **Signaling** [FMBtB22]. **Signals** [HFG+23]. **Signatures** [CLL+22, ZWM22]. **Significance** [TFF+22]. **SigRec** [CLL+22]. **Similar** [SJR+22, VPBB23, WCXG22]. **Similarity** [HWZ+21, JFH+24, KKC+23, MAG+22, MBD+25, OGK+23, PGB24, PXY+23]. **Similarity-Based** [PGB24]. **Similarly** [RBZ22]. **Simple** [PMKY23]. **Simpler** [AYA+22]. **Simplifying** [ZH25]. **Simulating** [EBM22, IWD23]. **Simulation** [FFR+24, LMN+24, LZM+23, MMT22, MMT23]. **Simulation-Based** [FFR+24, LZM+23, MMT22, MMT23]. **Simulink** [FFR+24, SYW+24]. **Site** [DDP+23]. **Six** [KKN+21]. **Size** [MAP+22, SPK22]. **Sketch** [SvdALS23]. **Sketch2Process** [SvdALS23]. **Skill** [JBL21]. **Skip** [AMS21a, SOM22]. **Skipped** [AMSR21]. **Slack** [EAGZ22]. **Sleep** [FSRJ20]. **Slicing** [GK25, TSBB20, WLY+21]. **SLocator** [LC23a]. **Slow** [IKW23]. **Small** [PR22]. **SMARLA** [ZABS25]. **Smart** [AB24, CXL+22a, CXL+22b, CLL+22, EOH23, GJX+21, JWW+22, KLS+22, KDVM23, LLZ+23, LSZ+23a, LCW+24, MWB+21, PBS+21, QHL+23, SXYG25, WLT+23, WTC24, WCZ+25, ZYX+23, ZWC+23, ZWLD24, ZSC+24, ZLK+21]. **Smart-Contract** [WLT+23]. **Smell** [LJX+21, VSB24]. **Smells** [CCM+23, JCA+22, PAA+21, PMVA24, SA23, SRG+23, dPSDdAM21, TPK21]. **SMT** [MBV+25]. **SMT-Based** [MBV+25]. **Sneaky** [IKW23]. **Snippet** [ZLY+24a]. **Snippets** [NDD+22, RKP+21, ZLY+24a]. **Socio** [Hod22, MJT+22, RCS+23]. **Socio-Technical** [Hod22, MJT+22]. **Software** [ABCS22, AFC+21, AYA+22, ANS+22, ASSB+21, AKM+20, AMDD22, Ano20a, Ano21, Ano22, AGR24, AMHW22, ATFJ22, BSMM22, BKR+20, BSFR22, BWR25, BBR22, BL23, BGL+21, CM23, CCZX21, CSZ+24, CCL24, CBR+25, COH22, CDK20, CXB23, DTP+21, DHMP23, DPV+21, DAM23, DWA22, Dwy25, EWC22, FAB+22, FCGA23, FW23, FdS20, FFT21, GWMZ23, GLNS22, GRHJ22, GZZ+23, GZ24, GKS+23, GRZS23, GY23, HNJA24, HFG+23, HPX+25, HYC22, Her21, HM25b, HSS+25, Hod22, HMFL23, Hol25, HPW+22, IGLP23, JZB21, KTJ21, KMB23a, KMB23b, KUC+21, KZWS25, Kor25, KGS23, KTH+22, KGvDG22, LYA24, LVEY+23, LNFW25, Lev25, LCY22, LZWH22, LZL+23, LMHWH24, Lic25, LL23, LJZ+24, LDRK24, MMZ+22, MHG23a, MHG23b, MÇS+24, MM22a, MAM23, MTD25, Med25, MEW22, MCG24, MMZF21, MBBZ21, MST+20, MRTM22, MYAA24, MHJS+21, NH22]. **Software** [NM24, NTR20, NR23, NWCS20, NRZ21, NLM23, NSMMA23, NDD+22, NNNV22, NC24, NLGZ23, NSHL+23, Nus25, PMC+21, Par25, PATB23, PZC22, PK25, PBC+22, PSV25, PR22, RTJ+22, RWKH21, RBPS20, RBZ22, RMT20, RUM22, RS22, SKAP20, SZ23, SBL21, SRT+22, STRM23, SBDR22, SPS+24, SNNO22, SVOJ21, SABZ22, SHF25, SHC+22, SAC23, SPK22,

SKR25, She25, SMS+25, SRS23, SB23, SM23, SFC22a, SSSC22, SZB+21, TMF23, TSPH22, TII22, TH21, TDWB23, TFF+22, TPBF23, UCD+24, Uch25, VR24, WXLM21, WLNT20, WGW+22, WDNH22, WHG+23, WHC+24, WWK+23, WWC20, WGL+24b, WLMR21, Wey25b, XSSM22, XHL+22, XYWH22, YHG+24, YNWC24, YYW24, YM22, YNW24, YHW20, ZSM23, ZWH+24, ZWDZ25, dMS+22, dCC+22, dAAvdH23, dASC21, vdMTH23]. **Software-Intensive** [RMT20]. **solution** [GMWL22]. **Solutions** [ADP21, CPB22, GKS+23, KLS+22, LCY22, YNWC24]. **Solved** [MZH22, TMS23]. **Solvers** [ZXL+23]. **Solving** [SLS+24, TSBB20, WZS+23, WZS+24]. **Sorted** [PDV23]. **Sorting** [YZP+22]. **SOSRepair** [AMS+21b]. **Source** [APCs22, BEK+23, BKR+20, BSFR22, BGL+21, CZW+23, CFM24, EVLVB+22, FRGCH20, FSC+24, FWPG25, GMBv20, GPG21, IKW23, JSC+24, KC21, KKN+21, LZWH22, LAM22, MAG+22, NDA+22, ODTS23, SBDR22, SPS+24, TPK21, TZL+24, TGW+22, WZS+22, YYW24, YNW24, YLH+24, ZYX+23, ZXB+23, Roc25]. **Source-Code-Quality** [GPG21]. **Source-Level** [CZW+23]. **Sourced** [VSA+22]. **Sources** [TZL+24]. **Space** [CPB22, EK21, NSMMA23, RAK+22]. **Specialization** [SVTTB23]. **Specializing** [XSQ+23]. **Specific** [EK21, JLJ+22, MVDS20, SFC+22b]. **Specification** [CZ20, HML+24, KGZS24, MTP+21, MTA+23, PMVA24, ZST+23]. **Specification-Based** [ZST+23]. **Specifications** [BSV24, HM25a, HLPK22, KRB22, LN22, MRTM22, WPGB22]. **Specified** [EFHT21, HLX+24, VPBB23]. **Specify** [HM25a]. **Specifying** [PL21]. **Spectra** [PAV21]. **Spectral** [TLW21]. **Spectre** [WCG+21]. **Spectrum** [BMPR21, WCT+21, ZLL+21]. **Spectrum-Based** [ZLL+21]. **Speech** [NDA+22]. **Speed** [HM25b, PWSG25]. **Speed-Ups** [PWSG25]. **Spork** [LFBM23]. **Spreadsheets** [KSJ+21]. **Sprint2Vec** [CBR+25]. **Sprints** [CBR+25]. **SQAPlanner** [RTJ+22]. **SQL** [LC23a, ZRL+24]. **SQLPsdem** [ZRL+24]. **SSA** [Mas23]. **ST** [WWP+23]. **Stability** [SBL21]. **Stabilizing** [EK21]. **Stable** [HLT+21]. **Stack** [LZWH22, BTR22, BWAH22, GZ24, LPM+22, LXL+22, LCC+23, LMZ+22, NLM23, RKP+21, UK21, WXH21, WCH20, XHS+22, ZWC+21, ZWCH21, ZWL+22, ZZX+23]. **Stackoverflow** [vdLWHR22]. **Stage** [HXJ+23]. **StagedVulBERT** [JZS+24]. **Stages** [GWMZ23]. **Stakeholder** [SB24, SHE+22]. **Stakeholders** [RMT20]. **Stale** [KLM24]. **Standards** [FGMS22]. **Start** [KUC+21, YWR23]. **Start-Ups** [KUC+21]. **Startups** [MEW22]. **State** [AKT22, AMHW22, BKJD22, BT24, CDMM24b, ESvE+22, EFB21, EMM24, GBJ+23, LY24, SBL21, SYW+24, TDM+24, THEF+24, WH23, YSSH22]. **State-Aware** [SYW+24]. **State-Based** [AKT22]. **State-of-the-Art** [LY24, SBL21, YSSH22]. **Statecharts** [CGSV22]. **Statement** [BC23, LHJ+24, SCZ+23]. **Statement-Wise** [BC23]. **Statements** [LCYS22, XCM24]. **States** [NND22]. **Static** [AXR+23, BCJ+22, CBWV22, DKH+20, DB22, DWA22, ED23, GOD+23, GTL+23, LY24, Men25, PLHR23, PDV23, SWF+24, YKT+23, ZYZY23, ZLC+24b]. **Static-Dynamic** [BCJ+22]. **Statically** [YGM+22]. **Statistical** [BS24, NMA+23, WXL+23]. **Statistically** [SZ23]. **Statistics** [ZTW21]. **Stealthy** [YXZ+24]. **Step** [YFTM22]. **Stepping** [Med25]. **Steps** [FMBC+23]. **Still** [LYW+22]. **Stirred** [BKWZ24]. **Stop** [TCS+23]. **Store** [ASSB+21, HBH20]. **Story** [FT23]. **Storyboard** [CFCL23]. **Straight** [KMP23]. **Straight-Line** [KMP23].

Strategies [AHH22, DAM23, GSKV22, SBFW22, TEM22]. **Strategy** [JZZ+21, SYW+24]. **STRE** [TCS+23]. **Stream** [DDCC23]. **Streaming** [SLZR22]. **Strength** [GStZ+23, WCZ+25]. **Strengths** [TDM+24]. **Stress** [LMN+24]. **String** [ZXL+23]. **Structural** [CPX+22, GJX+21, MGW20]. **Structurally** [LC23b]. **Structure** [CR21, SHC+22, TKF23, ZZC+23]. **Structured** [LFBM23, WWP+23, YMC+23, ZLY+24b]. **Structures** [DPV+21, LLM+23, LFaG+22]. **Studies** [HPW+22, KMB23a, OGK+23, KMB23b]. **Study** [AGT+23, ALL+21, ATZ22, BXLM21, BWAH22, BXL+22, CR21, CPF21, CJL+21, CCW23, CASA22, CCP+22, COH21, COH22, CRAF23, CMAS22, CVGA22, DPH+22, DWA22, EBM22, EOH23, EAGZ22, FNS+24, FGMS22, GM20, GMBv20, GRZS23, GSFO23, HHZZ23, HM25b, HMIM22, HSW+25, HSH+22, HLR24, IGLP23, JDZ+23, JSW+23, JSC+24, JTDG22, KCVM22, KDVM23, LSA+21, LYZ+22, LYW+22, LCB23, LSAS23, LHJ+24, LSZ+23a, LMZ+22, LKW+24, MG20, MJT+22, MST+20, NLGZ23, NSHL+23, OSKH23, PPHZ24, PQM+21, PHL24, RKM22, RPNR22, RMT20, RVSP20, SGJ20, SHC+22, SBFW22, SA21, SPT23, TWZ+22, TSPH22, TMS23, TAV20, TCA+23, VHFA22, VSA+22, VFX+21, WW22, WXH21, WCH20, WZXL22, XWY+24, YHG+24, YKT+23, ZZMJ21, ZLL+21, ZWC+21, ZLH+21, ZWL+22, ZTT+23, ZZX+23, ZLY+24a, ZXB+23, ZLWC24, ZPX+21, ZLC+24b, ZLX+21, dASC21]. **Studying** [AHH22, CCPP23, GdCZH21, GHZ23, HBH20, JK21, LCYS22, LZWH22, ZWB+21, CBLA21]. **Styles** [AGR24]. **Stylometric** [ODTS23]. **Sub** [EFB21]. **Sub-Components** [EFB21]. **Subgraph** [KL22]. **Substitutable** [SHM21]. **Subsuming** [GOD+23]. **Subtree** [XHT+24]. **Success** [LDRK24, TGW+22, YWR23]. **Suggesting** [TCS+23]. **Suggestion** [LWCK21]. **Suite** [DPH+22, FA25, PGB24, TLZL24, YHW20, ZLM+22]. **Suites** [JTA+23, SGP+23, ZWX+23]. **Summaries** [ZLY+24b]. **Summarization** [BEK+23, FSC+24, LLC+22, SCZ+23, WZS+22, ZYF+23]. **Summary** [FSC+24, HYC22]. **Summer** [TZZ23]. **Supersonic** [CFM24]. **Supervised** [AMDD22, KMP23, NXL+22]. **Support** [GMWL22, MTA+23, MVDS20, NDD+22, RdWT23, SKR25, ZLZ+25]. **Supporting** [KSO+23, PWA+21, ZLW+23]. **Surface** [vdLWHR22]. **Surrogate** [CGC25, SGTY22, WCW+24]. **Surrogate-Assisted** [WCW+24]. **Survey** [AFG+21, BSMM22, BKR+20, HNJA24, HMC+22, HKSH22, HSX+21, KGS23, MHH+21, SKAP20, SBL21, SFC22a, VHFA22, WHC+24, ZHML22, ZZX+23, ZPX+21, ZZH23]. **Surveys** [MCG24]. **Sustains** [MHB22b]. **Switches** [MSZ+22]. **Sword** [VR24]. **Symbolic** [CHB+22, Cla25, EFB21, MPH23, MBD+25, NND22, TJH+24]. **Symmetric** [Ebn22]. **Symmetry** [PDV23]. **Synchronization** [FEA23]. **Synergistic** [SWF+24]. **SynShine** [ALD23]. **Syntactic** [LCLL+23, OGK+23, ZZC+23]. **Syntax** [ALD23, LGC+22, PWSG25, ZLH+23]. **Syntax-Based** [ZLH+23]. **Synthesis** [CIM+24, Cat23, EK21, Ebn22, JWZ+24]. **Synthesizing** [SHM21]. **System** [ANS+22, BBS24, CPGB23, CHLV25, FMBtB22, HML+24, HM25a, KTSR22, PEM21, SA21, SSL+23, WZ24, XZL+22, ZMH+21, ZLG+23, ZWX+23, ZSCT20, ZPX+21, ZST+23, Roc25]. **Systematic** [AME+23, AMO24, AGT+23, CXB23, EWC22, FMBtB22, GRZS23, HGHM22, KR24, MIL+24, MSMG24, MST+20,

SKAP20, SGJ20, dPSDdAM21, TEM22, WHG+23, ZLF+22, ZLL+22, ZYZY23, ZTT+23, dASC21]. **Systematical** [TWZ+22]. **Systems** [ALT22, ASC+23, APM+22, AYY+22, AMHW22, BT24, BBD+24, CGS+24, CIM+24, CPB22, DC24, EK21, GRR+23, GZZ+22, HMC+22, HL25, Hol25, IAM+20, JLC+21, KDF24, KNJM21, LSAS23, LMN+24, LCL+22, LM23, MÇS+24, MMT23, MG20, MBE+23, MSMG24, NC24, OSKH23, PBCV21, PC20, PBC+22, RCP+21, SSBA23, SWC+22, SXM23, SPT23, SLZR22, TTO23, TLLV20, TII22, TYL+24, TC23, UC21, VBW+21, VCPB23, WSQJ21, WYN+23, XWM+22, XLC24b, XYAA24, YLA+21, ZRDD22, ZSM23, ZTT+23, ZLA+23, ZPX+21, ZZH23]. **SZZ** [FXdC+21, LKW+24].

T [CCW23]. **T-Evos** [CCW23]. **Tabular** [MBV+25]. **Tactics** [NLGZ23]. **Tagging** [WXY+23b]. **Tags** [AJBTMN23, NDA+22]. **Tail** [HPX+25]. **Tailed** [WGL+24b]. **Tailor** [HSR21]. **Taint** [KGZS24, KTSS20, ZWQR22]. **Tainted** [ZYZ+20]. **Talk** [WNB+23]. **Taming** [SCL+23]. **Targeting** [PBC+22]. **Task** [JK21, KTJ21, LZP+23, MSZ+22, SBDR22, SAK+23, TDV+21, WYW+22, YYW24]. **Task-Agnostic** [SAK+23]. **Task-Oriented** [LZP+23]. **Tasks** [BSMM22, LZL+23, MCP+23, YLH+24]. **Taxonomy** [BHMS23, MVR+23, MHG22, QHL+23, WWW+23, ZLF+22]. **TCAS** [HL25]. **TD** [NMA+23]. **TDD** [KPTJ25]. **Teaching** [PGPa+22]. **Team** [BL23, BHMS23, LFaG+22, PHL24]. **Teams** [HMFL23, MHB22b, TKF23, VR24]. **TEASMA** [ADBL24]. **Technical** [ABON22, AGT+23, DCAA22, EOH23, Hod22, LSAS23, LMHWH24, MJT+22, PAA+21, SA23, TMC+22, TMA+24, WCH20, XWM+22, YFTM22, YWR23, ZHX+22, ZBA23]. **Technique** [SFP+21, WTT+22]. **Techniques** [AGT+23, JTDG22, PDV23, RVK+22, THM20, WNP+21, YSSH22, ZLC+20]. **Technologies** [MMZ+22, NTR20, WCXG22]. **Technology** [AGR24, DDCC23]. **Telemetry** [GRR+23]. **Tell** [DM21, ZYZ+20]. **Templated** [MRTM22]. **Templates** [LYW+23]. **Temporal** [BMBB23, CZ20, MVDS20]. **Ten** [Dwy25]. **Tensor** [YFL+22]. **Term** [ATFJ22]. **Test** [ADBL24, AAB+23, AMLS+23, ATZ22, AYY+22, BKB22, BFP+23, BBR22, BMPR21, CSS22, CCW23, CHLV25, DLP+24, DPH+22, DPRVG+23, DPZL20, FNS+24, FYS+23, FYZ+25, FHB24, FFR+24, FA25, GPG21, GLPP21, HSd25, HAC+23, JZZ+21, KTJ21, Kor25, LZL+22, LDP+24, LV22, LAM22, LM23, LN22, LFZ+22, MBGC22, MGW20, MN22, NPZL20, OD25, PXP+22, PGB24, PGSS22, PCY22, PWA+21, RLL+22, RU25, SNET24, SHWW24, SRG+23, SJR+22, SYW+24, SGTY22, SGP+23, SYLL23, SGY+24, TLZL24, TDV+21, VPBB23, WPGB22, WCW+24, WAYA24, WXY+23b, WYGL24, XZY+23, YM23, YZP+22, YBKB23, YHW20, YFZ+23, ZLM+22, ZZF+24, vSSE23, GZZ+22]. **Test-Based** [CHLV25]. **Test-Case** [GPG21]. **Test-Driven** [FNS+24, KTJ21, PGSS22, TDV+21]. **Test-Level** [CSS22]. **Test-to-Code** [SGY+24]. **Testable** [MVR+23]. **Testers** [SRT+22]. **Testing** [AAB+23, AJBTMN23, BBR22, BT24, BBC23, CGS+24, CPGB23, CMPB24, CWH+21, CDMM24a, CFA+24, CA21, DGY+22, DZZ+23, EFM+23, FYS+23, FFR+24, GYF+23, GLK+20, GLPP21, GZZ+22, GStZ+23, HSX+21, HCL+24, JZR+22, JZC+24, JWZ+24, LCY+23, LMN+24, LN22, LDC+23, LL23, LAY24, MWW+25, MM22a, MJY22, MZH22, MSMG24, MYAA24, NSMMA23, NNL+20b, NSW+22, NWN+22, OGK+23, PCY22,

PATB23, PIFJ22, RU25, STRM23, SPS+24, SSS24, SPT23, SCL+23, TAJ21, THEF+24, UC21, WWC+21, WHC+24, WPL+25, WYGL24, Wey25a, WNP+20, WNP+21, WYN+23, XLC+24a, XHL+22, XLC24b, YZP+22, YFD+24, YPW24, ZWS+22, ZHML22, ZRDD22, ZWX+23, ZLS+23, ZTW21, ZST+23, ZLC+24b, ZAB+23]. **Testing-Based** [GLK+20, LL23]. **Tests** [BKWZ24, DDP+23, FGB23, HNJA24, JTA+23, NHSR22, SZ23, SGG+24]. **Text** [FYZ+25, LSZ+22, WWP+23, YFZ+23]. **Textual** [CPX+22, HPX+25]. **Their** [BLZ+19, BLZ+20, BKWZ24, LCYS22, NH22, RPNR22, TH21, YZP+22, ZLY+24a, ZLX+21, LSZ+23b]. **Them** [SKR25]. **Theoretical** [PATB23, PAV21, QZCP22]. **Theories** [ADP21]. **Theory** [FW23, FEA23, GCSHB21, Hod22, LLM+23, MHB22a, NWN+22, PVC+24, RUM22, SZB+21]. **There** [CKDR22, LSZ+22, ZKX+23]. **Thereof** [SHE+22]. **Things** [FAB+22]. **Third** [CXLX21, HLC+22, HXJ+23, LWW+20, LPS+24, SVTTB23, ZLF+22, ZLL+22, ZFC+24]. **Third-Party** [CXLX21, HLC+22, HXJ+23, LWW+20, SVTTB23, ZLF+22, ZLL+22, ZFC+24]. **Third-Party-Library-Aware** [LPS+24]. **Thirty** [HL25]. **Thought** [YZC+24]. **Thread** [ZYZ+20]. **Threaded** [YDLW20]. **Threaten** [ZFC+24]. **Threats** [ASC+23, DAM23, HMC+22]. **Three** [Par25]. **Thumb** [LDRK24]. **Time** [BXLM21, BBR22, CM23, CSS22, FXdC+21, dAFdOBT21, FMBC+23, GZLW24, KGvDG22, LTH22b, LXL+23, QGX+22, RPNR22, STRM23, SM23, TMF23, WSQJ21, WGH+24, XYAA24, YXF+22, ZLA+23]. **Time-Aware** [ZLA+23]. **Time-to-Event** [XYAA24]. **Timed** [PMGM22]. **TimeLIME** [PM22]. **Timeout** [WAM24]. **Times** [NC24]. **Timestamp** [LKP+21]. **Title** [LCC+23]. **TkT** [PMGM22]. **Today** [MBBZ21]. **TODO** [WGH+24]. **TODO-Missed** [WGH+24]. **Together** [JSC+24]. **Tolerance** [WYN+23]. **Too** [NZZ21]. **Tool** [JWZ+24, PMVA24, SdSS+21, dCC+22, PBCV21]. **Tool-Based** [PMVA24]. **Tools** [AXR+23, DWA22, FMBtB22, HSd25, IWD23, JDZ+23, MSMG24, PMF+22, PPJ22, SKR25, SR21, WCZ+25, YSSH22, ZLL+22, ZWQR22, ZLC+24b]. **Top** [AHH22, HBH20]. **Topic** [CDK20, GZW+22]. **Topology** [EK21]. **Topology-Specific** [EK21]. **Toxic** [RKP+21]. **TR** [DPRVG+23]. **Trace** [BMBB23, MWTV24, TYL+24]. **Traceability** [ACC+25, MHBS23, SGY+24]. **Traces** [JLC+21, LZWH22, PXY+23]. **Tracing** [GZW+22]. **Tracker** [TDWB23]. **Trackers** [RML+23]. **Tracking** [HTA24, LY24, SRS23, aFbPS22]. **Traditional** [PPJ22]. **Traffic** [BSV24, BSK+22, ZKR23]. **Trained** [ZFS+24, vdMTH23]. **Training** [HGX+24, MWW+25]. **Traits** [IYNH21, RS22]. **Trajectory** [vSSE23]. **Transactions** [Ano20a, Ano21, Ano22, Uch25]. **Transfer** [BK23, CKM23, HTL+21, JLJZ22, MXC+21, MAP+22, MCP+23, SSGG23, TLW21, TZL+24, XYAA24]. **Transferability** [SPT23]. **Transferring** [KNJM21]. **Transformation** [AKT22, BDR+20, HFS+23, LQG+25, VDBP+22, XHT+24]. **Transformations** [CBWV22, ZGZ+23]. **TransformCode** [XHT+24]. **Transformer** [CCP+22, FT23, FNT+23, LQG+25]. **Transformer-Based** [FT23, FNT+23, LQG+25]. **Transformers** [BC23, KR24, vdMTH23]. **Transforms** [YMC+23]. **Transition** [TTO23]. **Transitioned** [KKN+21]. **Transitions** [VDBP+22]. **Translating** [BCCH+23]. **Translation** [LZZ+24]. **Translators** [LDC+23]. **Travis** [GM20]. **Treatment** [KPTJ25, NRZ21]. **Treatment-Outcome** [NRZ21]. **Tree**

[CDAR22, FWPG25, HFS+23, LGC+22]. **Tree-Based** [CDAR22, HFS+23]. **Trees** [GBJ+23, GGMD23]. **Trends** [GWMZ23, MAM23, Med25]. **Triage** [JCMB23]. **Trident** [PBM22]. **Trimmer** [ANS+22]. **TrinityRCL** [GRR+23]. **Trip** [PBJ24]. **Triple** [HSS+25]. **Trivial** [CASA22]. **Trust** [HDW+23, YLH+24]. **Trustability** [SMA+21]. **Trustworthiness** [YLC+21]. **TSE** [Kor25, Kra25, UCD+24]. **Tuning** [CCL24, CGC25, NM24, WYG+23, ZFS+24]. **Turnover** [HMMR24]. **Tutorials** [AGR24]. **Twin** [MWTV24]. **Twins** [XYAA24]. **Two** [HXJ+23, LWL+23, PPJ22, RKH+22, YXF+22, YFTM22, ZZX+23]. **Two-Armed** [RKH+22]. **Two-Phase** [LWL+23, YXF+22]. **Two-Stage** [HXJ+23]. **Two-Step** [YFTM22]. **Type** [CMAS22, KCVM22]. **Type-Related** [KCVM22]. **Types** [FNT+23, GWMZ23, GRR+23, JDS23, MSZ+22, WGL+24b].

UI [BCCH+23, LCW+23, MHAZ24, WLGT23]. **UIO** [EFHT21]. **UltraFuzz** [ZWL+23b]. **UML** [CGSV22, EMM24, RCS+23, SAPGIM22]. **UML2PROV** [SAPGIM22]. **UMLsecRT** [PBJ24]. **Uncertain** [HLX+24, YYW24]. **Uncertainty** [HSW+25, SMS+25, WH23, XCM24]. **Uncover** [AYY+22, WPXM23]. **Uncovering** [BKR+20, EWL+22, WZS+23, WZS+24]. **Under-Specified** [HLX+24]. **Underpin** [RYZ+24]. **Understand** [LZL+23]. **Understandability** [CZ20, OSdO+25, SBV+21, WZ24]. **Understanding** [ABCS22, FYZ+25, FCT+25, FMBC+23, FIY+23, GSN23, HZL+24, IBR23, LYW+23, LQG+25, Lic25, LFZ+22, LCW+23, OSdO+25, PFR+22, QCL+24, TZZ23, UBGK21, WLC+20, YFZ+23, ZSCT20, SFC+22b]. **Uni** [Ebn22, VCMG20]. **Uni-REPM** [VCMG20]. **Uni-Rings** [Ebn22]. **Unified** [BLLZ22]. **Uniform** [MMT22]. **Unit** [JTA+23, MBGC22, NHSR22, SNET24, TLZL24, WXY+23b, ZZF+24]. **Unity** [WCZ+25]. **Universal** [SXS+24]. **Unix** [SA21]. **Unmanned** [VBW+21]. **Unnecessity** [SZ23]. **Unpacking** [XZL+22]. **unsafe** [CMAS22]. **Unsupervised** [CXLX21, DHMP23, NXL+22]. **Untriviality** [CASA22]. **Up-to-Date** [SRG+23]. **Update** [LWCK21, LXL+23, NBD+20]. **Updates** [DAM23, HBH20, HHZZ23, IW23]. **Updating** [LWL+23]. **Ups** [KUC+21, PWSG25]. **Uptake** [MMZ+22]. **Usability** [FMBtB22, FRS+23]. **Usable** [JSW+23]. **Usage** [BXL+22, CGR+23, CCP+22, CMAS22, EBM22, KSA+21, WYGL24, YBSM21, ZJR+21]. **Usages** [ADS22]. **Use** [ARdNF+22, ATFJ22, BSMM22, DWA22, EAGZ22, FGMS22, GM20, GZLW24, GSXH22, WXH21, WPGB22, ZSCT20, GM20]. **Use-After-Free** [GSXH22]. **Usefulness** [CCA+24]. **User** [BJ22, DWA22, FNS+24, FRS+23, JDS23, MBCC+20, NZZ21, SH21, SMA+21, YWL+23, ZZX+23, ZSC+21]. **User-Centered** [DWA22]. **User-Centric** [SMA+21]. **User-Defined** [JDS23]. **User-Reviews** [NZZ21]. **Users** [MWdA21, WCH20, ZLC+24a, ZLZ+24]. **Uses** [YZW+24]. **Using** [AGT+23, AS23, AJBTMN23, BSV24, BMPR21, BWAH22, CPJ21, CCW22, CBWV22, DLC+22, DDPT22, DDP+23, FHB24, GXD+24, GPG21, GRR+23, HHCZ25, IWD23, KKC+23, KNJM21, LSC22, LFZ+22, MIL+24, MCP+23, MWdA21, MWX+24, MWTV24, MYAA24, NYM+20, NND22, PM22, PATB23, PL21, PGPa+22, QZC+21, RCS+23, SOM22, SNET24, SAC23, SSBA23, She25, SMS+25,

SY21, SSSC22, TC23, THEF+24, WZS+22, WTT+22, WXY+23b, YLA+21, YTWM21, ZWX+23, ZZX+23, BLS21, PMC+21]. **Utility** [NLM23]. **Utilizing** [PZC22].

Valid [FXLH20, YPW24]. **Validating** [KSA+21]. **Validation** [JCHT21, OMM+23, WGW+22, XYWX24]. **Validity** [GWGH21, SB23, vdMTH23]. **Value** [DDCC23, MDX+21, RMT20, RUM22, SNNO22, SX20, YM22]. **Value-Based** [RUM22]. **Value-Flow-Based** [SX20]. **Value-Set** [MDX+21]. **Values** [FW23, HSH+22, HPW+22]. **VarGAN** [LWBG24]. **Variability** [GWMZ23, MÇS+24, NNNV22, RBZ22, SAC23]. **Variability-Aware** [SAC23]. **Variable** [LWBG24, RWKH21]. **Variables** [LXL+21, WXL+23]. **Variants** [MAP+22]. **Variations** [MHB22a]. **Vector** [KRB22]. **Vehicle** [HAC+23]. **Vehicles** [LSZ+23b, LAY24, ZKR23, vSSE23]. **Vendors** [HDW+23]. **Verifiable** [SWC+22]. **Verification** [AKT22, CGS+24, Ebn22, GXS+22, GGMD23, HYC22, HLPK22, KDF24, LL23, MMT22, MMT23, MBV+25, MPH23, MVDS20, ODTS23, SLZR22, TCA+23, YDLW20]. **Verify** [KRB22]. **Verifying** [WSQJ21]. **Version** [Ebb23, JM22, RCP+21, ZWDZ25]. **Versioning** [DM21]. **Versions** [MAP+22]. **Versus** [FEA23, OGK+23, SPT23]. **Via** [CGR+23, CQL+23, FYS+23, LCLL+23, TJZ+22, WDNH22, ATJ+24, BLDL24, BDR+20, CXLX21, DGY+22, FYZ+25, FMBC+23, GZW+22, GCSHB21, JFW+25, JSW+23, KMP23, KDF24, LLS22, LLZ+23, LQG+25, LXS+23, LCW+23, LLL+22, MWW+25, MSJP23, PLHR23, PCM23, QLH+24, SMA+21, TZZ23, TZL+25, TTO23, WLY+21, WCG+21, WLT+23, WZS+23, WZS+24, WXL+23, WYN+23, XHT+24, XLC24b, YYW24, YZP+22, YFZ+23, YB20, ZLL+21, ZGZ+23, ZFS+24, ZHX+23]. **VID2XML** [Ala23]. **Video** [BCCH+23]. **View** [CGR+23, WLMR21, YYW24, PIFJ22]. **Violations** [BLZ+19, BLZ+20, DHB21, LKB+21, MCK+21, ZKR23]. **Virtual** [EBM22, MÇS+24, SPT23]. **Vision** [BSMM22, CVGA22, WHC+24, ZLC+24a]. **Visual** [LCW+23]. **Visually** [ZLZ+24]. **Vol** [Ano20a, Ano21, Ano22]. **Volunteering** [BKR+20]. **Volunteers** [BSFR22]. **vs** [PPJ22, TLZL24]. **VulExplainer** [FNT+23]. **VulHunter** [LLZ+23]. **Vuln4Real** [PPP+22]. **Vulnerabilities** [CKM23, IGLP23, MXR+22, VSA+22, WDNH22, XZY+23]. **Vulnerability** [AXR+23, CKDR22, CAA+24, CQL+23, CXB23, DPH+22, FNT+23, GJL+21, HPX+25, JZS+24, NLCK+23, NSHL+23, OMM+23, QHL+23, QLH+24, TSBB20, WSP+23, WCZ+25, WGL+24b, WGY+24, YNW24, YTWM21, ZLXY23, ZWC+23, ZLH+23, ZFC+24]. **Vulnerable** [DTP+21, LLZ+23, PPP+22, ZFC+24].

Warning [LCW+24, TJZ+22]. **Warnings** [GTL+23, LY24, YKT+23]. **Was** [MBBZ21]. **Watch** [RPNR22]. **Way** [HJL+22]. **Ways** [WWW+23]. **Weak** [YZP+22]. **Weaknesses** [RP23, TDM+24, ZWL+22, ZSC+24]. **Web** [AMLS+23, CPGB23, LCY+23, LC23a, YM23, ZZX+23, LCL+22, TSBB20]. **Web-Based** [LCL+22]. **Websites** [NLM23, WCH20]. **Weighted** [TZL+24]. **Well** [WWC20]. **We're** [HSB+23]. **Wheat** [FXLH20]. **Whence** [KNJM21]. **Where** [dPSDdAM21]. **Where2Change** [ZCZ+21]. **Whether** [ZYZ+20]. **Which** [AMSR21, GZLW24, LXL+21, dPSDdAM21]. **Whilst** [ZWS+24]. **Whiteboard** [dAAvdH23]. **Who** [dPSDdAM21]. **Whole** [FA25]. **Wikipedia** [WPXM23]. **Wikipedia-Based** [WPXM23]. **Wild** [Ebb23, IBR23]. **Will** [WWW+22]. **Wise**

[BCL+24, BC23]. **Within** [DDPT22, Nus25]. **Within-Project** [DDPT22]. **Without** [CPF21, XCM24]. **Witness** [TZJ+24]. **Wizard** [EBM22]. **Word** [LJKC20]. **WordNet** [CCZX21]. **Work** [HSS+25, JZB21, MMZF21, ZQS+24]. **Worker** [WWC+21]. **Working** [LYW+22, PGSS22]. **Workload** [HMMR24]. **Workplace** [GLNS22]. **World** [AMS+21b, MHB22a, MSB+22, QTL+22, QCL+24, SHWA23, SPT23, YPW24]. **Wrapper** [DiFBK24]. **Wrong** [CBLA21]. **W's** [dPSDdAM21].

X [ARdNF+22]. **X-SBR** [ARdNF+22]. **XDebloat** [TZL+22]. **XML** [Ala23]. **XPro** [MEW22].

Yanked [LCB23]. **Years** [Dwy25, HL25, She25, Uch25]. **Yuga** [NMAR24].

Zero [MBD+25]. **Zero-Day** [MBD+25]. **Zone** [LS23]. **Zone-Based** [LS23].

References

Aghababaeyan:2023:BBT

[AAB+23] Zohreh Aghababaeyan, Manel Abdellatif, Lionel Briand, Ramesh S, and Mojtaba Bagherzadeh. Black-box testing of deep neural networks through test case diversity. *IEEE Transactions on Software Engineering*, 49(5): 3182–3204, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Amaral:2022:AEA

[AAT+22] Orlando Amaral, Sallam Abualhaija, Damiano Torre, Mehrdad Sabetzadeh, and Lionel C. Briand. AI-enabled automation for completeness checking of privacy policies. *IEEE Transactions on Software Engineering*, 48(11): 4647–4674, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

AlGhanmi:2024:EFD

[AB24] Hanouf Al Ghanmi and Rami Bahsoon. ExplanaSC: a framework for determining information requirements for explainable blockchain smart contracts. *IEEE Transactions on Software Engineering*, 50 (8):1984–2004, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Abdellatif:2022:CNL

[ABCS22] Ahmad Abdellatif, Khaled Badran, Diego Elias Costa, and Emad Shihab. A comparison of natural language understanding platforms for chatbots in software engineering. *IEEE Transactions on Software Engineering*, 48(8): 3087–3102, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Aghajani:2021:ADA

[ABLVL21] E. Aghajani, G. Bavota, M. Linares-Vásquez, and M. Lanza. Automated doc-

umentation of Android apps. *IEEE Transactions on Software Engineering*, 47(1):204–220, January 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Albarak:2022:MTD

[ABON22] Mashel Albarak, Rami Bahsoon, Ipek Ozkaya, and Robert Nord. Managing technical debt in database normalization. *IEEE Transactions on Software Engineering*, 48(3): 755–772, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Antoniol:2025:RTL

[ACC+25] Giulio Antoniol, Gerardo Canfora, Gerardo Casazza, Andrea De Lucia, and Ettore Merlo. Recovering traceability links between code and documentation: a retrospective. *IEEE Transactions on Software Engineering*, 51(3): 825–832, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Abbasishahkoo:2024:TPM

[ADBL24] Amin Abbasishahkoo, Mahboubeh Dadkhah, Lionel Briand, and Dayi Lin. TEASMA: a practical methodology for test adequacy assessment of deep neural networks. *IEEE Transactions on Software Engineering*, 50(12): 3307–3329, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Aquino:2021:RSM

[ADP21] Andrea Aquino, Giovanni Denaro, and Mauro Pezzè. Reusing solutions modulo theories. *IEEE Transactions on Software Engineering*, 47(5): 948–968, May 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Aranda:2023:ERA

[ADPJ23] Alejandrina M. Aranda, Oscar Dieste, Jose Ignacio Panach, and Natalia Juristo. Effect of requirements analyst experience on elicitation effectiveness: a family of quasi-experiments. *IEEE Transactions on Software Engineering*, 49(4):2088–2106, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ahmed:2022:LFU

[ADS22] Toufique Ahmed, Premkumar Devanbu, and Anand Ashok Sawant. Learning to find usages of library functions in optimized binaries. *IEEE Transactions on Software Engineering*, 48(10):3862–3876, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

ajFejzer:2022:TBF

[aFbPS22] Miko aj Fejzer, Jakub Nar bski, Piotr Przymus, and Krzysztof Stencel. Tracking buggy files: New efficient adaptive bug localization algorithm. *IEEE Transactions on Software Engineering*, 48 (7):2557–2569, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Agrawal:2021:HDC

[AFC+21] Amritanshu Agrawal, Wei Fu, Di Chen, Xipeng Shen, and Tim Menzies. How to DODGE complex software analytics. *IEEE Transactions on Software Engineering*, 47(10): 2182–2194, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ameller:2021:DNF

[AFG+21] David Ameller, Xavier Franch, Cristina Gómez, Silverio Martínez-Fernández, João Araújo, Stefan Biffl, Jordi Cabot, Vittorio Cortellessa, Daniel Méndez Fernández, Ana Moreira, Henry Muccini, Antonio Vallecillo, Manuel Wimmer, Vasco Amaral, Wolfgang Böhm, Hugo Bruneliere, Loli Burgueño, Miguel Goulão, Sabine Teufl, and Luca Berardinelli. Dealing with non-functional requirements in model-driven development: a survey. *IEEE Transactions on Software Engineering*, 47(4):818–835, April 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Arya:2024:PSS

[AGR24] Deeksha M. Arya, Jin L. C. Guo, and Martin P. Robillard. Properties and styles of software technology tutorials. *IEEE Transactions on Software Engineering*, 50(2): 159–172, February 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Albuquerque:2023:MTD

[AGT+23] Danyllo Albuquerque, Everton Guimarães, Graziela Tonin, Pilar Rodríguezs, Mirko Perkusich, Hyggo Almeida, Angelo Perkusich, and Ferdinandy Chagas. Managing technical debt using intelligent techniques — a systematic mapping study. *IEEE Transactions on Software Engineering*, 49(4):2202–2220, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ahasanuzzaman:2022:SAL

[AHH22] Md Ahasanuzzaman, Safwat Hassan, and Ahmed E. Hassan. Studying ad library integration strategies of top free-to-download apps. *IEEE Transactions on Software Engineering*, 48(1):209–224, January 2022. CODEN IESEDJ.

ISSN 0098-5589 (print), 1939-3520 (electronic).

Almendros-Jimenez:2023:UMT

[AJBTMN23] Jesús M. Almendros-Jiménez, Antonio Becerra-Terón, Mercedes G. Merayo, and Manuel Núñez. Using metamorphic testing to improve the quality of tags in OpenStreetMap. *IEEE Transactions on Software Engineering*, 49(2):549–563, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Abid:2022:HDR

[AKA+22] Chaima Abid, Marouane Kessentini, Vahid Alizadeh, Mouna Dhaouadi, and Rick Kazman. How does refactoring impact security when improving quality? A security-aware refactoring approach. *IEEE Transactions on Software Engineering*, 48(3):864–878, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Alizadeh:2020:IDS

[AKM+20] Vahid Alizadeh, Marouane Kessentini, Mohamed Wiem Mkaouer, Mel Ó Cinnéide, Ali Ouni, and Yuanfang Cai. An interactive and dynamic search-based approach to software refactoring recommendations. *IEEE Transactions on Software Engineering*, 46 (9):932–961, September 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Almasri:2022:VAR

[AKT22] Nada Almasri, Bogdan Korel, and Luay Tahat. Verification approach for refactoring transformation rules of state-based models. *IEEE Transactions on Software Engineering*, 48(10): 3833–3861, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Alahmadi:2023:VAE

[Ala23] Mohammad D. Alahmadi. VID2XML: Automatic extraction of a complete XML data from mobile programming screencasts. *IEEE Transactions on Software Engineering*, 49(4):1726–1740, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ahmed:2023:SIF

[ALD23] Toufique Ahmed, Noah Rose Ledesma, and Premkumar Devanbu. SynShine: Improved fixing of syntax errors. *IEEE Transactions on Software Engineering*, 49(4):2169–2181, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ali:2021:SCG

[ALL+21] Karim Ali, Xiaoni Lai, Zhaoyi Luo, Ondřej Lhoták, Julian Dolby, and Frank Tip.

A study of call graph construction for JVM-hosted languages. *IEEE Transactions on Software Engineering*, 47(12): 2644–2666, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Afzal:2022:PMA

[ALT22] Afsoon Afzal, Claire Le Goues, and Christopher Steven Timperley. `Mithra`: Anomaly detection as an oracle for cyberphysical systems. *IEEE Transactions on Software Engineering*, 48(11):4535–4552, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Aniche:2022:ESM

[AMDD22] Maurício Aniche, Erick Maziero, Rafael Durelli, and Vinicius H. S. Durelli. The effectiveness of supervised machine learning algorithms in predicting software refactoring. *IEEE Transactions on Software Engineering*, 48(4):1432–1450, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Abgaz:2023:DMA

[AME+23] Yalemisew Abgaz, Andrew McCarren, Peter Elger, David Solan, Neil Lapuz, Marin Bivol, Glenn Jackson, Murat Yilmaz, Jim Buckley, and Paul Clarke. Decomposition of monolith applications into microservices architectures: a systematic review. *IEEE Transactions on Software Engineering*, 49(8):4213–4242, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Alhanahnah:2023:AAM

[AMG+23] Mohannad Alhanahnah, Shiqing Ma, Ashish Gehani, Gabriela F. Ciocarlie, Vinod Yegneswaran, Somesh Jha, and Xiangyu Zhang. autoMPI: Automated multiple perspective attack investigation with semantics aware execution partitioning. *IEEE Transactions on Software Engineering*, 49(4): 2761–2775, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ataiefard:2022:DSI

[AMHW22] Foozhan Ataiefard, Mohammad Jafar Mashhadi, Hadi Hemmati, and Neil Walkinshaw. Deep state inference: Toward behavioral model inference of black-box software systems. *IEEE Transactions on Software Engineering*, 48(12):4857–4872, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Alonso:2023:AAG

[AMLS+23] Juan C. Alonso, Alberto Martin-Lopez, Sergio Segura, José María García, and An-

tonio Ruiz-Cortés. ARTE: Automated generation of realistic test inputs for web APIs. *IEEE Transactions on Software Engineering*, 49(1): 348–363, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

AlOmar:2024:BIE

[AMO24] Eman Abdullah AlOmar, Mohamed Wiem Mkaouer, and Ali Ouni. Behind the intent of extract method refactoring: a systematic literature review. *IEEE Transactions on Software Engineering*, 50 (4):668–694, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Abdalkareem:2021:MLA

[AMS21a] Rabe Abdalkareem, Suhaib Mujahid, and Emad Shihab. A machine learning approach to improve the detection of CI skip commits. *IEEE Transactions on Software Engineering*, 47(12):2740–2754, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Afzal:2021:SES

[AMS+21b] Afsoon Afzal, Manish Motwani, Kathryn T. Stolee, Yuriy Brun, and Claire Le Goues. SOSRepair: Expressive semantic search for real-world program repair. *IEEE Transactions on Software Engineering*, 47(10): 2162–2181, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Abdalkareem:2021:WCC

[AMSR21] R. Abdalkareem, S. Mujahid, E. Shihab, and J. Rilling. Which commits can be CI skipped? *IEEE Transactions on Software Engineering*, 47 (3):448–463, March 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Anomalies:2020:IIT

[Ano20a] Anomalies. 2019 index *IEEE Transactions on Software Engineering* vol. 45. *IEEE Transactions on Software Engineering*, 46(1):1–9, January 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Anomalies:2020:RL

[Ano20b] Anomalies. 2019 reviewers list*. *IEEE Transactions on Software Engineering*, 46(1): 114–117, January 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Anonymous:2021:IIT

[Ano21] Anonymous. 2020 index *IEEE Transactions on Software Engineering* vol. 46. *IEEE Transactions on Software Engineering*, 47(1):1–10, January 2021.

CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Anonymous:2022:IIT

[Ano22] Anonymous. 2021 index *IEEE Transactions on Software Engineering* vol. 47. *IEEE Transactions on Software Engineering*, 48(1):1–24, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Anonymous:2023:RLR

[Ano23] Anonymous. 2022 reviewers list. *IEEE Transactions on Software Engineering*, 49(1): 468–472, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Anonymous:2024:RL

[Ano24] Anonymous. 2023 reviewers list. *IEEE Transactions on Software Engineering*, 50(2): 354–358, February 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Anonymous:2025:RL

[Ano25] Anonymous. 2024 reviewers list. *IEEE Transactions on Software Engineering*, 51(1): 320–324, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ahmad:2022:TAS

[ANS+22] Aatira Anum Ahmad, Abdul Rafae Noor, Hashim Sharif, Usama Hameed, Shoaib Asif, Mubashir Anwar, Ashish Gehani, Fareed Zaffar, and Junaid Haroon Siddiqui. Trimmer: an automated system for configuration-based software debloating. *IEEE Transactions on Software Engineering*, 48(9):3485–3505, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Alami:2022:PRG

[APCs22] Adam Alami, Raúl Pardo, Marisa Leavitt Cohn, and Andrzej W sowski. Pull request governance in open source communities. *IEEE Transactions on Software Engineering*, 48(12):4838–4856, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Amaro:2023:CPD

[APdS23] Ricardo Amaro, Ruben Pereira, and Miguel Mira da Silva. Capabilities and practices in DevOps: a multivocal literature review. *IEEE Transactions on Software Engineering*, 49(2): 883–901, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Arizon-Peretz:2022:ISE

[APHL22] Renana Arizon-Peretz, Irit Hadar, and Gil Luria. The

importance of security is in the eye of the beholder: Cultural, organizational, and personal factors affecting the implementation of security by design. *IEEE Transactions on Software Engineering*, 48(11): 4433–4446, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Alrimawi:2022:IML

[APM+22] Faeq Alrimawi, Liliana Pasquale, Deepak Mehta, Nobukazu Yoshioka, and Bashar Nuseibeh. Incidents are meant for learning, not repeating: Sharing knowledge about security incidents in cyber-physical systems. *IEEE Transactions on Software Engineering*, 48 (1):120–134, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Abid:2022:PXS

[ARdNF+22] Chaima Abid, Dhia Elhaq Rzig, Thiago do Nascimento Ferreira, Marouane Kessentini, and Tushar Sharma. `X-SBR`: On the use of the history of refactorings for explainable search-based refactoring and intelligent change operators. *IEEE Transactions on Software Engineering*, 48 (10):3753–3770, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Alhazami:2023:GCS

[AS23] Essa A. Alhazami and Abdullah M. Sheneamer. Graph-of-code: Semantic clone detection using graph fingerprints. *IEEE Transactions on Software Engineering*, 49(8):3972–3988, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Alhanahnah:2023:IDI

[ASC+23] Mohannad Alhanahnah, Clay Stevens, Bocheng Chen, Qiben Yan, and Hamid Bagheri. IoT-Com: Dissecting interaction threats in IoT systems. *IEEE Transactions on Software Engineering*, 49(4):1523–1539, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Al-Subaihin:2021:ASE

[ASSB+21] A. A. Al-Subaihin, F. Sarro, S. Black, L. Capra, and M. Harman. App store effects on software engineering practices. *IEEE Transactions on Software Engineering*, 47(2): 300–319, February 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Arteca:2023:LHL

[AST23] Ellen Arteca, Max Schäfer, and Frank Tip. Learning how to listen: Automatically finding bug patterns in event-driven JavaScript APIs. *IEEE*

Transactions on Software Engineering, 49(1):166–184, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ayala:2022:UMT

[ATFJ22] Claudia Ayala, Burak Turhan, Xavier Franch, and Natalia Juristo. Use and misuse of the term experiment in mining software repositories research. *IEEE Transactions on Software Engineering*, 48(11): 4229–4248, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ayerdi:2024:GAG

[ATJ+24] Jon Ayerdi, Valerio Terragni, Gunel Jahangirova, Aitor Arrieta, and Paolo Tonella. GenMorph: Automatically generating metamorphic relations via genetic programming. *IEEE Transactions on Software Engineering*, 50(7): 1888–1900, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Aniche:2022:HDE

[ATZ22] Maurício Aniche, Christoph Treude, and Andy Zaidman. How developers engineer test cases: an observational study. *IEEE Transactions on Software Engineering*, 48(12): 4925–4946, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Afrose:2023:ESV

[AXR+23] Sharmin Afrose, Ya Xiao, Sazzadur Rahaman, Barton P. Miller, and Danfeng Yao. Evaluation of static vulnerability detection tools with Java cryptographic API benchmarks. *IEEE Transactions on Software Engineering*, 49(2): 485–497, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Agrawal:2022:SHO

[AYA+22] Amritanshu Agrawal, Xueqi Yang, Rishabh Agrawal, Rahul Yedida, Xipeng Shen, and Tim Menzies. Simpler hyperparameter optimization for software analytics: Why, how, when? *IEEE Transactions on Software Engineering*, 48 (8):2939–2954, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Asyrofi:2022:BMT

[AYY+22] Muhammad Hilmi Asyrofi, Zhou Yang, Imam Nur Bani Yusuf, Hong Jin Kang, Ferdian Thung, and David Lo. BiasFinder: Metamorphic test generation to uncover bias for sentiment analysis systems. *IEEE Transactions on Software Engineering*, 48(12): 5087–5101, December 2022. CODEN IESEDJ. ISSN 0098-

5589 (print), 1939-3520 (electronic).

Bousy:2023:PRT

[BBC23] Iason Papapanagiotakis Bousy, Earl T. Barr, and David Clark. PopArt: Ranked testing efficiency. *IEEE Transactions on Software Engineering*, 49(4): 2221–2238, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bombarda:2024:EFA

[BBD+24] Andrea Bombarda, Silvia Bonfanti, Martina De Sanctis, Angelo Gargantini, Patrizio Pelliccione, Elvinia Riccobene, and Patrizia Scandurra. Evaluation framework for autonomous systems: The case of programmable electronic medical systems. *IEEE Transactions on Software Engineering*, 50(4):995–1014, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Beheshtian:2022:SBT

[BBR22] Mohammad Javad Beheshtian, Amir Hossein Bavand, and Peter C. Rigby. Software batch testing to save build test resources and to reduce feedback time. *IEEE Transactions on Software Engineering*, 48 (8):2784–2801, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Barzolevskaia:2024:MCM

[BBS24] Anna Barzolevskaia, Enrico Branca, and Natalia Stakhanova. Measuring and characterizing (mis)compliance of the Android permission system. *IEEE Transactions on Software Engineering*, 50(4): 742–764, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bertolotti:2023:CSW

[BC23] Francesco Bertolotti and Walter Cazzola. CombTransformers: Statement-wise transformers for statement-wise representations. *IEEE Transactions on Software Engineering*, 49(10):4677–4690, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Blanco:2024:AAQ

[BCBA24] Alison Fernandez Blanco, Araceli Queirolo Córdova, Alexandre Bergel, and Juan Pablo Sandoval Alcocer. Asking and answering questions during memory profiling. *IEEE Transactions on Software Engineering*, 50(5): 1096–1117, May 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bernal-Cardenas:2023:TVR

[BCCH+23] Carlos Bernal-Cárdenas, Nathan Cooper, Madeleine Havranek,

Kevin Moran, Oscar Chaparro, Denys Poshyvanyk, and Andrian Marcus. Translating video recordings of complex mobile app UI gestures into replayable scenarios. *IEEE Transactions on Software Engineering*, 49(4):1782–1803, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bai:2022:HSD

[BCJ+22] Jia-Ju Bai, Qiu-Liang Chen, Zu-Ming Jiang, Julia Lawall, and Shi-Min Hu. Hybrid static-dynamic analysis of data races caused by inconsistent locking discipline in device drivers. *IEEE Transactions on Software Engineering*, 48(12):5120–5135, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Baranov:2024:SWC

[BCL+24] Eduard Baranov, Sourav Chakraborty, Axel Legay, Kuldeep S. Meel, and N. Variyam Vinodchandran. A scalable t-wise coverage estimator: Algorithms and applications. *IEEE Transactions on Software Engineering*, 50(8):2021–2039, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bernardez:2022:EMC

[BDP+22] Beatriz Bernárdez, Amador Durán, José A. Parejo, Natalia Juristo, and Antonio Ruiz Cortés. Effects of mindfulness on conceptual modeling performance: a series of experiments. *IEEE Transactions on Software Engineering*, 48(2): 432–452, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Basciani:2020:ASO

[BDR+20] F. Basciani, M. D'Emidio, D. D. Ruscio, D. Frigioni, L. Iovino, and A. Pierantonio. Automated selection of optimal model transformation chains via shortest-path algorithms. *IEEE Transactions on Software Engineering*, 46 (3):251–279, March 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bansal:2023:FCG

[BEK+23] Aakash Bansal, Zachary Eberhart, Zachary Karas, Yu Huang, and Collin McMillan. Function call graph context encoding for neural source code summarization. *IEEE Transactions on Software Engineering*, 49(9):4268–4281, September 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Barbosa:2023:TFA

[BFP+23] Keila Barbosa, Ronivaldo Ferreira, Gustavo Pinto, Marcelo d'Amorim, and Breno

Miranda. Test flakiness across programming languages. *IEEE Transactions on Software Engineering*, 49(4): 2039–2052, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Butler:2021:CCC

[BGL+21] Simon Butler, Jonas Gamalielsson, Björn Lundell, Christoffer Brax, Johan Sjöberg, Anders Mattsson, Tomas Gustavsson, Jonas Feist, and Erik Lönroth. On company contributions to community open source software projects. *IEEE Transactions on Software Engineering*, 47(7):1381–1401, July 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Berntzen:2023:TIT

[BHMS23] Marthe Berntzen, Rashina Hoda, Nils Brede Moe, and Viktoria Stray. A taxonomy of inter-team coordination mechanisms in large-scale agile. *IEEE Transactions on Software Engineering*, 49(2): 699–718, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Blouin:2022:IMU

[BJ22] Arnaud Blouin and Jean-Marc Jézéquel. Interacto: a modern user interaction processing model. *IEEE Transactions on Software Engineering*, 48(9):3206–3226, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bal:2023:DTR

[BK23] Pravas Ranjan Bal and Sandeep Kumar. A data transfer and relevant metrics matching based approach for heterogeneous defect prediction. *IEEE Transactions on Software Engineering*, 49(3): 1232–1245, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bagherzadeh:2022:RLT

[BKB22] Mojtaba Bagherzadeh, Nafiseh Kahani, and Lionel Briand. Reinforcement learning for test case prioritization. *IEEE Transactions on Software Engineering*, 48(8):2836–2856, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bagherzadeh:2022:EPS

[BKJD22] Mojtaba Bagherzadeh, Nafiseh Kahani, Karim Jahed, and Juergen Dingel. Execution of partial state machine models. *IEEE Transactions on Software Engineering*, 48(3): 951–972, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Barcomb:2020:UPQ

[BKR+20] Ann Barcomb, Andreas Kaufmann, Dirk Riehle, Klaas-Jan Stol, and Brian Fitzgerald. Uncovering the periphery: A qualitative survey of episodic volunteering in free/libre and open source software communities. *IEEE Transactions on Software Engineering*, 46(9):962–980, September 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Brandt:2024:SSH

[BKWZ24] Carolin Brandt, Ali Khatami, Mairieli Wessel, and Andy Zaidman. Shaken, not stirred: How developers like their amplified tests. *IEEE Transactions on Software Engineering*, 50(5):1264–1280, May 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Benaroch:2023:HMD

[BL23] Michel Benaroch and Kalle Lyytinen. How much does software complexity matter for maintenance productivity? The link between team instability and diversity. *IEEE Transactions on Software Engineering*, 49(4):2459–2475, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bai:2024:IIP

[BLDL24] Shuotong Bai, Huaxiao Liu, Enyan Dai, and Lei Liu. Improving Issue-PR link prediction via knowledge-aware heterogeneous graph learning. *IEEE Transactions on Software Engineering*, 50(7):1901–1920, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Benton:2022:EIU

[BLLZ22] Samuel Benton, Xia Li, Yiling Lou, and Lingming Zhang. Evaluating and improving unified debugging. *IEEE Transactions on Software Engineering*, 48(11):4692–4716, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Baresi:2021:FGD

[BLQ21] Luciano Baresi, Alberto Leva, and Giovanni Quattrocchi. Fine-grained dynamic resource allocation for big-data applications. *IEEE Transactions on Software Engineering*, 47(8):1668–1682, August 2021.

Barbon:2021:DBM

[BLS21] Gianluca Barbon, Vincent Leroy, and Gwen Salaün. Debugging of behavioural models using counterexample analysis. *IEEE Transactions on Software Engineering*, 47(6):1184–1197, June 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bian:2019:DBD

[BLZ+19] P. Bian, B. Liang, Y. Zhang, C. Yang, W. Shi, and Y. Cai. Detecting bugs by discovering expectations and their violations. *IEEE Transactions on Software Engineering*, 45(10):984–1001, October 2019. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic). See corrections [BLZ+20].

Bian:2020:CDB

[BLZ+20] P. Bian, B. Liang, Y. Zhang, C. Yang, W. Shi, and Y. Cai. Corrections to "Detecting Bugs by Discovering Expectations and Their Violations". *IEEE Transactions on Software Engineering*, 46 (1):113, January 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic). See [BLZ+19].

Boufaied:2023:TDS

[BMBB23] Chaima Boufaied, Claudio Menghi, Domenico Bianculli, and Lionel C. Briand. Trace diagnostics for signal-based temporal properties. *IEEE Transactions on Software Engineering*, 49(5):3131–3154, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bertolino:2021:ATC

[BMPR21] Antonia Bertolino, Breno Miranda, Roberto Pietrantuono, and Stefano Russo. Adaptive test case allocation, selection and generation using coverage spectrum and operational profile. *IEEE Transactions on Software Engineering*, 47(5):881–898, May 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Booch:2025:OOD

[Boo25] G. Booch. Object-oriented development, revisited. *IEEE Transactions on Software Engineering*, 51(3):725–727, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bu:2024:CPA

[BS24] Hao Bu and Meng Sun. Clopper-pearson algorithms for efficient statistical model checking estimation. *IEEE Transactions on Software Engineering*, 50(7):1726–1746, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Barcomb:2022:MEV

[BSFR22] Ann Barcomb, Klaas-Jan Stol, Brian Fitzgerald, and Dirk Riehle. Managing episodic volunteers in free/libre/open source software communities. *IEEE Transactions on Software Engineering*, 48(1):260–277, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bagheri:2022:MCA

[BSK+22] Maryam Bagheri, Marjan Sirjani, Ehsan Khamespanah, Christel Baier, and Ali Movaghar. Magnifier: a compositional analysis approach for autonomous traffic control. *IEEE Transactions on Software Engineering*, 48(8): 2732–2747, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bajammal:2022:SUC

[BSMM22] Mohammad Bajammal, Andrea Stocco, Davood Mazinanian, and Ali Mesbah. A survey on the use of computer vision to improve software engineering tasks. *IEEE Transactions on Software Engineering*, 48(5):1722–1742, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Babikian:2024:CAT

[BSV24] Aren A. Babikian, Oszkár Semeráth, and Dániel Varró. Concretization of abstract traffic scene specifications using metaheuristic search. *IEEE Transactions on Software Engineering*, 50(1):48–68, January 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Biagiola:2024:BSG

[BT24] Matteo Biagiola and Paolo Tonella. Boundary state generation for testing and improvement of autonomous driving systems. *IEEE Transactions on Software Engineering*, 50(8):2040–2053, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Baltes:2022:CDR

[BTR22] Sebastian Baltes, Christoph Treude, and Martin P. Robillard. Contextual documentation referencing on Stack Overflow. *IEEE Transactions on Software Engineering*, 48(1):135–149, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bhatia:2022:SBM

[BWAH22] Aaditya Bhatia, Shaowei Wang, Muhammad Asaduzzaman, and Ahmed E. Hassan. A study of bug management using the Stack Exchange question and answering platform. *IEEE Transactions on Software Engineering*, 48(2):502–518, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Basili:2025:TMB

[BWR25] Victor R. Basili, David M. Weiss, and Hans Dieter Rombach. Toward measurement-based software engineering. *IEEE Transactions on Software Engineering*, 51(3):717–719, March 2025. CO-

DEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bi:2022:ESR

[BXL+22] Tingting Bi, Xin Xia, David Lo, John Grundy, and Thomas Zimmermann. An empirical study of release note production and usage in practice. *IEEE Transactions on Software Engineering*, 48(6): 1834–1852, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Bao:2021:LSS

[BXLM21] Lingfeng Bao, Xin Xia, David Lo, and Gail C. Murphy. A large scale study of long-time contributor prediction for GitHub projects. *IEEE Transactions on Software Engineering*, 47(6):1277–1298, June 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cruz:2021:EFM

[CA21] Luís Cruz and Rui Abreu. On the energy footprint of mobile testing frameworks. *IEEE Transactions on Software Engineering*, 47(10): 2260–2271, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chakraborty:2024:RPD

[CAA+24] Partha Chakraborty, Krishna Kanth Arumugam, Mahmoud Alfadel, Meiyappan Nagappan, and Shane McIntosh. Revisiting the performance of deep learning-based vulnerability detection on realistic datasets. *IEEE Transactions on Software Engineering*, 50(8):2163–2177, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cejas:2023:NBA

[CAAB23] Orlando Amaral Cejas, Muhammad Ilyas Azeem, Sallam Abualhaija, and Lionel C. Briand. NLP-based automated compliance checking of data processing agreements against GDPR. *IEEE Transactions on Software Engineering*, 49(9):4282–4303, September 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chakraborty:2024:RRL

[CAN24] Partha Chakraborty, Mahmoud Alfadel, and Meiyappan Nagappan. RLocator: Reinforcement learning for bug localization. *IEEE Transactions on Software Engineering*, 50 (10):2695–2708, October 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chowdhury:2022:UTP

[CASA22] Md Atique Reza Chowdhury, Rabe Abdalkareem, Emad Shihab, and Bram Adams. On the untriviality of triv-

ial packages: an empirical study of npm JavaScript packages. *IEEE Transactions on Software Engineering*, 48(8): 2695–2708, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Catano:2023:PSC

[Cat23] Nestor Catano. Program synthesis for cyber-resilience. *IEEE Transactions on Software Engineering*, 49(3):962–972, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Costa:2021:WWM

[CBLA21] Diego Costa, Cor-Paul Bezemer, Philipp Leitner, and Artur Andrzejak. What's wrong with my benchmark results? Studying bad practices in JMH benchmarks. *IEEE Transactions on Software Engineering*, 47(7):1452–1467, July 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Choetkiertikul:2025:SDC

[CBR+25] Morakot Choetkiertikul, Peerachai Banyongrakkul, Chaiyong Ragkhitwetsagul, Suppawong Tuarob, Hoa Khanh Dam, and Thanwadee Sunetnanta. Sprint2Vec: a deep characterization of sprints in iterative software development. *IEEE Transactions on Software Engineering*, 51(1): 220–242, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cuadrado:2022:EEA

[CBWV22] Jesús Sánchez Cuadrado, Loli Burgueño, Manuel Wimmer, and Antonio Vallecillo. Efficient execution of ATL model transformations using static analysis and parallelism. *IEEE Transactions on Software Engineering*, 48(4): 1097–1114, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Carvalho:2024:UAG

[CCA+24] Luiz Carvalho, Thelma Elita Colanzi, Wesley K. G. Assunção, Alessandro Garcia, Juliana Alves Pereira, Marcos Kalinowski, Rafael Maiani de Mello, Maria Julia de Lima, and Carlos Lucena. On the usefulness of automatically generated microservice architectures. *IEEE Transactions on Software Engineering*, 50(3):651–667, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2022:AEI

[CCF+22] Sen Chen, Chunyang Chen, Lingling Fan, Mingming Fan, Xian Zhan, and Yang Liu. Accessible or not? An empirical investigation of Android App accessibility. *IEEE Transac-*

tions on Software Engineering, 48(10):3954–3968, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2024:MMM

[CCL24] Pengzhou Chen, Tao Chen, and Miqing Li. MMO: Meta multi-objectivization for software configuration tuning. *IEEE Transactions on Software Engineering*, 50(6): 1478–1504, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cao:2023:TBD

[CCM+23] Yulu Cao, Lin Chen, Wanwangying Ma, Yanhui Li, Yuming Zhou, and Linzhang Wang. Towards better dependency management: a first look at dependency smells in Python projects. *IEEE Transactions on Software Engineering*, 49(4):1741–1765, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ciniselli:2022:ESU

[CCP+22] Matteo Ciniselli, Nathan Cooper, Luca Pascarella, Antonio Mastropaolo, Emad Aghajani, Denys Poshyvanyk, Massimiliano Di Penta, and Gabriele Bavota. An empirical study on the usage of transformer models for code completion. *IEEE Transactions on Software Engineering*, 48(12): 4818–4837, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Casamayor:2023:SID

[CCPP23] Rodrigo Casamayor, Carlos Cetina, Óscar Pastor, and Francisca Pérez. Studying the influence and distribution of the human effort in a hybrid fitness function for search-based model-driven engineering. *IEEE Transactions on Software Engineering*, 49(12): 5189–5202, December 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2022:PII

[CCW22] An Ran Chen, Tse-Hsun Chen, and Shaowei Wang. Pathidea: Improving information retrieval-based bug localization by re-constructing execution paths using logs. *IEEE Transactions on Software Engineering*, 48(8):2905–2919, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2023:ELS

[CCW23] An Ran Chen, Tse-Hsun Peter Chen, and Shaowei Wang. T-Evos: a large-scale longitudinal study on CI test execution and failure. *IEEE Transactions on Software Engineering*, 49(4):2352–2365, April 2023. CODEN IESEDJ. ISSN 0098-

5589 (print), 1939-3520 (electronic).

Chen:2021:SWS

[CCZX21] Xiang Chen, Chunyang Chen, Dun Zhang, and Zhenchang Xing. SEthesaurus: WordNet in software engineering. *IEEE Transactions on Software Engineering*, 47(9):1960–1979, September 2021.

Chakraborty:2022:PCC

[CDAR22] Saikat Chakraborty, Yangruibo Ding, Miltiadis Allamanis, and Baishakhi Ray. `CODIT`: Code editing with tree-based neural models. *IEEE Transactions on Software Engineering*, 48(4):1385–1399, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Corley:2020:CBT

[CDK20] C. S. Corley, K. Damevski, and N. A. Kraft. Changeset-based topic modeling of software repositories. *IEEE Transactions on Software Engineering*, 46(10):1068–1080, October 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Clerissi:2024:DEP

[CDMM24a] Diego Clerissi, Giovanni Denaro, Marco Mobilio, and Leonardo Mariani. DBInputs: Exploiting persistent data to improve automated GUI testing. *IEEE Transactions on Software Engineering*, 50(9):2412–2436, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Clerissi:2024:GSE

[CDMM24b] Diego Clerissi, Giovanni Denaro, Marco Mobilio, and Leonardo Mariani. Guess the state: Exploiting determinism to improve GUI exploration efficiency. *IEEE Transactions on Software Engineering*, 50 (4):836–853, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cai:2022:DFD

[CF22] Haipeng Cai and Xiaoqin Fu. $D^2$2Abs: a framework for dynamic dependence analysis of distributed programs. *IEEE Transactions on Software Engineering*, 48(12): 4733–4761, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Coppola:2024:EEG

[CFA+24] Riccardo Coppola, Tommaso Fulcini, Luca Ardito, Marco Torchiano, and Emil Alègroth. On effectiveness and efficiency of gamified exploratory GUI testing. *IEEE Transactions on Software Engineering*, 50(2): 322–337, February 2024. CODEN IESEDJ. ISSN 0098-

5589 (print), 1939-3520 (electronic).

Chen:2023:ADS

[CFCL23] Sen Chen, Lingling Fan, Chunyang Chen, and Yang Liu. Automatically distilling storyboard with rich features for Android apps. *IEEE Transactions on Software Engineering*, 49(2):667–683, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2024:SLG

[CFM24] Zimin Chen, Sen Fang, and Martin Monperrus. Supersonic: Learning to generate source code optimizations in C/C++. *IEEE Transactions on Software Engineering*, 50(11):2849–2864, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Costa:2021:RPC

[CFP+21] Catarina Costa, Jair Figueirêdo, João Felipe Pimentel, Anita Sarma, and Leonardo Murta. Recommending participants for collaborative merge sessions. *IEEE Transactions on Software Engineering*, 47(6):1198–1210, June 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2025:ACL

[CGC25] Pengzhou Chen, Jingzhi Gong, and Tao Chen. Accuracy can lie: On the impact of surrogate model in configuration tuning. *IEEE Transactions on Software Engineering*, 51(2):548–580, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cassano:2023:MSP

[CGN+23] Federico Cassano, John Gouwar, Daniel Nguyen, Sydney Nguyen, Luna Phipps-Costin, Donald Pinckney, Ming-Ho Yee, Yangtian Zi, Carolyn Jane Anderson, Molly Q Feldman, Arjun Guha, Michael Greenberg, and Abhinav Jangda. MultiPL-E: a scalable and polyglot approach to benchmarking neural code generation. *IEEE Transactions on Software Engineering*, 49(7):3675–3691, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2023:AUR

[CGR+23] Yujia Chen, Cuiyun Gao, Xiaoxue Ren, Yun Peng, Xin Xia, and Michael R. Lyu. API usage recommendation via multi-view heterogeneous graph representation learning. *IEEE Transactions on Software Engineering*, 49(5):3289–3304, May 2023. CODEN IESEDJ. ISSN 0098-

5589 (print), 1939-3520 (electronic).

Caldas:2024:RVF

[CGS+24] Ricardo Caldas, Juan Antonio Piñera García, Matei Schiopu, Patrizio Pelliccione, Genaína Rodrigues, and Thorsten Berger. Runtime verification and field-based testing for ROS-based robotic systems. *IEEE Transactions on Software Engineering*, 50 (10):2544–2567, October 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Carnevali:2022:CAH

[CGSV22] Laura Carnevali, Reinhard German, Francesco Santoni, and Enrico Vicario. Compositional analysis of hierarchical UML statecharts. *IEEE Transactions on Software Engineering*, 48(12): 4762–4788, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cha:2022:EDS

[CHB+22] Sooyoung Cha, Seongjoon Hong, Jiseong Bak, Jingyoung Kim, Junhee Lee, and Hakjoo Oh. Enhancing dynamic symbolic execution by automatically learning search heuristics. *IEEE Transactions on Software Engineering*, 48(9): 3640–3663, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Csuvik:2025:GBS

[CHLV25] Viktor Csuvik, Dániel Horváth, Márk Lajkó, and László Vidács. GenProgJS: a baseline system for test-based automated repair of JavaScript programs. *IEEE Transactions on Software Engineering*, 51 (2):325–343, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cheng:2024:RKB

[CHM24] Wei Cheng, Wei Hu, and Xiaoxing Ma. Revisiting knowledge-based inference of Python runtime environments: a realistic and adaptive approach. *IEEE Transactions on Software Engineering*, 50(2): 258–279, February 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Calinescu:2024:CSA

[CIM+24] Radu Calinescu, Calum Imrie, Ravi Mangal, Genaína Nunes Rodrigues, Corina Păsăreanu, Misael Alpizar Santana, and Gricel Vázquez. Controller synthesis for autonomous systems with deep-learning perception components. *IEEE Transactions on Software Engineering*, 50(6):1374–1395, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2021:ESH

[CJL+21] Haowen Chen, Xiao-Yuan Jing, Zhiqiang Li, Di Wu, Yi Peng, and Zhiguo Huang. An empirical study on heterogeneous defect prediction approaches. *IEEE Transactions on Software Engineering*, 47(12):2803–2822, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chakraborty:2022:DLB

[CKDR22] Saikat Chakraborty, Rahul Krishna, Yangruibo Ding, and Baishakhi Ray. Deep learning based vulnerability detection: Are we there yet? *IEEE Transactions on Software Engineering*, 48(9):3280–3296, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2023:NTL

[CKM23] Zimin Chen, Steve Kommrusch, and Martin Monperrus. Neural transfer learning for repairing security vulnerabilities in C code. *IEEE Transactions on Software Engineering*, 49(1):147–165, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2021:SSS

[CKT+21] Zimin Chen, Steve Kommrusch, Michele Tufano, Louis-Noël Pouchet, Denys Poshyvanyk, and Martin Monperrus. SequenceR: Sequence-to-sequence learning for end-to-end program repair. *IEEE Transactions on Software Engineering*, 47(9):1943–1959, September 2021.

Clarke:2025:PRS

[Cla25] Lori A. Clarke. A personal retrospective on symbolic execution. *IEEE Transactions on Software Engineering*, 51 (3):706–709, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2022:SAR

[CLL+22] Ting Chen, Zihao Li, Xiapu Luo, Xiaofeng Wang, Ting Wang, Zheyuan He, Kezhao Fang, Yufei Zhang, Hang Zhu, Hongwei Li, Yan Cheng, and Xiaosong Zhang. SigRec: Automatic recovery of function signatures in smart contracts. *IEEE Transactions on Software Engineering*, 48(8):3066–3086, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cabral:2023:TRO

[CM23] George G. Cabral and Leandro L. Minku. Towards reliable online just-in-time software defect prediction. *IEEE Transactions on Software Engineering*, 49(3):1342–1358, March 2023. CODEN IESEDJ. ISSN 0098-

5589 (print), 1939-3520 (electronic).

Costa:2022:BTS

[CMAS22] Diego Elias Costa, Suhaib Mujahid, Rabe Abdalkareem, and Emad Shihab. Breaking type safety in Go: An empirical study on the usage of the `unsafe` package. *IEEE Transactions on Software Engineering*, 48(7):2277–2294, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chaleshtari:2024:AAI

[CMPB24] Nazanin Bayati Chaleshtari, Yoann Marquer, Fabrizio Pastore, and Lionel C. Briand. AIM: Automated input set minimization for metamorphic security testing. *IEEE Transactions on Software Engineering*, 50(12):3403–3434, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cogo:2021:ESD

[COH21] Filipe Roseiro Cogo, Gustavo A. Oliva, and Ahmed E. Hassan. An empirical study of dependency downgrades in the `npm` ecosystem. *IEEE Transactions on Software Engineering*, 47(11): 2457–2470, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cogo:2022:DPR

[COH22] Filipe R. Cogo, Gustavo A. Oliva, and Ahmed E. Hassan. Deprecation of packages and releases in software ecosystems: a case study on NPM. *IEEE Transactions on Software Engineering*, 48(7): 2208–2223, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cornejo:2022:MAC

[CPB22] Oscar Cornejo, Fabrizio Pastore, and Lionel C. Briand. Mutation analysis for cyber-physical systems: Scalable solutions and results in the space domain. *IEEE Transactions on Software Engineering*, 48 (10):3913–3939, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2021:CBP

[CPF21] Liushan Chen, Yu Pei, and Carlo A. Furia. Contract-based program repair without the contracts: An extended study. *IEEE Transactions on Software Engineering*, 47(12): 2841–2857, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chaleshtari:2023:MTW

[CPGB23] Nazanin Bayati Chaleshtari, Fabrizio Pastore, Arda Goknil, and Lionel C. Briand. Meta-

morphic testing for web system security. *IEEE Transactions on Software Engineering*, 49(6):3430–3471, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Calinescu:2021:EPM

[CPJ21] Radu Calinescu, Colin Paterson, and Kenneth Johnson. Efficient parametric model checking using domain knowledge. *IEEE Transactions on Software Engineering*, 47(6):1114–1133, June 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2023:PRR

[CPP+23] Liushan Chen, Yu Pei, Minxue Pan, Tian Zhang, Qixin Wang, and Carlo A. Furia. Program repair with repeated learning. *IEEE Transactions on Software Engineering*, 49 (2):831–848, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2022:HCS

[CPX+22] Chi Chen, Xin Peng, Zhenchang Xing, Jun Sun, Xin Wang, Yifan Zhao, and Wenyun Zhao. Holistic combination of structural and textual code information for context based API recommendation. *IEEE Transactions on Software Engineering*, 48(8): 2987–3009, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chi:2023:SAV

[CQL+23] Jianlei Chi, Yu Qu, Ting Liu, Qinghua Zheng, and Heng Yin. SeqTrans: Automatic vulnerability fix via sequence to sequence learning. *IEEE Transactions on Software Engineering*, 49(2): 564–585, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cai:2021:LSA

[CR21] Haipeng Cai and Barbara Ryder. A longitudinal study of application structure and behaviors in Android. *IEEE Transactions on Software Engineering*, 47(12): 2934–2955, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cornejo:2023:SED

[CRAF23] César Cornejo, Germán E. Regis, Nazareno Aguirre, and Marcelo F. Frias. A study of the Electrum and DynAlloy dynamic behavior notations. *IEEE Transactions on Software Engineering*, 49(11): 4946–4963, November 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2022:PTL

[CSS22] Jinfu Chen, Weiyi Shang, and Emad Shihab. PerfJIT: Test-level just-in-time prediction for performance regression introducing commits. *IEEE Transactions on Software Engineering*, 48(5):1529–1544, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2024:HHG

[CSZ+24] Xin Chen, Tian Sun, Dongling Zhuang, Dongjin Yu, He Jiang, Zhide Zhou, and Sicheng Li. HetFL: Heterogeneous graph-based software fault localization. *IEEE Transactions on Software Engineering*, 50(11): 2884–2905, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cummaudo:2022:RAD

[CVGA22] Alex Cummaudo, Rajesh Vasa, John Grundy, and Mohamed Abdelrazek. Requirements of API documentation: a case study into computer vision services. *IEEE Transactions on Software Engineering*, 48(6):2010–2027, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2021:CPA

[CWH+21] J. Chen, G. Wang, D. Hao, Y. Xiong, H. Zhang, L. Zhang, and B. Xie. Coverage prediction for accelerating compiler testing. *IEEE Transactions on Software Engineering*, 47(2):261–278, February 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chu:2025:ADI

[CWQ+25] Guojun Chu, Jingyu Wang, Qi Qi, Haifeng Sun, Zirui Zhuang, Bo He, Yuhan Jing, Lei Zhang, and Jianxin Liao. Anomaly detection on interleaved log data with semantic association mining on log-entity graph. *IEEE Transactions on Software Engineering*, 51(2):581–594, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Croft:2023:DPS

[CXB23] Roland Croft, Yongzheng Xie, and Muhammad Ali Babar. Data preparation for software vulnerability prediction: a systematic literature review. *IEEE Transactions on Software Engineering*, 49(3):1044–1063, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2022:DAS

[CXL+22a] Jiachi Chen, Xin Xia, David Lo, John Grundy, Xiapu Luo, and Ting Chen. DefectChecker: Automated smart contract defect detection by analyzing EVM byte-

code. *IEEE Transactions on Software Engineering*, 48(7): 2189–2207, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2022:DSC

[CXL+22b] Jiachi Chen, Xin Xia, David Lo, John Grundy, Xiapu Luo, and Ting Chen. Defining smart contract defects on Ethereum. *IEEE Transactions on Software Engineering*, 48(1):327–345, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2021:MLA

[CXLX21] C. Chen, Z. Xing, Y. Liu, and K. O. L. Xiong. Mining likely analogical APIs across third-party libraries via large-scale unsupervised API semantics embedding. *IEEE Transactions on Software Engineering*, 47(3):432–447, March 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cui:2024:RDM

[CXTZ24] Mohan Cui, Hui Xu, Hongliang Tian, and Yangfan Zhou. rCanary: Detecting memory leaks across semi-automated memory management boundary in Rust. *IEEE Transactions on Software Engineering*, 50(9): 2472–2484, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Cui:2024:ABA

[CYC+24] Lei Cui, Junnan Yin, Jiancong Cui, Yuede Ji, Peng Liu, Zhiyu Hao, and Xiaochun Yun. API2Vec++: Boosting API sequence representation for malware detection and classification. *IEEE Transactions on Software Engineering*, 50(8):2142–2162, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Czepa:2020:UTP

[CZ20] C. Czepa and U. Zdun. On the understandability of temporal properties formalized in linear temporal logic, property specification patterns and event processing language. *IEEE Transactions on Software Engineering*, 46(1):100–112, January 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Chen:2023:SLI

[CZW+23] Zhe Chen, Qi Zhang, Jun Wu, Junqi Yan, and Jingling Xue. A source-level instrumentation framework for the dynamic analysis of memory safety. *IEEE Transactions on Software Engineering*, 49(4): 2107–2127, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

deAlmeida:2023:LGW

[dAAvdH23] Eduardo Santana de Almeida, Iftekhar Ahmed, and André van der Hoek. Let's go to the whiteboard (again): Perceptions from software architects on whiteboard architecture meetings. *IEEE Transactions on Software Engineering*, 49(10):4773–4795, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Farzat:2021:EJC

[dAFdOBT21] Fábio de A. Farzat, Márcio de O. Barros, and Guilherme H. Travassos. Evolving JavaScript code to reduce load time. *IEEE Transactions on Software Engineering*, 47 (8):1544–1558, August 2021.

DiTizio:2023:SUS

[DAM23] Giorgio Di Tizio, Michele Armellini, and Fabio Massacci. Software updates strategies: a quantitative evaluation against advanced persistent threats. *IEEE Transactions on Software Engineering*, 49(3):1359–1373, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

deAndrade:2021:SDH

[dASC21] Hugo Sica de Andrade, Jan Schroeder, and Ivica Crnkovic. Software deployment on heterogeneous platforms: a systematic mapping study. *IEEE Transactions on Software Engineering*, 47(8):1683–1707, August 2021.

Do:2022:ESA

[DB22] Lisa Nguyen Quang Do and Eric Bodden. Explaining static analysis with rule graphs. *IEEE Transactions on Software Engineering*, 48(2): 678–690, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

DiGrazia:2023:DSP

[DBP23] Luca Di Grazia, Paul Bredl, and Michael Pradel. DiffSearch: a scalable and precise search engine for code changes. *IEEE Transactions on Software Engineering*, 49(4):2366–2380, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Dolata:2024:MSA

[DC24] Mateusz Dolata and Kevin Crowston. Making sense of AI systems development. *IEEE Transactions on Software Engineering*, 50(1):123–140, January 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Digkas:2022:CCN

[DCAA22] George Digkas, Alexander Chatzigeorgiou, Apostolos Ampatzoglou, and Paris Avgeriou. Can clean new code

reduce technical debt density? *IEEE Transactions on Software Engineering*, 48(5): 1705–1721, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

daSilvaJunior:2022:PDI

[dCC+22] Jose Ricardo da Silva Junior, Daniel Prett Campagna, Esteban Clua, Anita Sarma, and Leonardo Murta. `Dominoes`: an interactive exploratory data analysis tool for software relationships. *IEEE Transactions on Software Engineering*, 48(2):377–396, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Das:2023:DTV

[DDCC23] Souvick Das, Novarun Deb, Nabendu Chaki, and Agostino Cortesi. Driving the technology value stream by analyzing app reviews. *IEEE Transactions on Software Engineering*, 49(7):3753–3770, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Derakhshanfar:2023:GCL

[DDP+23] Pouria Derakhshanfar, Xavier Devroey, Annibale Panichella, Andy Zaidman, and Arie van Deursen. Generating class-level integration tests using call site information. *IEEE Transactions on Software Engineering*, 49(4):2069–2087, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

DallaPalma:2022:WPD

[DDPT22] Stefano Dalla Palma, Dario Di Nucci, Fabio Palomba, and Damian A. Tamburri. Within-project defect prediction of infrastructure-as-code using product and process metrics. *IEEE Transactions on Software Engineering*, 48(6): 2086–2104, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Dang:2022:EMT

[DGY+22] Xiangying Dang, Dunwei Gong, Xiangjuan Yao, Tian Tian, and Huai Liu. Enhancement of mutation testing via fuzzy clustering and multi-population genetic algorithm. *IEEE Transactions on Software Engineering*, 48(6): 2141–2156, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Dann:2021:MII

[DHB21] Andreas Dann, Ben Hermann, and Eric Bodden. ModGuard: Identifying integrity & confidentiality violations in Java modules. *IEEE Transactions on Software Engineering*, 47 (8):1656–1667, August 2021.

Denaro:2023:PUA

[DHMP23] Giovanni Denaro, Rahim Heydarov, Ali Mohebbi, and Mauro Pezzè. Prevent: an unsupervised approach to predict software failures in production. *IEEE Transactions on Software Engineering*, 49(12): 5139–5153, December 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Donevi:2024:MMW

[DiFBK24] Juraj Don evi , Kre imir Fertalj, Mario Brcic, and Mihael Kova . Mask mediator wrapper architecture as a data mesh driver. *IEEE Transactions on Software Engineering*, 50(4):900–910, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Do:2020:DSA

[DKH+20] Lisa Nguyen Quang Do, Stefan Krüger, Patrick Hill, Karim Ali, and Eric Bodden. Debugging static analysis. *IEEE Transactions on Software Engineering*, 46(7): 697–709, July 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Dai:2022:PLE

[DLC+22] Hetong Dai, Heng Li, Che-Shao Chen, Weiyi Shang, and Tse-Hsun Chen. `Logram`: Efficient log parsing using n-gram dictionaries. *IEEE Transactions on Software Engineering*, 48(3):879–892, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Dang:2024:TIP

[DLP+24] Xueqi Dang, Yinghua Li, Mike Papadakis, Jacques Klein, Tegawendé F. Bissyandé, and Yves Le Traon. Test input prioritization for machine learning classifiers. *IEEE Transactions on Software Engineering*, 50(3):413–442, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Decan:2021:WDP

[DM21] Alexandre Decan and Tom Mens. What do package dependencies tell us about semantic versioning? *IEEE Transactions on Software Engineering*, 47(6):1226–1240, June 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

daMotaSilveiraNeto:2022:DDI

[dMS+22] Paulo Anselmo da Mota Silveira Neto, Umme Ayda Mannan, Eduardo Santana de Almeida, Nachiappan Nagappan, David Lo, Pavneet Singh Kochhar, Cuiyun Gao, and Iftekhar Ahmed. A deep dive into the impact of COVID-19 on software development. *IEEE Transactions on Software Engineering*, 48(9):3342–

3360, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Dinella:2023:DLM

[DMS+23] Elizabeth Dinella, Todd Mytkowicz, Alexey Svyatkovskiy, Christian Bird, Mayur Naik, and Shuvendu Lahiri. DeepMerge: Learning to merge programs. *IEEE Transactions on Software Engineering*, 49(4): 1599–1614, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Decan:2022:BPA

[DMZD22] Alexandre Decan, Tom Mens, Ahmed Zerouali, and Coen De Roover. Back to the past analysing backporting practices in package dependency networks. *IEEE Transactions on Software Engineering*, 48 (10):4087–4099, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Dann:2022:ICO

[DPH+22] Andreas Dann, Henrik Plate, Ben Hermann, Serena Elisa Ponta, and Eric Bodden. Identifying challenges for OSS vulnerability scanners — a study & test suite. *IEEE Transactions on Software Engineering*, 48(9):3613–3625, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Delgado-Perez:2023:ITI

[DPRVG+23] Pedro Delgado-Pérez, Aurora Ramírez, Kevin J. Valle-Gómez, Inmaculada Medina-Bulo, and José Raúl Romero. InterEvo-TR: Interactive evolutionary test generation with readability assessment. *IEEE Transactions on Software Engineering*, 49(4):2580–2596, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sobrinho:2021:SLR

[dPSDdAM21] E. V. d. P. Sobrinho, A. De Lucia, and M. d. A. Maia. A systematic literature review on bad smells 5 W's: Which, when, what, who, where. *IEEE Transactions on Software Engineering*, 47(1): 17–66, January 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

DiSorbo:2021:ENLb

[DPV+21] Andrea Di Sorbo, Sebastiano Panichella, Corrado A. Visaggio, Massimiliano Di Penta, Gerardo Canfora, and Harald C. Gall. Exploiting natural language structures in software informal documentation. *IEEE Transactions on Software Engineering*, 47(8):1587–1604, August 2021.

DiNucci:2020:TCP

[DPZL20] Dario Di Nucci, Annibale Panichella, Andy Zaidman,

and Andrea De Lucia. A test case prioritization genetic algorithm guided by the hypervolume indicator. *IEEE Transactions on Software Engineering*, 46(6):674–696, June 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Dam:2021:AFL

[DTP+21] H. K. Dam, T. Tran, T. Pham, S. W. Ng, J. Grundy, and A. Ghose. Automatic feature learning for predicting vulnerable software components. *IEEE Transactions on Software Engineering*, 47(1): 67–85, January 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Do:2022:WDS

[DWA22] Lisa Nguyen Quang Do, James R. Wright, and Karim Ali. Why do software developers use static analysis tools? A user-centered study of developer needs and motivations. *IEEE Transactions on Software Engineering*, 48 (3):835–847, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Dwyer:2025:TYJ

[Dwy25] Matthew B. Dwyer. Ten years of journal first publication in software engineering. *IEEE Transactions on Software Engineering*, 51(3): 681–684, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ding:2024:MEB

[DXFJ24] Zhijun Ding, Yuehao Xu, Binbin Feng, and Changjun Jiang. Microservice extraction based on a comprehensive evaluation of logical independence and performance. *IEEE Transactions on Software Engineering*, 50(5):1244–1263, May 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Deng:2023:DMT

[DZZ+23] Yao Deng, Xi Zheng, Tianyi Zhang, Huai Liu, Guannan Lou, Miryung Kim, and Tsong Yueh Chen. A declarative metamorphic testing framework for autonomous driving. *IEEE Transactions on Software Engineering*, 49 (4):1964–1982, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

El-Attar:2022:EEE

[EA22] Mohamed El-Attar. Empirically evaluating the effect of the physics of notations on model construction. *IEEE Transactions on Software Engineering*, 48(7): 2455–2475, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

ElMezouar:2022:EUC

[EAGZ22] Mariam El Mezouar, Daniel Alencar da Costa, Daniel M. German, and Ying Zou. Exploring the use of chatrooms by developers: an empirical study on Slack and Gitter. *IEEE Transactions on Software Engineering*, 48(10): 3988–4001, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ebbers:2023:LSA

[Ebb23] Frank Ebbers. A large-scale analysis of IoT firmware version distribution in the wild. *IEEE Transactions on Software Engineering*, 49(2):816–830, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Eberhart:2022:WOS

[EBM22] Zachary Eberhart, Aakash Bansal, and Collin McMillan. A Wizard of Oz study simulating API usage dialogues with a virtual assistant. *IEEE Transactions on Software Engineering*, 48(6):1883–1904, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ebnenasir:2022:VSR

[Ebn22] Ali Ebnenasir. Verification and synthesis of responsive symmetric uni-rings. *IEEE Transactions on Software Engineering*, 48(11): 4447–4464, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Eid:2023:SPA

[ED23] Elias Eid and Nancy A. Day. Static profiling of alloy models. *IEEE Transactions on Software Engineering*, 49(2): 743–759, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

El-Fakih:2021:SRE

[EFB21] K. El-Fakih and G. V. Bochmann. Symbolic refinement of extended state machines with applications to the automatic derivation of sub-components and controllers. *IEEE Transactions on Software Engineering*, 47 (1):1–16, January 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

El-Fakih:2021:BUS

[EFHT21] Khaled El-Fakih, Robert M. Hierons, and Uraz Cengiz Türker. $\mathcal{K}$-branching UIO sequences for partially specified observable non-deterministic FSMs. *IEEE Transactions on Software Engineering*, 47(5): 1029–1040, May 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Elyasaf:2023:GCC

[EFM+23] Achiya Elyasaf, Eitan Farchi, Oded Margalit, Gera Weiss, and Yeshayahu Weiss. Generalized coverage criteria for combinatorial sequence testing. *IEEE Transactions on Software Engineering*, 49(8): 4023–4034, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ebnenasir:2021:TSS

[EK21] A. Ebnenasir and A. P. Klinkhamer. Topology-specific synthesis of self-stabilizing parameterized systems with constant-space processes. *IEEE Transactions on Software Engineering*, 47(3): 614–629, March 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Elekes:2024:DDS

[EMM24] Márton Elekes, Vince Molnár, and Zoltán Micskei. To do or not to do: Semantics and patterns for do activities in UML PSSM state machines. *IEEE Transactions on Software Engineering*, 50(8):2124–2141, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ellis:2023:OBR

[END23] Max Ellis, Sarah Nadi, and Danny Dig. Operation-based refactoring-aware merging: an empirical evaluation. *IEEE Transactions on Software Engineering*, 49(4):2698–2721, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ebrahimi:2023:SAT

[EOH23] Amir Mohammad Ebrahimi, Gustavo A. Oliva, and Ahmed E. Hassan. Self-admitted technical debt in Ethereum smart contracts: a large-scale exploratory study. *IEEE Transactions on Software Engineering*, 49(9):4304–4323, September 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Etemadi:2023:ADR

[ESMM23] Khashayar Etemadi, Aman Sharma, Fernanda Madeiral, and Martin Monperrus. Augmenting diffs with runtime information. *IEEE Transactions on Software Engineering*, 49(11):4988–5007, November 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Eismann:2022:SSA

[ESvE+22] Simon Eismann, Joel Scheuner, Erwin van Eyk, Maximilian Schwinger, Johannes Grohmann, Nikolas Herbst, Cristina L. Abad, and Alexandru Iosup. The state of serverless applications: Collection, characterization, and community consensus. *IEEE Trans-*

actions on Software Engineering, 48(10):4152–4166, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Escobar-Velasquez:2022:EMG

[EVLVB+22] Camilo Escobar-Velásquez, Mario Linares-Vásquez, Gabriele Bavota, Michele Tufano, Kevin Moran, Massimiliano Di Penta, Christopher Vendome, Carlos Bernal-Cárdenas, and Denys Poshyvanyk. Enabling mutant generation for open- and closed-source Android apps. *IEEE Transactions on Software Engineering*, 48(1): 186–208, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Edison:2022:CML

[EWC22] Henry Edison, Xiaofeng Wang, and Kieran Conboy. Comparing methods for large-scale agile software development: a systematic literature review. *IEEE Transactions on Software Engineering*, 48(8):2709–2731, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Elazhary:2022:UBC

[EWL+22] Omar Elazhary, Colin Werner, Ze Shi Li, Derek Lowlind, Neil A. Ernst, and Margaret-Anne Storey. Uncovering the benefits and challenges of continuous integration practices. *IEEE Transactions on Software Engineering*, 48(7): 2570–2583, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Elyasaf:2023:WPN

[EYW23] Achiya Elyasaf, Tom Yaacov, and Gera Weiss. What Petri nets oblige us to say comparing approaches for behavior composition. *IEEE Transactions on Software Engineering*, 49(4):2303–2317, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fraser:2025:RWT

[FA25] Gordon Fraser and Andrea Arcuri. A retrospective on whole test suite generation: On the role of SBST in the age of LLMs. *IEEE Transactions on Software Engineering*, 51(3): 874–878, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fahmideh:2022:SEI

[FAB+22] Mahdi Fahmideh, Aakash Ahmad, Ali Behnaz, John Grundy, and Willy Susilo. Software engineering for Internet of Things: The practitioners' perspective. *IEEE Transactions on Software Engineering*, 48(8):2857–2878, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fang:2023:FPM

[FCGA23] Xinwei Fang, Radu Calinescu, Simos Gerasimou, and Faisal Alhwikem. Fast parametric model checking with applications to software performability analysis. *IEEE Transactions on Software Engineering*, 49(10):4707–4730, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fang:2025:HAD

[FCT+25] Hongzhou Fang, Yuanfang Cai, Ewan Tempero, Rick Kazman, Yu-Cheng Tu, Jason Lefever, and Ernst Pisch. A holistic approach to design understanding through concept explanation. *IEEE Transactions on Software Engineering*, 51(2):449–465, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Franca:2020:MSS

[FdS20] C. França, F. Q. B. da Silva, and H. Sharp. Motivation and satisfaction of software engineers. *IEEE Transactions on Software Engineering*, 46(2): 118–140, February 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Foundjem:2023:GTC

[FEA23] Armstrong Foundjem, Ellis E. Eghan, and Bram Adams. A grounded theory of cross-community SECOs: Feedback diversity versus synchronization. *IEEE Transactions on Software Engineering*, 49(10): 4731–4750, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Formica:2024:SBT

[FFR+24] Federico Formica, Tony Fan, Akshay Rajhans, Vera Pantelic, Mark Lawford, and Claudio Menghi. Simulation-based testing of Simulink models with test sequence and test assessment blocks. *IEEE Transactions on Software Engineering*, 50(2):239–257, February 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Furia:2021:BDA

[FFT21] Carlo A. Furia, Robert Feldt, and Richard Torkar. Bayesian data analysis in empirical software engineering research. *IEEE Transactions on Software Engineering*, 47(9):1786–1810, September 2021.

Fatima:2023:FBB

[FGB23] Sakina Fatima, Taher A. Ghaleb, and Lionel Briand. Flakify: a black-box, language model-based predictor for flaky tests. *IEEE Transactions on Software Engineering*, 49(4):1912–1927, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Franch:2022:SAK

[FGMS22] Xavier Franch, Martin Glinz, Daniel Mendez, and Norbert Seyff. A study about the knowledge and use of requirements engineering standards in industry. *IEEE Transactions on Software Engineering*, 48(9):3310–3325, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fatima:2024:FUL

[FHB24] Sakina Fatima, Hadi Hemmati, and Lionel C. Briand. FlakyFix: Using large language models for predicting flaky test fix categories and test code repair. *IEEE Transactions on Software Engineering*, 50(12): 3146–3171, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ferreira:2023:DDU

[FIY+23] Thiago Ferreira, James Ivers, Jeffrey J. Yackley, Marouane Kessentini, Ipek Ozkaya, and Khouloud Gaaloul. Dependent or not: Detecting and understanding collections of refactorings. *IEEE Transactions on Software Engineering*, 49(6): 3344–3358, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fazzini:2023:EMA

[FMBC+23] Mattia Fazzini, Kevin Moran, Carlos Bernal-Cárdenas, Tyler Wendland, Alessandro Orso, and Denys Poshyvanyk. Enhancing mobile app bug reporting via real-time understanding of reproduction steps. *IEEE Transactions on Software Engineering*, 49(3): 1246–1272, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ferrari:2022:SEU

[FMBtB22] Alessio Ferrari, Franco Mazzanti, Davide Basile, and Maurice H. ter Beek. Systematic evaluation and usability analysis of formal methods tools for railway signaling system design. *IEEE Transactions on Software Engineering*, 48(11):4675–4691, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Feitelson:2022:HDC

[FMN+22] Dror G. Feitelson, Ayelet Mizrahi, Nofar Noy, Aviad Ben Shabat, Or Eliyahu, and Roy Sheffer. How developers choose names. *IEEE Transactions on Software Engineering*, 48(1):37–52, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Franch:2022:HDP

[FMV+22] Xavier Franch, Daniel Mendez, Andreas Vogelsang, Rogardt Heldal, Eric Knauss, Marc Oriol, Guilherme H. Travassos, Jeffrey C. Carver, and Thomas Zimmermann. How do practitioners perceive the relevance of requirements engineering research? *IEEE Transactions on Software Engineering*, 48(6):1947–1964, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fakhoury:2024:LBT

[FNS+24] Sarah Fakhoury, Aaditya Naik, Georgios Sakkas, Saikat Chakraborty, and Shuvendu K. Lahiri. LLM-based test-driven interactive code generation: User study and empirical evaluation. *IEEE Transactions on Software Engineering*, 50(9): 2254–2268, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fu:2023:VTB

[FNT+23] Michael Fu, Van Nguyen, Chakkrit Kla Tantithamthavorn, Trung Le, and Dinh Phung. VulExplainer: a transformer-based hierarchical distillation for explaining vulnerability types. *IEEE Transactions on Software Engineering*, 49(10):4550–4565, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Falessi:2020:LHA

[FRGCH20] Davide Falessi, Justin Roll, Jin L. C. Guo, and Jane Cleland-Huang. Leveraging historical associations between requirements and source code to identify impacted classes. *IEEE Transactions on Software Engineering*, 46 (4):420–441, April 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ferreira:2023:IUM

[FRS+23] Juan M. Ferreira, Francy D. Rodríguez, Adrián Santos, Oscar Dieste, Silvia T. Acuña, and Natalia Juristo. Impact of usability mechanisms: a family of experiments on efficiency, effectiveness and user satisfaction. *IEEE Transactions on Software Engineering*, 49(1):251–267, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fang:2024:EEC

[FSC+24] Chunrong Fang, Weisong Sun, Yuchen Chen, Xiao Chen, Zhao Wei, Quanjun Zhang, Yudu You, Bin Luo, Yang Liu, and Zhenyu Chen. Esale: Enhancing code-summary alignment learning for source code summarization. *IEEE Transactions on Software Engineering*, 50(8):2077–2095, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fucci:2020:NSI

[FSRJ20] D. Fucci, G. Scanniello, S. Romano, and N. Juristo. Need for sleep: The impact of a night of sleep deprivation on novice developers performance. *IEEE Transactions on Software Engineering*, 46 (1):1–19, January 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fu:2023:GTB

[FT23] Michael Fu and Chakkrit Tantithamthavorn. GPT2SP: a transformer-based agile story point estimation approach. *IEEE Transactions on Software Engineering*, 49(2):611–625, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fowze:2021:PPM

[FTH+21] Farhaan Fowze, Dave Tian, Grant Hernandez, Kevin Butler, and Tuba Yavuz. ProXray: Protocol model learning and guided firmware analysis. *IEEE Transactions on Software Engineering*, 47(9):1907–1928, September 2021.

Ferrario:2023:AHV

[FW23] Maria Angela Ferrario and Emily Winter. Applying human values theory to software engineering practice: Lessons and implications. *IEEE Transactions on Software Engineering*, 49(3):973–990, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fluri:2025:RCT

[FWPG25] Beat Fluri, Michael Würsch, Martin Pinzger, and Harald Gall. A retrospective of ChangeDistiller: Tree differencing for fine-grained source code change extraction. *IEEE Transactions on Software Engineering*, 51(3): 852–857, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fan:2021:IMC

[FXdC+21] Yuanrui Fan, Xin Xia, Daniel Alencar da Costa, David Lo, Ahmed E. Hassan, and Shanping Li. The impact of mislabeled changes by SZZ on just-in-time defect prediction. *IEEE Transactions on Software Engineering*, 47(8):1559–1586, August 2021.

Fan:2020:CWC

[FXLH20] Yuanrui Fan, Xin Xia, David Lo, and Ahmed E. Hassan. Chaff from the wheat: Characterizing and determining valid bug reports. *IEEE Transactions on Software Engineering*, 46(5):495–525, May 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Frantz:2024:MBD

[FXP+24] Miles Frantz, Ya Xiao, Tanmoy Sarkar Pias, Na Meng, and Danfeng Yao. Methods and benchmark for detecting cryptographic API misuses in Python. *IEEE Transactions on Software Engineering*, 50 (5):1118–1129, May 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fang:2023:TRG

[FYS+23] Chunrong Fang, Shengcheng Yu, Ting Su, Jing Zhang, Yuanhan Tian, and Yang Liu. Test report generation for Android app testing via heterogeneous data analysis. *IEEE Transactions on Software Engineering*, 49(5): 3032–3051, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Fang:2025:ECT

[FYZ+25] Chunrong Fang, Shengcheng Yu, Quanjun Zhang, Xin Li, Yulei Liu, and Zhenyu Chen. Enhanced crowdsourced test report prioritization via image-and-text semantic understanding and feature integration. *IEEE Transactions on Software Engineering*, 51(1):283–304, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gerrard:2022:CQP

[GBDF22] Mitchell Gerrard, Mateus Borges, Matthew B. Dwyer, and Antonio Filieri. Conditional quantitative program analysis. *IEEE Transactions on Software Engineering*, 48 (4):1212–1227, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ghzouli:2023:BTS

[GBJ+23] Razan Ghzouli, Thorsten Berger, Einar Broch Johnsen, Andrzej Wasowski, and Swaib Dragule. Behavior trees and state machines in robotics applications. *IEEE Transactions on Software Engineering*, 49(9):4243–4267, September 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Geethal:2023:HLA

[GBP23] Charaka Geethal, Marcel Böhme, and Van-Thuan Pham. Human-in-the-loop automatic program repair. *IEEE Transactions on Software Engineering*, 49(10):4526–4549, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gong:2025:DCP

[GCB25] Jingzhi Gong, Tao Chen, and Rami Bahsoon. Dividable configuration performance learning. *IEEE Transactions on Software Engineering*, 51(1):

106–134, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gavidia-Calderon:2021:ADI

[GCSHB21] Carlos Gavidia-Calderon, Federica Sarro, Mark Harman, and Earl T. Barr. The assessor's dilemma: Improving bug repair via empirical game theory. *IEEE Transactions on Software Engineering*, 47(10): 2143–2161, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ghaleb:2021:SIN

[GdCZH21] Taher Ahmed Ghaleb, Daniel Alencar da Costa, Ying Zou, and Ahmed E. Hassan. Studying the impact of noises in build breakage data. *IEEE Transactions on Software Engineering*, 47(9):1998–2011, September 2021.

Guerra:2022:PSA

[GdLCS22] Esther Guerra, Juan de Lara, Marsha Chechik, and Rick Salay. Property satisfiability analysis for product lines of modelling languages. *IEEE Transactions on Software Engineering*, 48(2):397–416, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gallaba:2022:ACI

[GEJM22] Keheliya Gallaba, John Ewart, Yves Junqueira, and Shane McIntosh. Accelerating continuous integration by caching environments and inferring dependencies. *IEEE Transactions on Software Engineering*, 48(6):2040–2052, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gonzalez:2023:ARL

[GF23] Sergio Luis Herrera Gonzalez and Piero Fraternali. Almost rerere: Learning to resolve conflicts in distributed projects. *IEEE Transactions on Software Engineering*, 49(4):2255–2271, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Good:2023:VFD

[GGMD23] Jack H. Good, Nicholas Gisolfi, Kyle Miller, and Artur Dubrawski. Verification of fuzzy decision trees. *IEEE Transactions on Software Engineering*, 49(5):3277–3288, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ghaleb:2023:SIB

[GHZ23] Taher A. Ghaleb, Safwat Hassan, and Ying Zou. Studying the interplay between the durations and breakages of continuous integration builds. *IEEE Transactions on Software Engineering*, 49(4):2476–2497, April 2023. CODEN IESEDJ. ISSN 0098-

5589 (print), 1939-3520 (electronic).

Gao:2021:SLE

[GJL+21] Jian Gao, Yu Jiang, Zhe Liu, Xin Yang, Cong Wang, Xun Jiao, Zijiang Yang, and Jiaguang Sun. Semantic learning and emulation based cross-platform binary vulnerability seeker. *IEEE Transactions on Software Engineering*, 47(11): 2575–2589, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gao:2021:CSC

[GJX+21] Zhipeng Gao, Lingxiao Jiang, Xin Xia, David Lo, and John Grundy. Checking smart contracts with structural code embedding. *IEEE Transactions on Software Engineering*, 47(12):2874–2891, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gallagher:2025:PSB

[GK25] Keith B. Gallagher and Suzanne J. Kozaitis. Program slicing: a brief retrospective. *IEEE Transactions on Software Engineering*, 51(3): 720–724, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Garcia:2022:FAD

[GKGM22] Joshua Garcia, Ehsan Kouroshfar, Negar Ghorbani, and Sam Malek. Forecasting architectural decay from evolutionary history. *IEEE Transactions on Software Engineering*, 48(7): 2439–2454, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Graetsch:2023:DDC

[GKS+23] Ulrike M. Graetsch, Hourieh Khalajzadeh, Mojtaba Shahin, Rashina Hoda, and John Grundy. Dealing with data challenges when delivering data-intensive software solutions. *IEEE Transactions on Software Engineering*, 49(9): 4349–4370, September 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ghandehari:2020:CTB

[GLK+20] Laleh Sh. Ghandehari, Yu Lei, Raghu Kacker, Richard Kuhn, Tao Xie, and David Kung. A combinatorial testing-based approach to fault localization. *IEEE Transactions on Software Engineering*, 46(6): 616–645, June 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Girardi:2022:EPP

[GLNS22] Daniela Girardi, Filippo Lanubile, Nicole Novielli, and Alexander Serebrenik. Emotions and perceived productivity of software developers at the workplace. *IEEE Trans-*

actions on Software Engineering, 48(9):3326–3341, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Grano:2021:TFR

[GLPP21] Giovanni Grano, Christoph Laaber, Annibale Panichella, and Sebastiano Panichella. Testing with fewer resources: An adaptive approach to performance-aware test case generation. *IEEE Transactions on Software Engineering*, 47(11):2332–2347, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Guo:2023:EDA

[GLZ+23] Shikai Guo, Haorui Lin, Jiaoru Zhao, Hui Li, Rong Chen, Xiaochen Li, and He Jiang. An easy data augmentation approach for application reviews event inference. *IEEE Transactions on Software Engineering*, 49(10):4751–4772, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gallaba:2020:UMC

[GM20] K. Gallaba and S. McIntosh. Use and misuse of continuous integration features: An empirical study of projects that (mis)Use Travis CI. *IEEE Transactions on Software Engineering*, 46(1):33–50, January 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ghiotto:2020:NMC

[GMBv20] Gleiph Ghiotto, Leonardo Murta, Márcio Barros, and André van der Hoek. On the nature of merge conflicts: A study of 2,731 open source Java projects hosted by GitHub. *IEEE Transactions on Software Engineering*, 46(8):892–915, August 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gaaloul:2022:CGP

[GMN+22] Khouloud Gaaloul, Claudio Menghi, Shiva Nejati, Lionel C. Briand, and Yago Isasi Parache. Combining genetic programming and model checking to generate environment assumptions. *IEEE Transactions on Software Engineering*, 48(9):3664–3685, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gorski:2022:JLS

[GMWL22] Peter Leo Gorski, Sebastian Möller, Stephan Wiefling, and Luigi Lo Iacono. I just looked for the solution! On integrating security-relevant information in non-security API documentation to support secure coding practices. *IEEE Transactions on Software Engineering*, 48(9):3467–3484, Septem-

ber 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Garg:2023:PCS

[GOD+23] Aayush Garg, Milos Ojdanic, Renzo Degiovanni, Thierry Titcheu Chekam, Mike Papadakis, and Yves Le Traon. `Cerebro`: Static subsuming mutant selection. *IEEE Transactions on Software Engineering*, 49(1):24–43, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Grano:2021:LAT

[GPG21] Giovanni Grano, Fabio Palomba, and Harald C. Gall. Lightweight assessment of test-case effectiveness using source-code-quality indicators. *IEEE Transactions on Software Engineering*, 47(4):758–774, April 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gong:2022:RID

[GRHJ22] Lina Gong, Gopi Krishnan Rajbahadur, Ahmed E. Hassan, and Shujuan Jiang. Revisiting the impact of dependency network metrics on software defect prediction. *IEEE Transactions on Software Engineering*, 48(12): 5030–5049, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gu:2023:TMG

[GRR+23] Shenghui Gu, Guoping Rong, Tian Ren, He Zhang, Haifeng Shen, Yongda Yu, Xian Li, Jian Ouyang, and Chunan Chen. TrinityRCL: Multigranular and code-level root cause localization using multiple types of telemetry data in microservice systems. *IEEE Transactions on Software Engineering*, 49(5):3071–3088, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gu:2023:LPS

[GRZS23] Shenghui Gu, Guoping Rong, He Zhang, and Haifeng Shen. Logging practices in software engineering: a systematic mapping study. *IEEE Transactions on Software Engineering*, 49(2):902–923, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Guerra:2023:ESE

[GSFO23] Michele Guerra, Simone Scalabrino, Fausto Fasano, and Rocco Oliveto. An empirical study on the effectiveness of privacy indicators. *IEEE Transactions on Software Engineering*, 49(10): 4610–4623, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ghorbani:2024:DAA

[GSGM24] Negar Ghorbani, Tarandeep Singh, Joshua Garcia, and Sam Malek. Darcy: Automatic architectural inconsistency resolution in Java. *IEEE Transactions on Software Engineering*, 50(6):1639–1657, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Guizzo:2022:PSH

[GSKV22] Giovani Guizzo, Federica Sarro, Jens Krinke, and Silvia R. Vergilio. `Sentinel`: A hyper-heuristic for the generation of mutant reduction strategies. *IEEE Transactions on Software Engineering*, 48 (3):803–818, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Greiler:2023:AFU

[GSN23] Michaela Greiler, Margaret-Anne Storey, and Abi Noda. An actionable framework for understanding and improving developer experience. *IEEE Transactions on Software Engineering*, 49(4):1411–1425, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Guo:2023:EAH

[GStZ+23] Xu Guo, Xiaoyu Song, Jian tao Zhou, Feiyu Wang, and Kecheng Tang. An effective approach to high strength covering array generation in combinatorial testing. *IEEE Transactions on Software Engineering*, 49(10): 4566–4593, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gui:2022:AUA

[GSXH22] Binfa Gui, Wei Song, Hailong Xiong, and Jeff Huang. Automated use-after-free detection and exploit mitigation: How far have we gone? *IEEE Transactions on Software Engineering*, 48(11): 4569–4589, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Guo:2023:MFP

[GTL+23] Zhaoqiang Guo, Tingting Tan, Shiran Liu, Xutong Liu, Wei Lai, Yibiao Yang, Yanhui Li, Lin Chen, Wei Dong, and Yuming Zhou. Mitigating false positive static analysis warnings: Progress, challenges, and opportunities. *IEEE Transactions on Software Engineering*, 49(12):5154–5188, December 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ghassabani:2021:IVC

[GWGH21] E. Ghassabani, M. Whalen, A. Gacek, and M. Heimdahl. Inductive validity cores. *IEEE Transactions on Software Engineering*, 47(2):279–

299, February 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gao:2023:VSE

[GWMZ23] Kai Gao, Zhixing Wang, Audris Mockus, and Minghui Zhou. On the variability of software engineering needs for deep learning: Stages, trends, and application types. *IEEE Transactions on Software Engineering*, 49(2):760–776, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gao:2024:FFN

[GXD+24] Zicong Gao, Hao Xiong, Weiyu Dong, Rui Chang, Rui Yang, Yajin Zhou, and Liehui Jiang. FA-Fuzz: a novel scheduling scheme using firefly algorithm for mutation-based fuzzing. *IEEE Transactions on Software Engineering*, 50 (1):1–15, January 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gao:2022:FVM

[GXS+22] Pengfei Gao, Hongyi Xie, Pu Sun, Jun Zhang, Fu Song, and Taolue Chen. Formal verification of masking countermeasures for arithmetic programs. *IEEE Transactions on Software Engineering*, 48(3): 973–1000, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Guo:2023:SPQ

[GY23] Jingzhe Guo and Mingsheng Ying. Software pipelining for quantum loop programs. *IEEE Transactions on Software Engineering*, 49(4):2815–2828, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ge:2023:LAA

[GYF+23] Xiuting Ge, Shengcheng Yu, Chunrong Fang, Qi Zhu, and Zhihong Zhao. Leveraging Android automated testing to assist crowdsourced testing. *IEEE Transactions on Software Engineering*, 49(4): 2318–2336, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gong:2024:MKM

[GZ24] Lina Gong and Haoxiang Zhang. MR_2^2-KG: a multi-relation multi-rationale knowledge graph for modeling software engineering knowledge on Stack Overflow. *IEEE Transactions on Software Engineering*, 50(7):1867–1887, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gao:2024:WAA

[GZLW24] Shanquan Gao, Liyuan Zhang, Huaxiao Liu, and Yihui Wang.

Which animation API should I use next? A multimodal real-time animation API recommendation model for Android apps. *IEEE Transactions on Software Engineering*, 50(1):106–122, January 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gao:2022:EAI

[GZW+22] Cuiyun Gao, Jichuan Zeng, Zhiyuan Wen, David Lo, Xin Xia, Irwin King, and Michael R. Lyu. Emerging app issue identification via online joint sentiment-topic tracing. *IEEE Transactions on Software Engineering*, 48(8): 3025–3043, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Guo:2022:RTT

[GZZ+22] Jianmin Guo, Quan Zhang, Yue Zhao, Heyuan Shi, Yu Jiang, and Jiaguang Sun. RNN-Test: Towards adversarial testing for recurrent neural network systems. *IEEE Transactions on Software Engineering*, 48(10):4167–4180, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Gong:2023:CII

[GZZ+23] Lina Gong, Haoxiang Zhang, Jingxuan Zhang, Mingqiang Wei, and Zhiqiu Huang. A comprehensive investigation of the impact of class overlap on software defect prediction. *IEEE Transactions on Software Engineering*, 49(4): 2440–2458, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Huai:2023:SGD

[HAC+23] Yuqi Huai, Sumaya Almanee, Yuntianyi Chen, Xiafa Wu, Qi Alfred Chen, and Joshua Garcia. scenoRITA: Generating diverse, fully mutable, test scenarios for autonomous vehicle planning. *IEEE Transactions on Software Engineering*, 49(10):4656–4676, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Heidari:2021:CEA

[HB21] Safiollah Heidari and Rajkumar Buyya. A cost-efficient auto-scaling algorithm for large-scale graph processing in cloud environments with heterogeneous resources. *IEEE Transactions on Software Engineering*, 47(8):1729–1741, August 2021.

Hassan:2020:SBU

[HBH20] Safwat Hassan, Cor-Paul Bezemer, and Ahmed E. Hassan. Studying bad updates of top free-to-download apps in the Google Play Store. *IEEE Transactions on Software Engineering*, 46(7):773–793, July 2020. CODEN IESEDJ. ISSN

0098-5589 (print), 1939-3520 (electronic).

Huang:2024:TCE

[HCL+24] Rubing Huang, Chenhui Cui, Junlong Lian, Dave Towey, Weifeng Sun, and Haibo Chen. Toward cost-effective adaptive random testing: an approximate nearest neighbor approach. *IEEE Transactions on Software Engineering*, 50 (5):1182–1214, May 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hijazi:2023:QEM

[HDC+23] Haytham Hijazi, Joao Duraes, Ricardo Couceiro, João Castelhano, Raul Barbosa, Júlio Medeiros, Miguel Castelo-Branco, Paulo de Carvalho, and Henrique Madeira. Quality evaluation of modern code reviews through intelligent biometric program comprehension. *IEEE Transactions on Software Engineering*, 49 (2):626–645, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hou:2023:CWT

[HDW+23] Qinsheng Hou, Wenrui Diao, Yanhao Wang, Chenglin Mao, Lingyun Ying, Song Liu, Xiaofeng Liu, Yuanzhi Li, Shanqing Guo, Meining Nie, and Haixin Duan. Can we trust the phone vendors? Comprehensive security measurements on the Android firmware ecosystem. *IEEE Transactions on Software Engineering*, 49(7): 3901–3921, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Herbold:2021:CPS

[Her21] Steffen Herbold. On the costs and profit of software defect prediction. *IEEE Transactions on Software Engineering*, 47(11):2617–2631, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hageman:2023:MSA

[HFG+23] Kaspar Hageman, Álvaro Feal, Julien Gamba, Aniketh Girish, Jakob Bleier, Martina Lindorfer, Juan Tapiador, and Narseo Vallina-Rodriguez. Mixed signals: Analyzing software attribution challenges in the Android ecosystem. *IEEE Transactions on Software Engineering*, 49(4):2964–2979, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hu:2023:CTB

[HFS+23] Yutao Hu, Yilin Fang, Yifan Sun, Yaru Jia, Yueming Wu, Deqing Zou, and Hai Jin. Code2Img: Tree-based image transformation for scalable code clone detection. *IEEE Transactions on Software Engineering*, 49(9): 4429–4442, September 2023.

CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hidellaarachchi:2022:EHA

[HGHM22] Dulaji Hidellaarachchi, John Grundy, Rashina Hoda, and Kashumi Madampe. The effects of human aspects on the requirements engineering process: a systematic literature review. *IEEE Transactions on Software Engineering*, 48(6): 2105–2127, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hu:2024:ACL

[HGX+24] Qiang Hu, Yuejun Guo, Xiaofei Xie, Maxime Cordy, Lei Ma, Mike Papadakis, and Yves Le Traon. Active code learning: Benchmarking sample-efficient training of code models. *IEEE Transactions on Software Engineering*, 50(5):1080–1095, May 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Huang:2025:TIP

[HHCZ25] Yuan Huang, Jinbo Huang, Xiangping Chen, and Zibin Zheng. Towards improving the performance of comment generation models by using bytecode information. *IEEE Transactions on Software Engineering*, 51(2):503–520, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

He:2023:ADU

[HHZZ23] Runzhi He, Hao He, Yuxia Zhang, and Minghui Zhou. Automating dependency updates in practice: An exploratory study on GitHub dependabot. *IEEE Transactions on Software Engineering*, 49 (8):4004–4022, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Huang:2022:CRK

[HJC+22] Yuan Huang, Nan Jia, Xiangping Chen, Kai Hong, and Zibin Zheng. Code review knowledge perception: Fusing multi-features for salient-class location. *IEEE Transactions on Software Engineering*, 48 (5):1463–1479, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Huang:2022:CPM

[HJL+22] Yuan Huang, Jinyu Jiang, Xiapu Luo, Xiangping Chen, Zibin Zheng, Nan Jia, and Gang Huang. Change-patterns mapping: a boosting way for change impact analysis. *IEEE Transactions on Software Engineering*, 48(7): 2376–2398, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hort:2022:SPO

[HKSH22] Max Hort, Maria Kechagia, Federica Sarro, and Mark Harman. A survey of performance optimization for mobile applications. *IEEE Transactions on Software Engineering*, 48 (8):2879–2904, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Heimdahl:2025:MBS

[HL25] Mats P. E. Heimdahl and Nancy G. Leveson. Model-based systems engineering and TCAS II: Thirty years later. *IEEE Transactions on Software Engineering*, 51(3):762–767, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

He:2022:DTP

[HLC+22] Qiang He, Bo Li, Feifei Chen, John Grundy, Xin Xia, and Yun Yang. Diversified third-party library prediction for mobile app development. *IEEE Transactions on Software Engineering*, 48(1):150–165, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

He:2023:SCS

[HLGX23] Dongjie He, Jingbo Lu, Yaoqing Gao, and Jingling Xue. Selecting context-sensitivity modularly for accelerating object-sensitive pointer analysis. *IEEE Transactions on Software Engineering*, 49(2): 719–742, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hoch:2022:VCB

[HLPK22] Ralph Hoch, Christoph Luckeneder, Roman Popp, and Hermann Kaindl. Verification of consistency between process models, object life cycles, and context-dependent semantic specifications. *IEEE Transactions on Software Engineering*, 48(10):4041–4059, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hwang:2024:ESJ

[HLR24] Sungjae Hwang, Sungho Lee, and Sukyoung Ryu. An empirical study of JVMs' behaviors on erroneous JNI interoperations. *IEEE Transactions on Software Engineering*, 50 (4):979–994, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hoang:2021:PHD

[HLT+21] Thong Hoang, Julia Lawall, Yuan Tian, Richard J. Oentaryo, and David Lo. PatchNet: Hierarchical deep learning-based stable patch identification for the Linux kernel. *IEEE Transactions on Software Engineering*, 47(11):

2471–2486, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Huang:2024:AUU

[HLX+24] Qing Huang, Zishuai Li, Zhenchang Xing, Zhengkang Zuo, Xin Peng, Xiwei Xu, and Qinghua Lu. Answering uncertain, under-specified API queries assisted by knowledge-aware human–AI dialogue. *IEEE Transactions on Software Engineering*, 50(2):280–295, February 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Harel:2025:ESH

[HM25a] David Harel and Assaf Marron. From executable specifications to hard-to-specify requirements: Challenges in describing reactive system behavior. *IEEE Transactions on Software Engineering*, 51(3): 741–745, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Herbsleb:2025:RES

[HM25b] James Herbsleb and Audris Mockus. Retrospective: an empirical study of speed and communication in globally distributed software development. *IEEE Transactions on Software Engineering*, 51(3): 833–835, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

He:2022:TST

[HMC+22] Yingzhe He, Guozhu Meng, Kai Chen, Xingbo Hu, and Jinwen He. Towards security threats of deep learning systems: a survey. *IEEE Transactions on Software Engineering*, 48(5):1743–1770, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hoffmann:2023:HSS

[HMFL23] Marco Hoffmann, Daniel Mendez, Fabian Fagerholm, and Anton Luckhardt. The human side of software engineering teams: an investigation of contemporary challenges. *IEEE Transactions on Software Engineering*, 49(1): 211–225, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hirao:2022:CRD

[HMIM22] Toshiki Hirao, Shane McIntosh, Akinori Ihara, and Kenichi Matsumoto. Code reviews with divergent review scores: an empirical study of the OpenStack and Qt communities. *IEEE Transactions on Software Engineering*, 48 (1):69–81, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Han:2024:RSB

[HML+24] Ruidong Han, Siqi Ma, Juanru Li, Surya Nepal, David Lo, Zhuo Ma, and JianFeng Ma. Range specification bug detection in flight control system through fuzzing. *IEEE Transactions on Software Engineering*, 50(3):461–473, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hajari:2024:FEW

[HMMR24] Fahimeh Hajari, Samaneh Malmir, Ehsan Mirsaeedi, and Peter C. Rigby. Factoring expertise, workload, and turnover into code review recommendation. *IEEE Transactions on Software Engineering*, 50(4):884–899, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Haas:2024:OAM

[HNJA24] Roman Haas, Raphael Nömmer, Elmar Juergens, and Sven Apel. Optimization of automated and manual software tests in industrial practice: a survey and historical analysis. *IEEE Transactions on Software Engineering*, 50(8): 2005–2020, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hoda:2022:STG

[Hod22] Rashina Hoda. Socio-technical grounded theory for software engineering. *IEEE Transactions on Software Engineering*, 48(10):3808–3832, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Holzmann:2025:ASC

[Hol25] Gerard J. Holzmann. The analysis of safety critical software systems. *IEEE Transactions on Software Engineering*, 51(3):774–777, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hussain:2022:HVS

[HPW+22] Waqar Hussain, Harsha Perera, Jon Whittle, Arif Nurwidyantoro, Rashina Hoda, Rifat Ara Shams, and Gillian Oliver. Human values in software engineering: Contrasting case studies of practice. *IEEE Transactions on Software Engineering*, 48(5): 1818–1833, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Han:2025:DCY

[HPX+25] Linyi Han, Shidong Pan, Zhenchang Xing, Jiamou Sun, Sofonias Yitagesu, Xiaowang Zhang, and Zhiyong Feng. Do chase your tail! Missing key aspects augmentation in textual vulnerability descriptions of long-tail software through feature inference. *IEEE Transactions on*

Software Engineering, 51(2): 466–483, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Horcas:2023:WGB

[HSB+23] Jose-Miguel Horcas, Daniel Strüber, Alexandru Burdusel, Jabier Martinez, and Steffen Zschaler. We're not gonna break it! Consistency-preserving operators for efficient product line configuration. *IEEE Transactions on Software Engineering*, 49(3): 1102–1117, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hayet:2025:CLB

[HSd25] Ishrak Hayet, Adam Scott, and Marcelo d'Amorim. ChatAssert: LLM-based test oracle generation with external tools assistance. *IEEE Transactions on Software Engineering*, 51(1): 305–319, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hu:2024:TCM

[HSEW24] Danniell Hu, Priscila Santiesteban, Madeline Endres, and Westley Weimer. Towards a cognitive model of dynamic debugging: Does identifier construction matter? *IEEE Transactions on Software Engineering*, 50(11): 3007–3021, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hussain:2022:HCH

[HSH+22] Waqar Hussain, Mojtaba Shahin, Rashina Hoda, Jon Whittle, Harsha Perera, Arif Nurwidyantoro, Rifat Ara Shams, and Gillian Oliver. How can human values be addressed in agile methods? A case study on SAFe. *IEEE Transactions on Software Engineering*, 48(12): 5158–5175, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Heinrich:2021:LRA

[HSR21] Robert Heinrich, Misha Strittmatter, and Ralf Reussner. A layered reference architecture for metamodels to tailor quality modeling and analysis. *IEEE Transactions on Software Engineering*, 47(4): 775–800, April 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hernandez:2025:TPD

[HSS+25] Javier Hernandez, Vedant Das Swain, Jina Suh, Daniel McDuff, Judith Amores, Gonzalo Ramos, Kael Rowan, Brian Houck, Shamsi Iqbal, and Mary Czerwinski. Triple peak day: Work rhythms of software developers in hybrid work. *IEEE Transactions on*

Software Engineering, 51(2): 344–354, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Huang:2025:LBY

[HSW+25] Yuheng Huang, Jiayang Song, Zhijie Wang, Shengming Zhao, Huaming Chen, Felix Juefei-Xu, and Lei Ma. Look before you leap: an exploratory study of uncertainty analysis for large language models. *IEEE Transactions on Software Engineering*, 51(2): 413–429, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Huang:2021:SAR

[HSX+21] Rubing Huang, Weifeng Sun, Yinyin Xu, Haibo Chen, Dave Towey, and Xin Xia. A survey on adaptive random testing. *IEEE Transactions on Software Engineering*, 47(10): 2052–2083, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hasan:2024:RAB

[HTA24] Mohammed Tayeeb Hasan, Nikolaos Tsantalis, and Pouria Alikhanifard. Refactoring-aware block tracking in commit history. *IEEE Transactions on Software Engineering*, 50(12):3330–3350, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Huo:2021:DTB

[HTL+21] Xuan Huo, Ferdian Thung, Ming Li, David Lo, and Shu-Ting Shi. Deep transfer bug localization. *IEEE Transactions on Software Engineering*, 47(7):1368–1380, July 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Hu:2021:SBH

[HWZ+21] Yikun Hu, Hui Wang, Yuanyuan Zhang, Bodong Li, and Dawu Gu. A semantics-based hybrid approach on binary code similarity comparison. *IEEE Transactions on Software Engineering*, 47(6):1241–1258, June 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Huang:2023:SDT

[HXJ+23] Jianjun Huang, Bo Xue, Jiasheng Jiang, Wei You, Bin Liang, Jingzheng Wu, and Yanjun Wu. Scalably detecting third-party Android libraries with two-stage Bloom filtering. *IEEE Transactions on Software Engineering*, 49(4):2272–2284, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Huang:2020:AIM

[HXLM20] Q. Huang, X. Xia, D. Lo, and G. C. Murphy. Automating in-

tention mining. *IEEE Transactions on Software Engineering*, 46(10):1098–1119, October 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

He:2022:ESR

[HYC22] Fei He, Qianshan Yu, and Liming Cai. Efficient summary reuse for software regression verification. *IEEE Transactions on Software Engineering*, 48(4):1417–1431, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Han:2024:UNO

[HZL+24] Junxiao Han, Jiahao Zhang, David Lo, Xin Xia, Shuiguang Deng, and Minghui Wu. Understanding newcomers onboarding process in deep learning projects. *IEEE Transactions on Software Engineering*, 50(3):443–460, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Iannucci:2020:MIA

[IAM+20] S. Iannucci, S. Abdelwahed, A. Montemaggio, M. Hannis, L. Leonard, J. S. King, and J. A. Hamilton. A model-integrated approach to designing self-protecting systems. *IEEE Transactions on Software Engineering*, 46(12): 1380–1392, December 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Iwaya:2023:PEW

[IBR23] Leonardo Horn Iwaya, Muhammad Ali Babar, and Awais Rashid. Privacy engineering in the wild: Understanding the practitioners mindset, organizational aspects, and current practices. *IEEE Transactions on Software Engineering*, 49(9):4324–4348, September 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Iannone:2023:SLS

[IGLP23] Emanuele Iannone, Roberta Guadagni, Filomena Ferrucci and Andrea De Lucia, and Fabio Palomba. The secret life of software vulnerabilities: a large-scale empirical study. *IEEE Transactions on Software Engineering*, 49(1): 44–63, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Imtiaz:2023:OSF

[IKW23] Nasif Imtiaz, Aniqa Khanom, and Laurie Williams. Open or sneaky? Fast or slow? Light or heavy?: Investigating security releases of open source packages. *IEEE Transactions on Software Engineering*, 49(4):1540–1560, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Imtiaz:2023:YDC

[IW23] Nasif Imtiaz and Laurie Williams. Are your dependencies code reviewed?: Measuring code review coverage in dependency updates. *IEEE Transactions on Software Engineering*, 49(11): 4932–4945, November 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Iorga:2023:SOM

[IWD23] Dan Iorga, John Wickerson, and Alastair F. Donaldson. Simulating operational memory models using off-the-shelf program analysis tools. *IEEE Transactions on Software Engineering*, 49(12): 5084–5102, December 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Iyer:2021:EPT

[IYNH21] Rahul N. Iyer, S. Alex Yun, Meiyappan Nagappan, and Jesse Hoey. Effects of personality traits on pull request acceptance. *IEEE Transactions on Software Engineering*, 47(11):2632–2643, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jorgensen:2021:RBE

[JBL21] Magne Jørgensen, Gunnar Rye Bergersen, and Knut Liestøl. Relations between effort estimates, skill indicators, and measured programming skill. *IEEE Transactions on Software Engineering*, 47(12): 2892–2906, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jarman:2022:LMC

[JBS+22] Darryl Jarman, Jeffrey Berry, Riley Smith, Ferdian Thung, and David Lo. Legion: Massively composing rankers for improved bug localization at Adobe. *IEEE Transactions on Software Engineering*, 48(8): 3010–3024, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jafari:2022:DSJ

[JCA+22] Abbas Javan Jafari, Diego Elias Costa, Rabe Abdalkareem, Emad Shihab, and Nikolaos Tsantalis. Dependency smells in JavaScript projects. *IEEE Transactions on Software Engineering*, 48(10): 3790–3807, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jahangirova:2021:EVO

[JCHT21] Gunel Jahangirova, David Clark, Mark Harman, and Paolo Tonella. An empirical validation of oracle improvement. *IEEE Transactions on Software Engineering*, 47(8): 1708–1728, August 2021.

Jahanshahi:2023:AAD

[JCMB23] Hadi Jahanshahi, Mucahit Cevik, Kianoush Mousavi, and Ayşe Başar. ADP-Triage: Approximate dynamic programming for bug triage. *IEEE Transactions on Software Engineering*, 49(10): 4594–4609, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jesse:2023:LPU

[JDS23] Kevin Jesse, Premkumar T. Devanbu, and Anand Sawant. Learning to predict user-defined types. *IEEE Transactions on Software Engineering*, 49(4):1508–1522, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2023:CSA

[JDZ+23] Muhui Jiang, Qinming Dai, Wenlong Zhang, Rui Chang, Yajin Zhou, Xiapu Luo, Ruoyu Wang, Yang Liu, and Kui Ren. A comprehensive study on ARM disassembly tools. *IEEE Transactions on Software Engineering*, 49(4): 1683–1703, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2024:BDS

[JFH+24] Shuai Jiang, Cai Fu, Shuai He, Jianqiang Lv, Lansheng Han, and Hong Hu. BinCola: Diversity-sensitive contrastive learning for binary code similarity detection. *IEEE Transactions on Software Engineering*, 50(10):2485–2497, October 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ji:2025:MFD

[JFW+25] Pin Ji, Yang Feng, Duo Wu, Lingyue Yan, Penglin Chen, Jia Liu, and Zhihong Zhao. MoCo: Fuzzing deep learning libraries via assembling code. *IEEE Transactions on Software Engineering*, 51(2):371–388, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jana:2020:EAI

[JHA+20] Angshuman Jana, Raju Halder, Kalahasti Venkata Abhishekh, Sanjeevini Devi Ganni, and Agostino Cortesi. Extending abstract interpretation to dependency analysis of database applications. *IEEE Transactions on Software Engineering*, 46(5):463–494, May 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jalote:2021:STP

[JK21] Pankaj Jalote and Damodaram Kamma. Studying task processes for improving programmer productivity. *IEEE Transactions on Software Engineering*, 47(4):801–817,

April 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jesse:2023:RER

[JKS23] Kevin Jesse, Christoph Kuhmuench, and Anand Sawant. RefactorScore: Evaluating refactor prone code. *IEEE Transactions on Software Engineering*, 49(11):5008–5026, November 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jin:2021:SCI

[JLC+21] Wuxia Jin, Ting Liu, Yuanfang Cai, Rick Kazman, Ran Mo, and Qinghua Zheng. Service candidate identification from monolithic systems based on execution traces. *IEEE Transactions on Software Engineering*, 47(5):987–1007, May 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2023:DDD

[JLG+23] He Jiang, Yulong Li, Shikai Guo, Xiaochen Li, Tao Zhang, Hui Li, and Rong Chen. DupHunter: Detecting duplicate pull requests in fork-based development. *IEEE Transactions on Software Engineering*, 49(4):2920–2940, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2022:HNN

[JLJ+22] Lin Jiang, Hui Liu, He Jiang, Lu Zhang, and Hong Mei. Heuristic and neural network based prediction of project-specific API member access. *IEEE Transactions on Software Engineering*, 48(4):1249–1267, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2022:AEA

[JLJZ22] Yanjie Jiang, Hui Liu, Jiahao Jin, and Lu Zhang. Automated expansion of abbreviations based on semantic relation and transfer expansion. *IEEE Transactions on Software Engineering*, 48(2):519–537, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2023:BAA

[JLL+23] Yanjie Jiang, Hui Liu, Xiaoqing Luo, Zhihao Zhu, Xiaye Chi, Nan Niu, Yuxia Zhang, Yamin Hu, Pan Bian, and Lu Zhang. BugBuilder: an automated approach to building bug repository. *IEEE Transactions on Software Engineering*, 49(4):1443–1463, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2020:AAE

[JLZZ20a] Yanjie Jiang, Hui Liu, Jiaqi Zhu, and Lu Zhang. Au-

tomatic and accurate expansion of abbreviations in parameters. *IEEE Transactions on Software Engineering*, 46(7):732–747, July 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic). See corrections [JLZZ20b].

Jiang:2020:CAA

[JLZZ20b] Yanjie Jiang, Hui Liu, Jiaqi Zhu, and Lu Zhang. Corrections to Automatic and Accurate Expansion of Abbreviations in Parameters. *IEEE Transactions on Software Engineering*, 46(9): 1039, September 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic). See [JLZZ20a].

Janke:2022:GBM

[JM22] Mario Janke and Patrick Mäder. Graph based mining of code change patterns from version control commits. *IEEE Transactions on Software Engineering*, 48(3): 848–863, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Janke:2023:SMC

[JM23] Mario Janke and Patrick Mäder. FS^3_{change}: a scalable method for change pattern mining. *IEEE Transactions on Software Engineering*, 49(6): 3616–3629, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2024:BOS

[JSC+24] Hanzhi Jiang, Lin Shi, Meiru Che, Yuxia Zhang, and Qing Wang. Bringing open source communication and development together: a cross-platform study on Gitter and GitHub. *IEEE Transactions on Software Engineering*, 50(11):2807–2826, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2023:TUN

[JSW+23] Shuyao Jiang, Jiacheng Shen, Shengnan Wu, Yu Cai, Yue Yu, and Yangfan Zhou. Towards usable neural comment generation via code-comment linkage interpretation: Method and empirical study. *IEEE Transactions on Software Engineering*, 49(4): 2239–2254, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jangali:2023:AGE

[JTA+23] Mostafa Jangali, Yiming Tang, Niclas Alexandersson, Philipp Leitner, Jinqiu Yang, and Weiyi Shang. Automated generation and evaluation of JMH microbenchmark suites from unit tests. *IEEE Transactions on Software Engineering*, 49(4):1704–1725, April 2023. CODEN IESEDJ. ISSN

0098-5589 (print), 1939-3520 (electronic).

Jiarpakdee:2022:ESM

[JTDG22] Jirayus Jiarpakdee, Chakkrit Kla Tantithamthavorn, Hoa Khanh Dam, and John Grundy. An empirical study of model-agnostic techniques for defect prediction models. *IEEE Transactions on Software Engineering*, 48(1):166–185, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiarpakdee:2021:ICM

[JTH21] J. Jiarpakdee, C. Tantithamthavorn, and A. E. Hassan. The impact of correlated metrics on the interpretation of defect models. *IEEE Transactions on Software Engineering*, 47(2):320–331, February 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jin:2022:PAA

[JWW+22] Hai Jin, Zeli Wang, Ming Wen, Weiqi Dai, Yu Zhu, and Deqing Zou. `Aroc`: an automatic repair framework for on-chain smart contracts. *IEEE Transactions on Software Engineering*, 48(11): 4611–4629, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2024:TPP

[JWZ+24] He Jiang, Zun Wang, Zhide Zhou, Xiaochen Li, Shikai Guo, Weifeng Sun, and Tao Zhang. A testing program and pragma combination selection based framework for high-level synthesis tool pragma-related bug detection. *IEEE Transactions on Software Engineering*, 50(4):937–955, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Johnson:2021:EWE

[JZB21] Brittany Johnson, Thomas Zimmermann, and Christian Bird. The effect of work environments on productivity and satisfaction of software engineers. *IEEE Transactions on Software Engineering*, 47(4): 736–757, April 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jin:2023:EIP

[JZC+23] Wuxia Jin, Dinghong Zhong, Yuanfang Cai, Rick Kazman, and Ting Liu. Evaluating the impact of possible dependencies on architecture-level maintainability. *IEEE Transactions on Software Engineering*, 49(3):1064–1085, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2024:EPT

[JZC+24] Muhui Jiang, Xiaoye Zheng, Rui Chang, Yajin Zhou, and Xiapu Luo. Examiner-pro: Testing Arm emulators across different privileges. *IEEE Transactions on Software Engineering*, 50(11): 2786–2806, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2022:CCT

[JZR+22] He Jiang, Zhide Zhou, Zhilei Ren, Jingxuan Zhang, and Xiaochen Li. CTOS: Compiler testing for optimization sequences of LLVM. *IEEE Transactions on Software Engineering*, 48(7):2339–2358, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2024:SMV

[JZS+24] Yuan Jiang, Yujian Zhang, Xiaohong Su, Christoph Treude, and Tiantian Wang. StagedVulBERT: Multigranular vulnerability detection with a novel pretrained code model. *IEEE Transactions on Software Engineering*, 50(12): 3454–3471, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Jiang:2021:ITO

[JZZ+21] Shujuan Jiang, Miao Zhang, Yanmei Zhang, Rongcun Wang, Qiao Yu, and Jacky Wai Keung. An integration test order strategy to consider control coupling. *IEEE Transactions on Software Engineering*, 47(7):1350–1367, July 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Khatoonabadi:2024:PFR

[KACS24] SayedHassan Khatoonabadi, Ahmad Abdellatif, Diego Elias Costa, and Emad Shihab. Predicting the first response latency of maintainers and contributors in pull requests. *IEEE Transactions on Software Engineering*, 50(10): 2529–2543, October 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kafura:2025:RMC

[Kaf25] Dennis Kafura. Reflections on McCabe's cyclomatic complexity. *IEEE Transactions on Software Engineering*, 51 (3):700–705, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Keegan:2022:CDE

[KBD+22] Maureen Keegan, Victor Braberman, Nicolás D'Ippolito, Nir Piterman, and Sebastián Uchitel. Control and discovery of environment behaviour. *IEEE Transactions on Software Engineering*, 48 (6):1965–1978, June 2022.

CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kapitsaki:2021:MRO

[KC21] Georgia M. Kapitsaki and Georgia Charalambous. Modeling and recommending open source licenses with `findOSSLicense`. *IEEE Transactions on Software Engineering*, 47(5):919–935, May 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Khan:2022:EST

[KCVM22] Faizan Khan, Boqi Chen, Daniel Varro, and Shane McIntosh. An empirical study of type-related defects in Python projects. *IEEE Transactions on Software Engineering*, 48(8):3145–3158, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kourtis:2024:PVL

[KDF24] Georgios Kourtis, Clare Dixon, and Michael Fisher. Parameterized verification of leader/follower systems via arithmetic constraints. *IEEE Transactions on Software Engineering*, 50(9):2458–2471, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Khan:2023:CCS

[KDVM23] Faizan Khan, Istvan David, Daniel Varro, and Shane McIntosh. Code cloning in smart contracts on the Ethereum platform: an extended replication study. *IEEE Transactions on Software Engineering*, 49(4):2006–2019, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kotti:2023:ISE

[KGS23] Zoe Kotti, Georgios Gousios, and Diomidis Spinellis. Impact of software engineering research in practice: a patent and author survey analysis. *IEEE Transactions on Software Engineering*, 49(4):2020–2038, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kula:2022:FAT

[KGvDG22] Elvan Kula, Eric Greuter, Arie van Deursen, and Georgios Gousios. Factors affecting on-time delivery in large-scale agile software development. *IEEE Transactions on Software Engineering*, 48(9):3573–3592, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kan:2024:CLT

[KGZS24] Shuangxiang Kan, Yuhao Gao, Zexin Zhong, and Yulei

Sui. Cross-language taint analysis: Generating caller-sensitive native code specification for Java. *IEEE Transactions on Software Engineering*, 50(6):1518–1533, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kim:2023:RBC

[KKC+23] Dongkwan Kim, Eunsoo Kim, Sang Kil Cha, Sooel Son, and Yongdae Kim. Revisiting binary code similarity analysis using interpretable feature engineering and lessons learned. *IEEE Transactions on Software Engineering*, 49 (4):1661–1682, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kamiya:2025:RDC

[KKI25] Toshihiro Kamiya, Shinji Kusumoto, and Katsuro Inoue. A retrospective on developing code clone detector CCFinder and its impact. *IEEE Transactions on Software Engineering*, 51(3): 808–813, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kochhar:2021:MCO

[KKN+21] Pavneet Singh Kochhar, Eirini Kalliamvakou, Nachiappan Nagappan, Thomas Zimmermann, and Christian Bird. Moving from closed to open source: Observations from six transitioned projects to GitHub. *IEEE Transactions on Software Engineering*, 47(9):1838–1856, September 2021.

Kang:2022:ALD

[KL22] Hong Jin Kang and David Lo. Active learning of discriminative subgraph patterns for API misuse detection. *IEEE Transactions on Software Engineering*, 48(8):2761–2783, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kazemi:2024:CPD

[KLM24] Farshad Kazemi, Maxime Lamothe, and Shane McIntosh. Characterizing the prevalence, distribution, and duration of stale reviewer recommendations. *IEEE Transactions on Software Engineering*, 50(8):2096–2109, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kannengiesser:2022:CCS

[KLS+22] Niclas Kannengießer, Sebastian Lins, Christian Sander, Klaus Winter, Hellmuth Frey, and Ali Sunyaev. Challenges and common solutions in smart contract development. *IEEE Transactions on Software Engineering*, 48(11): 4291–4318, November 2022. CODEN IESEDJ. ISSN 0098-

5589 (print), 1939-3520 (electronic).

Kramer:2025:DCM

[KM25] Jeff Kramer and Jeff Magee. Dynamic change management: Quiescence revisited. *IEEE Transactions on Software Engineering*, 51(3):746–750, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kitchenham:2023:HSS

[KMB23a] Barbara Kitchenham, Lech Madeyski, and David Budgen. How should software engineering secondary studies include grey material? *IEEE Transactions on Software Engineering*, 49(2):872–882, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kitchenham:2023:SSE

[KMB23b] Barbara Kitchenham, Lech Madeyski, and David Budgen. SEGRESS: Software Engineering Guidelines for REporting Secondary Studies. *IEEE Transactions on Software Engineering*, 49(3): 1273–1298, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ko:2025:RHD

[KMCA25] Amy J. Ko, Brad A. Myers, Michael Coblenz, and Htet Htet Aung. A retrospective on how developers seek, relate, and collect information about code. *IEEE Transactions on Software Engineering*, 51(3):848–851, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kommrusch:2023:SSL

[KMP23] Steve Kommrusch, Martin Monperrus, and Louis-Noël Pouchet. Self-supervised learning to prove equivalence between straight-line programs via rewrite rules. *IEEE Transactions on Software Engineering*, 49(7):3771–3792, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kitchenham:2022:ICC

[KMSG22] Barbara Kitchenham, Lech Madeyski, Giuseppe Scanniello, and Carmine Gravino. The importance of the correlation in crossover experiments. *IEEE Transactions on Software Engineering*, 48(8): 2802–2813, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kechagia:2022:EAP

[KMSH22] Maria Kechagia, Sergey Mechtaev, Federica Sarro, and Mark Harman. Evaluating automatic program repair capabilities to repair API misuses. *IEEE Transactions on*

Software Engineering, 48(7): 2658–2679, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Krishna:2021:WLT

[KNJM21] Rahul Krishna, Vivek Nair, Pooyan Jamshidi, and Tim Menzies. Whence to learn? Transferring knowledge in configurable systems using BEETLE. *IEEE Transactions on Software Engineering*, 47(12):2956–2972, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Korel:2025:IIT

[Kor25] Bogdan Korel. Influence of the 1990 IEEE TSE paper "Automated Software Test Data Generation" on software engineering. *IEEE Transactions on Software Engineering*, 51 (3):751–753, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Karac:2025:DTA

[KPTJ25] Itir Karac, Jose Ignacio Panach, Burak Turhan, and Natalia Juristo. Does treatment adherence impact experiment results in TDD? *IEEE Transactions on Software Engineering*, 51(1):135–152, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Karmakar:2024:IIS

[KR24] Anjan Karmakar and Romain Robbes. INSPECT: Intrinsic and systematic probing evaluation for code transformers. *IEEE Transactions on Software Engineering*, 50(2):220–238, February 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kramer:2025:RFE

[Kra25] Jeff Kramer. Reflections of a former Editor-in-Chief of TSE. *IEEE Transactions on Software Engineering*, 51(3): 673–676, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kallehbasti:2022:HBV

[KRB22] Mohammad Mehdi Pourhashem Kallehbasti, Matteo Rossi, and Luciano Baresi. On how bit-vector logic can help verify LTL-based specifications. *IEEE Transactions on Software Engineering*, 48(4): 1154–1168, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kruger:2021:CEA

[KSA+21] Stefan Krüger, Johannes Späth, Karim Ali, Eric Bodden, and Mira Mezini. CrySL: An extensible approach to validating the correct usage of cryptographic APIs.

IEEE Transactions on Software Engineering, 47(11): 2382–2400, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Koch:2021:MBF

[KSJ+21] Patrick Koch, Konstantin Schekotihin, Dietmar Jannach, Birgit Hofer, and Franz Wotawa. Metric-based fault prediction for spreadsheets. *IEEE Transactions on Software Engineering*, 47(10): 2195–2207, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Khalajzadeh:2023:SDA

[KSO+23] Hourieh Khalajzadeh, Mojtaba Shahin, Humphrey O. Obie, Pragya Agrawal, and John Grundy. Supporting developers in addressing human-centric issues in mobile apps. *IEEE Transactions on Software Engineering*, 49(4):2149–2168, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kim:2025:RCC

[KSW25] Sunghun Kim, Shivkumar Shivaji, and Jim Whitehead. A reflection on change classification in the era of large language models. *IEEE Transactions on Software Engineering*, 51(3):864–869, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kuhrmann:2022:WMA

[KTH+22] Marco Kuhrmann, Paolo Tell, Regina Hebig, Jil Klünder, Jürgen Münch, Oliver Linssen, Dietmar Pfahl, Michael Felderer, Christian R. Prause, Stephen G. MacDonell, Joyce Nakatumba-Nabende, David Raffo, Sarah Beecham, Eray Tüzün, Gustavo López, Nicolas Paez, Diego Fontdevila, Sherlock A. Licorish, Steffen Küpper, Günther Ruhe, Eric Knauss, Özden Özcan-Top, Paul Clarke, Fergal McCaffery, Marcela Genero, Aurora Vizcaino, Mario Piattini, Marcos Kalinowski, Tayana Conte, Rafael Prikladnicki, Stephan Krusche, Ahmet Co kunçay, Ezequiel Scott, Fabio Calefato, Svetlana Pimonova, Rolf-Helge Pfeiffer, Ulrik Pagh Schultz, Rogardt Heldal, Masud Fazal-Baqaie, Craig Anslow, Maleknaz Nayebi, Kurt Schneider, Stefan Sauer, Dietmar Winkler, Stefan Biffl, Maria Cecilia Bastarrica, and Ita Richardson. What makes agile software development agile? *IEEE Transactions on Software Engineering*, 48(9): 3523–3539, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Karac:2021:CEN

[KTJ21] Itir Karac, Burak Turhan, and Natalia Juristo. A controlled experiment with novice developers on the impact of task description granularity on software quality in test-driven development. *IEEE Transactions on Software Engineering*, 47(7):1315–1330, July 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kovalenko:2020:DRR

[KTP+20] Vladimir Kovalenko, Nava Tintarev, Evgeny Pasynkov, Christian Bird, and Alberto Bacchelli. Does reviewer recommendation help developers? *IEEE Transactions on Software Engineering*, 46(7): 710–731, July 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Krishna:2022:PCE

[KTSR22] Rahul Krishna, Chong Tang, Kevin Sullivan, and Baishakhi Ray. `ConEx`: Efficient exploration of big-data system configurations for better performance. *IEEE Transactions on Software Engineering*, 48(3): 893–909, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Karim:2020:PID

[KTSS20] R. Karim, F. Tip, A. Sochrková, and K. Sen. Platform-independent dynamic taint analysis for JavaScript. *IEEE Transactions on Software Engineering*, 46(12):1364–1379, December 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Klotins:2021:PMS

[KUC+21] E. Klotins, M. Unterkalmsteiner, P. Chatzipetrou, T. Gorschek, R. Prikladnicki, N. Tripathi, and L. B. Pompermaier. A progression model of software engineering goals, challenges, and practices in start-ups. *IEEE Transactions on Software Engineering*, 47 (3):498–521, March 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kang:2024:EDL

[KYAY24] Sungmin Kang, Juyeon Yoon, Nargiz Askarbekkyzy, and Shin Yoo. Evaluating diverse large language models for automatic and general bug reproduction. *IEEE Transactions on Software Engineering*, 50(10):2677–2694, October 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Kohler:2025:CLF

[KZWS25] Mirko Köhler, George Zakhour, Pascal Weisenburger, and Guido Salvaneschi. Consistent local-first software: Enforcing safety and invari-

ants for local-first applications. *IEEE Transactions on Software Engineering*, 51(1): 53–65, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ling:2022:HDT

[LAM22] Xiao Ling, Rishabh Agrawal, and Tim Menzies. How different is test case prioritization for open and closed source projects? *IEEE Transactions on Software Engineering*, 48 (7):2526–2540, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lamport:2025:RPC

[Lam25] Leslie Lamport. A retrospective of proving the correctness of multiprocess programs. *IEEE Transactions on Software Engineering*, 51(3): 713–716, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lu:2024:ETA

[LAY24] Chengjie Lu, Shaukat Ali, and Tao Yue. EpiTESTER: Testing autonomous vehicles with epigenetic algorithm and attention mechanism. *IEEE Transactions on Software Engineering*, 50(10): 2614–2632, October 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2021:RRD

[LBK21] Li Li, Tegawendé F. Bissyandé, and Jacques Klein. Rebooting research on detecting repackaged Android apps: Literature review and benchmark. *IEEE Transactions on Software Engineering*, 47(4): 676–693, April 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2023:SLO

[LC23a] Wei Liu and Tse-Hsun Chen. SLocator: Localizing the origin of SQL queries in database-backed web applications. *IEEE Transactions on Software Engineering*, 49(6): 3376–3390, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lopez:2023:GSR

[LC23b] José Antonio Hernández López and Jesús Sánchez Cuadrado. Generating structurally realistic models with deep autoregressive networks. *IEEE Transactions on Software Engineering*, 49(4):2661–2676, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2023:ESY

[LCB23] Hao Li, Filipe R. Cogo, and Cor-Paul Bezemer. An empirical study of yanked releases in the Rust package registry. *IEEE Transactions on*

Software Engineering, 49(1): 437–449, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2023:AQT

[LCC+23] Ke Liu, Xiang Chen, Chunyang Chen, Xiaofei Xie, and Zhanqi Cui. Automated question title reformulation by mining modification logs from Stack Overflow. *IEEE Transactions on Software Engineering*, 49(9):4390–4410, September 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liao:2022:LPR

[LCL+22] Lizhi Liao, Jinfu Chen, Heng Li, Yi Zeng, Weiyi Shang, Catalin Sporea, Andrei Toma, and Sarah Sajedi. Locating performance regression root causes in the field operations of Web-based systems: an experience report. *IEEE Transactions on Software Engineering*, 48(12): 4986–5006, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Le-Cong:2023:IAP

[LCLL+23] Thanh Le-Cong, Duc-Minh Luong, Xuan Bach D. Le, David Lo, Nhat-Hoa Tran, Bui Quang-Huy, and Quyet-Thang Huynh. Invalidator: Automated patch correctness assessment via semantic and syntactic reasoning. *IEEE Transactions on Software Engineering*, 49(6): 3411–3429, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2024:ACE

[LCP+24] Changshu Liu, Pelin Cetin, Yogesh Patodia, Baishakhi Ray, Saikat Chakraborty, and Yangruibo Ding. Automated code editing with search-generate-modify. *IEEE Transactions on Software Engineering*, 50(7):1675–1686, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lopez:2025:IDC

[LCS+25] José Antonio Hernández López, Boqi Chen, Mootez Saad, Tushar Sharma, and Dániel Varró. On inter-dataset code duplication and data leakage in large language models. *IEEE Transactions on Software Engineering*, 51(1): 192–205, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2023:PNF

[LCW+23] Zhe Liu, Chunyang Chen, Junjie Wang, Yuekai Huang, Jun Hu, and Qing Wang. `Nighthawk`: Fully automated localizing UI display issues via visual understanding. *IEEE Transactions on Software En-*

gineering, 49(1):403–418, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lin:2024:CWR

[LCW+24] Zewei Lin, Jiachi Chen, Jiajing Wu, Weizhe Zhang, Yongjuan Wang, and Zibin Zheng. CRPWarner: Warning the risk of contract-related rug pull in DeFi smart contracts. *IEEE Transactions on Software Engineering*, 50(6): 1534–1547, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2022:HES

[LCY22] Miqing Li, Tao Chen, and Xin Yao. How to evaluate solutions in pareto-based search-based software engineering: a critical review and methodological guidance. *IEEE Transactions on Software Engineering*, 48 (5):1771–1799, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lei:2023:BAT

[LCY+23] Zhanyao Lei, Yixiong Chen, Yang Yang, Mingyuan Xia, and Zhengwei Qi. Bootstrapping automated testing for RESTful web services. *IEEE Transactions on Software Engineering*, 49(4):1561–1579, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2022:SDL

[LCYS22] Zhenhao Li, Tse-Hsun Chen, Jinqiu Yang, and Weiyi Shang. Studying duplicate logging statements and their relationships with code clones. *IEEE Transactions on Software Engineering*, 48(7):2476–2494, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2023:DTM

[LDC+23] Shuang Liu, Shujie Dou, Junjie Chen, Zhirun Zhang, and Ye Lu. Differential testing of machine translators based on compositional semantics. *IEEE Transactions on Software Engineering*, 49(12):5046–5059, December 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2022:ACP

[LDL+22] Rui Li, Wenrui Diao, Zhou Li, Shishuai Yang, Shuang Li, and Shanqing Guo. Android custom permissions demystified: a comprehensive security evaluation. *IEEE Transactions on Software Engineering*, 48(11): 4465–4484, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2024:TIP

[LDP+24] Yinghua Li, Xueqi Dang, Weiguo Pian, Andrew Habib, Jacques Klein, and Tegawendé F.

Bissyandé. Test input prioritization for graph neural networks. *IEEE Transactions on Software Engineering*, 50(6): 1396–1424, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Long:2024:ART

[LDRK24] Daniel Long, Scott Drylie, Jonathan D. Ritschel, and Clay Koschnick. An assessment of rules of thumb for software phase management, and the relationship between phase effort and schedule success. *IEEE Transactions on Software Engineering*, 50(2): 209–219, February 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Leveson:2025:DAC

[Lev25] Nancy G. Leveson. Design and assurance of control software. *IEEE Transactions on Software Engineering*, 51(3): 666–672, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lopez-Fernandez:2022:DTS

[LFaG+22] Daniel López-Fernández, Jessica D 'az, Javier García, Jorge Pérez, and Ángel González-Prieto. DevOps team structures: Characterization and implications. *IEEE Transactions on Software Engineering*, 48(10): 3716–3736, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Larsen:2023:PSS

[LFBM23] Simon Larsén, Jean-Rémy Falleri, Benoit Baudry, and Martin Monperrus. `Spork`: Structured merge for Java with formatting preservation. *IEEE Transactions on Software Engineering*, 49(1):64–83, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2022:CCT

[LFZ+22] Di Liu, Yang Feng, Xiaofang Zhang, James A. Jones, and Zhenyu Chen. Clustering crowdsourced test reports of mobile applications using image understanding. *IEEE Transactions on Software Engineering*, 48(4):1290–1308, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2022:ACM

[LGC+22] Shangqing Liu, Cuiyun Gao, Sen Chen, Lun Yiu Nie, and Yang Liu. ATOM: Commit message generation based on abstract syntax tree and hybrid ranking. *IEEE Transactions on Software Engineering*, 48(5):1800–1817, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2023:IDL

[LGL+23] Shiran Liu, Zhaoqiang Guo, Yanhui Li, Chuanqi Wang, Lin Chen, Zhongbin Sun, Yuming Zhou, and Baowen Xu. Inconsistent defect labels: Essence, causes, and influence. *IEEE Transactions on Software Engineering*, 49(2): 586–610, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2024:EEL

[LHJ+24] Yichen Li, Yintong Huo, Zhihan Jiang, Renyi Zhong, Pinjia He, Yuxin Su, Lionel C. Briand, and Michael R. Lyu. Exploring the effectiveness of LLMs in automated logging statement generation: an empirical study. *IEEE Transactions on Software Engineering*, 50(12):3188–3207, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Licorish:2025:UEA

[Lic25] Sherlock A. Licorish. Understanding the effect of agile practice quality on software product quality. *IEEE Transactions on Software Engineering*, 51(2):650–662, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2020:BSG

[LJKC20] X. Li, H. Jiang, Y. Kamei, and X. Chen. Bridging semantic gaps between natural languages and APIs with word embedding. *IEEE Transactions on Software Engineering*, 46(10):1081–1097, October 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2022:PDB

[LJL+22] Dong Liu, He Jiang, Xiaochen Li, Zhilei Ren, Lei Qiao, and Zuohua Ding. `DPWord2Vec`: Better representation of design patterns in semantics. *IEEE Transactions on Software Engineering*, 48(4):1228–1248, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2021:DLB

[LJX+21] Hui Liu, Jiahao Jin, Zhifeng Xu, Yanzhen Zou, Yifan Bu, and Lu Zhang. Deep learning based code smell detection. *IEEE Transactions on Software Engineering*, 47(9):1811–1837, September 2021.

Liu:2024:EEE

[LJZ+24] Jingwen Liu, Wuxia Jin, Junhui Zhou, Qiong Feng, Ming Fan, Haijun Wang, and Ting Liu. 3Erefactor: Effective, efficient and executable refactoring recommendation for software architectural consistency. *IEEE Transactions on Software Engineering*, 50(10): 2633–2655, October 2024. CODEN IESEDJ. ISSN 0098-

5589 (print), 1939-3520 (electronic).

Liu:2021:MFP

[LKB+21] K. Liu, D. Kim, T. F. Bissyandé, S. Yoo, and Y. Le Traon. Mining fix patterns for FindBugs violations. *IEEE Transactions on Software Engineering*, 47(1):165–188, January 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liva:2021:ART

[LKP+21] Giovanni Liva, Muhammad Taimoor Khan, Martin Pinzger, Francesco Spegni, and Luca Spalazzi. Automatic repair of timestamp comparisons. *IEEE Transactions on Software Engineering*, 47(11):2369–2381, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lyu:2024:ESI

[LKW+24] Yunbo Lyu, Hong Jin Kang, Ratnadira Widyasari, Julia Lawall, and David Lo. Evaluating SZZ implementations: an empirical study on the Linux kernel. *IEEE Transactions on Software Engineering*, 50(9):2219–2239, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2023:ECT

[LL23] Ai Liu and Shaoying Liu. Enhancing the capability of testing-based formal verification by handling operations in software packages. *IEEE Transactions on Software Engineering*, 49(1):304–324, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Locke:2022:LAL

[LLC+22] Steven Locke, Heng Li, Tse-Hsun Peter Chen, Weiyi Shang, and Wei Liu. LogAssist: Assisting log analysis through log summarization. *IEEE Transactions on Software Engineering*, 48(9): 3227–3241, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lu:2022:PCD

[LLL+22] Jie Lu, Feng Li, Chen Liu, Lian Li, Xiaobing Feng, and Jingling Xue. `CloudRaid`: Detecting distributed concurrency bugs via log mining and enhancement. *IEEE Transactions on Software Engineering*, 48(2):662–677, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2023:GCP

[LLL+23] Leping Li, Hui Liu, Kejun Li, Yanjie Jiang, and Rui Sun. Generating concise patches for newly released programming assignments. *IEEE Transactions on Software Engineering*, 49(1):450–467, January 2023.

CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Leite:2023:TOS

[LLM+23] Leonardo Leite, Nelson Lago, Claudia Melo, Fabio Kon, and Paulo Meirelles. A theory of organizational structures for development and infrastructure professionals. *IEEE Transactions on Software Engineering*, 49(4):1898–1911, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lamothe:2022:AEB

[LLS22] Maxime Lamothe, Heng Li, and Weiyi Shang. Assisting example-based API misuse detection via complementary artificial examples. *IEEE Transactions on Software Engineering*, 48(9):3410–3422, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2023:VHV

[LLZ+23] Zhaoxuan Li, Siqi Lu, Rui Zhang, Ziming Zhao, Rujin Liang, Rui Xue, Wenhao Li, Fan Zhang, and Sheng Gao. VulHunter: Hunting vulnerable smart contracts at EVM bytecode-level via multiple instance learning. *IEEE Transactions on Software Engineering*, 49(11): 4886–4916, November 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2025:CAC

[LLZ+25] Yu Liu, Tong Li, Runzi Zhang, Zhao Jin, Mingkai Tong, Wenmao Liu, Yiting Wang, and Zhen Yang. A context-aware clustering approach for assisting operators in classifying security alerts. *IEEE Transactions on Software Engineering*, 51(1):153–171, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ling:2023:WTC

[LM23] Xiao Ling and Tim Menzies. What not to test (for cyber-physical systems). *IEEE Transactions on Software Engineering*, 49(7):3811–3826, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liang:2024:CEA

[LMHWH24] Anda Liang, Emerson Murphy-Hill, Westley Weimer, and Yu Huang. A controlled experiment in age and gender bias when reading technical articles in software engineering. *IEEE Transactions on Software Engineering*, 50(10): 2498–2511, October 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2024:LSF

[LMN+24] Jia Li, Behrad Moeini, Shiva Nejati, Mehrdad Sabetzadeh, and Michael McCallen. A lean simulation framework for stress testing IoT cloud systems. *IEEE Transactions on Software Engineering*, 50(7): 1827–1851, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lu:2022:MUG

[LMZ+22] Yao Lu, Xinjun Mao, Minghui Zhou, Yang Zhang, Zude Li, Tao Wang, Gang Yin, and Huaimin Wang. Motivation under gamification: an empirical study of developers motivations and contributions in Stack Overflow. *IEEE Transactions on Software Engineering*, 48(12): 4947–4963, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2022:ATC

[LN22] Shaoying Liu and Shin Nakajima. Automatic test case and test oracle generation based on functional scenarios in formal specifications for conformance testing. *IEEE Transactions on Software Engineering*, 48(2):691–712, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

LeGoues:2025:EAS

[LNFW25] Claire Le Goues, ThanhVu Nguyen, Stephanie Forrest, and Westley Weimer. The evolution of automated software repair. *IEEE Transactions on Software Engineering*, 51(3): 870–873, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2022:ARD

[LPM+22] Mingwei Liu, Xin Peng, Andrian Marcus, Shuangshuang Xing, Christoph Treude, and Chengyuan Zhao. API-related developer information needs in Stack Overflow. *IEEE Transactions on Software Engineering*, 48(11): 4485–4500, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liao:2024:CRL

[LPS+24] Dianshu Liao, Shidong Pan, Xiaoyu Sun, Xiaoxue Ren, Qing Huang, Zhenchang Xing, Huan Jin, and Qinying Li. A^3-CodGen: a repository-level code generation framework for code reuse with local-aware, global-aware, and third-party-library-aware. *IEEE Transactions on Software Engineering*, 50(12):3369–3384, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2025:URT

[LQG+25] Yaoxian Li, Shiyi Qi, Cuiyun Gao, Yun Peng, David Lo, Michael R. Lyu, and Zenglin Xu. Understanding the robustness of transformer-based code intelligence via code transformation: Challenges and opportunities. *IEEE Transactions on Software Engineering*, 51(2):521–547, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2024:NLR

[LQW+24] Bo Li, Haowei Quan, Jiawei Wang, Pei Liu, Haipeng Cai, Yuan Miao, Yun Yang, and Li Li. Neural library recommendation by embedding project-library knowledge graph. *IEEE Transactions on Software Engineering*, 50(6):1620–1638, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2023:ZBM

[LS23] Boyuan Li and Carol Smidts. A zone-based model for analysis of dependent failures in requirements inspection. *IEEE Transactions on Software Engineering*, 49(6):3581–3598, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2021:QSB

[LSA+21] Heng Li, Weiyi Shang, Bram Adams, Mohammed Sayagh, and Ahmed E. Hassan. A qualitative study of the benefits and costs of logging from developers perspectives. *IEEE Transactions on Software Engineering*, 47(12): 2858–2873, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2023:SAT

[LSAS23] Yikun Li, Mohamed Soliman, Paris Avgeriou, and Lou Somers. Self-admitted technical debt in the embedded systems industry: an exploratory case study. *IEEE Transactions on Software Engineering*, 49(4):2545–2565, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lamothe:2022:PAA

[LSC22] Maxime Lamothe, Weiyi Shang, and Tse-Hsun Peter Chen. `A3`: Assisting Android API migrations using code examples. *IEEE Transactions on Software Engineering*, 48(2): 417–431, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2024:LLI

[LSVS+24] Zheng Li, Nicolás Saldías-Vallejos, Diego Seco, María Andrea Rodríguez, and Rajiv

Ranjan. Long live the image: On enabling resilient production database containers for microservice applications. *IEEE Transactions on Software Engineering*, 50(9):2363–2378, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2022:DLB

[LSZ+22] Hui Liu, Mingzhu Shen, Jiaqi Zhu, Nan Niu, Ge Li, and Lu Zhang. Deep learning based program generation from requirements text: Are we there yet? *IEEE Transactions on Software Engineering*, 48(4):1268–1289, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liao:2023:LSE

[LSZ+23a] Zhou Liao, Shuwei Song, Hang Zhu, Xiapu Luo, Zheyuan He, Renkai Jiang, Ting Chen, Jiachi Chen, Tao Zhang, and Xiaosong Zhang. Large-scale empirical study of inline assembly on 7.6 million Ethereum smart contracts. *IEEE Transactions on Software Engineering*, 49(2):777–801, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lu:2023:LCO

[LSZ+23b] Chengjie Lu, Yize Shi, Huihui Zhang, Man Zhang, Tiexin Wang, Tao Yue, and Shaukat Ali. Learning configurations of operating environment of autonomous vehicles to maximize their collisions. *IEEE Transactions on Software Engineering*, 49(1):384–402, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2022:PPP

[LTH+22a] Meilun Li, Andrea Turrini, Ernst Moritz Hahn, Zhikun She, and Lijun Zhang. Probabilistic preference planning problem for Markov decision processes. *IEEE Transactions on Software Engineering*, 48 (5):1545–1559, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lin:2022:IDM

[LTH22b] Dayi Lin, Chakkrit Tantithamthavorn, and Ahmed E. Hassan. The impact of data merging on the interpretation of cross-project just-in-time defect models. *IEEE Transactions on Software Engineering*, 48(8):2969–2986, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2024:GSG

[LTL+24a] Haofeng Li, Tian Tan, Yue Li, Jie Lu, Haining Meng, Liqing Cao, Yongheng Huang, Lian Li, Lin Gao, Peng Di, Liang Lin, and ChenXi Cui. Generic sensitivity: Generics-guided

context sensitivity for pointer analysis. *IEEE Transactions on Software Engineering*, 50 (5):1144–1162, May 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2024:NNL

[LTL+24b] Zhijie Liu, Yutian Tang, Xiapu Luo, Yuming Zhou, and Liang Feng Zhang. No need to lift a finger anymore? Assessing the quality of code generation by ChatGPT. *IEEE Transactions on Software Engineering*, 50(6):1548–1584, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lima:2022:MAB

[LV22] Jackson A. Prado Lima and Silvia Regina Vergilio. A multi-armed bandit approach for test case prioritization in continuous integration environments. *IEEE Transactions on Software Engineering*, 48 (2):453–465, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Larios-Vargas:2023:DFD

[LVEY+23] Enrique Larios-Vargas, Omar Elazhary, Soroush Yousefi, Derek Lowlind, Michael L. W. Vliek, and Margaret-Anne Storey. DASP: a framework for driving the adoption of software security practices. *IEEE Transactions on Software Engineering*, 49(4): 2892–2919, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Letier:2025:OAR

[LvL25] Emmanuel Letier and Axel van Lamsweerde. Obstacle analysis in requirements engineering: Retrospective and emerging challenges. *IEEE Transactions on Software Engineering*, 51(3): 795–801, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lin:2024:VAL

[LWBG24] Yalan Lin, Chengcheng Wan, Shuwen Bai, and Xiaodong Gu. VarGAN: Adversarial learning of variable semantic representations. *IEEE Transactions on Software Engineering*, 50(6):1505–1517, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lee:2021:ADU

[LWCK21] Seonah Lee, Rongxin Wu, Shing-Chi Cheung, and Sungwon Kang. Automatic detection and update suggestion for outdated API names in documentation. *IEEE Transactions on Software Engineering*, 47(4):653–675, April 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Lin:2023:PCU

[LWL+23] Bo Lin, Shangwen Wang, Zhongxin Liu, Xin Xia, and Xiaoguang Mao. Predictive comment updating with heuristics and AST-Path-based neural learning: a two-phase approach. *IEEE Transactions on Software Engineering*, 49(4):1640–1660, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2020:LST

[LWW+20] Menghao Li, Pei Wang, Wei Wang, Shuai Wang, Dinghao Wu, Jian Liu, Rui Xue, Wei Huo, and Wei Zou. Large-scale third-party library detection in Android markets. *IEEE Transactions on Software Engineering*, 46(9):981–1003, September 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2021:WVS

[LXL+21] Zhongxin Liu, Xin Xia, David Lo, Zhenchang Xing, Ahmed E. Hassan, and Shanping Li. Which variables should I log? *IEEE Transactions on Software Engineering*, 47(9):2012–2031, September 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2022:BEL

[LXL+22] Jiakun Liu, Xin Xia, David Lo, Haoxiang Zhang, Ying Zou, Ahmed E. Hassan, and Shanping Li. Broken external links on Stack Overflow. *IEEE Transactions on Software Engineering*, 48(9):3242–3267, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2023:JTO

[LXL+23] Zhongxin Liu, Xin Xia, David Lo, Meng Yan, and Shanping Li. Just-in-time obsolete comment detection and update. *IEEE Transactions on Software Engineering*, 49 (1):1–23, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2023:GEG

[LXS+23] Shangqing Liu, Xiaofei Xie, Jingkai Siow, Lei Ma, Guozhu Meng, and Yang Liu. GraphSearchNet: Enhancing GNNs via capturing global dependencies for semantic code search. *IEEE Transactions on Software Engineering*, 49(4): 2839–2855, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2024:TES

[LY24] Junjie Li and Jinqiu Yang. Tracking the evolution of static code warnings: The state-of-the-art and a better approach. *IEEE Transactions*

on Software Engineering, 50 (3):534–550, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Laaber:2024:ESB

[LYA24] Christoph Laaber, Tao Yue, and Shaukat Ali. Evaluating search-based software microbenchmark prioritization. *IEEE Transactions on Software Engineering*, 50(7): 1687–1703, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2022:YSW

[LYW+22] Zhixing Li, Yue Yu, Tao Wang, Gang Yin, ShanShan Li, and Huaimin Wang. Are you still working on this? An empirical study on pull request abandonment. *IEEE Transactions on Software Engineering*, 48(6):2173–2188, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2023:FFU

[LYW+23] Zhixing Li, Yue Yu, Tao Wang, Yan Lei, Ying Wang, and Huaimin Wang. To follow or not to follow: Understanding issue/pull-request templates on GitHub. *IEEE Transactions on Software Engineering*, 49(4):2530–2544, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2022:RCP

[LYZ+22] Zhixing Li, Yue Yu, Minghui Zhou, Tao Wang, Gang Yin, Long Lan, and Huaimin Wang. Redundancy, context, and preference: an empirical study of duplicate pull requests in OSS projects. *IEEE Transactions on Software Engineering*, 48(4):1309–1335, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2023:DDS

[LZJ+23] Zhiqiang Li, Hongyu Zhang, Xiao-Yuan Jing, Juanying Xie, Min Guo, and Jie Ren. DSSDPP: Data selection and sampling based domain programming predictor for cross-project defect prediction. *IEEE Transactions on Software Engineering*, 49(4): 1941–1963, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2022:AAG

[LZL+22] Feng Li, Jianyi Zhou, Yinzhu Li, Dan Hao, and Lu Zhang. AGA: an accelerated greedy additional algorithm for test case prioritization. *IEEE Transactions on Software Engineering*, 48(12):5102–5119, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2023:DPL

[LZL+23] Yao Li, Tao Zhang, Xiapu Luo, Haipeng Cai, Sen Fang, and Dawei Yuan. Do pre-trained language models indeed understand software engineering tasks? *IEEE Transactions on Software Engineering*, 49(10):4639–4655, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2023:WWW

[LZM+23] Bohan Liu, He Zhang, Weigang Ma, Gongyuan Li, Shanshan Li, and Haifeng Shen. The why, when, what, and how about predictive continuous integration: a simulation-based investigation. *IEEE Transactions on Software Engineering*, 49(12):5223–5249, December 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2023:TOM

[LZP+23] Mingwei Liu, Chengyuan Zhao, Xin Peng, Simin Yu, Haofen Wang, and Chaofeng Sha. Task-oriented ML/DL library recommendation based on a knowledge graph. *IEEE Transactions on Software Engineering*, 49(8):4081–4096, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Li:2022:SPL

[LZWH22] Heng Li, Haoxiang Zhang, Shaowei Wang, and Ahmed E. Hassan. Studying the practices of logging exception stack traces in open-source software projects. *IEEE Transactions on Software Engineering*, 48(12):4907–4924, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Liu:2024:HHM

[LZZ+24] Jiaqi Liu, Fengming Zhang, Xin Zhang, Zhiwen Yu, Liang Wang, Yao Zhang, and Bin Guo. hmCodeTrans: Human machine interactive code translation. *IEEE Transactions on Software Engineering*, 50(5):1163–1181, May 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mehrotra:2022:MFS

[MAG+22] Nikita Mehrotra, Navdha Agarwal, Piyush Gupta, Saket Anand, David Lo, and Rahul Purandare. Modeling functional similarity in source code with graph-based Siamese networks. *IEEE Transactions on Software Engineering*, 48(10):3771–3789, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mathew:2023:FTS

[MAM23] George Mathew, Amritanshu Agrawal, and Tim Menzies.

Finding trends in software research. *IEEE Transactions on Software Engineering*, 49(4): 1397–1410, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Murali:2024:ASB

[MAN+24] Aniruddhan Murali, Mahmoud Alfadel, Meiyappan Nagappan, Meng Xu, and Chengnian Sun. AddressWatcher: Sanitizer-based localization of memory leak fixes. *IEEE Transactions on Software Engineering*, 50(9): 2398–2411, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Martin:2022:TLA

[MAP+22] Hugo Martin, Mathieu Acher, Juliana Alves Pereira, Luc Lesoil, Jean-Marc Jézéquel, and Djamel Eddine Khelladi. Transfer learning across variants and versions: The case of Linux kernel size. *IEEE Transactions on Software Engineering*, 48(11): 4274–4290, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Masud:2023:DCS

[Mas23] Abu Naser Masud. The duality in computing SSA programs and control dependency. *IEEE Transactions on Software Engineering*, 49(4): 1766–1781, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Meyer:2021:TWG

[MBBZ21] André N. Meyer, Earl T. Barr, Christian Bird, and Thomas Zimmermann. Today was a good day: The daily life of software developers. *IEEE Transactions on Software Engineering*, 47(5):863–880, May 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Moran:2020:MLB

[MBCC+20] K. Moran, C. Bernal-Cárdenas, M. Curcio, R. Bonett, and D. Poshyvanyk. Machine learning-based prototyping of graphical user interfaces for mobile apps. *IEEE Transactions on Software Engineering*, 46(2):196–221, February 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Molloy:2025:MNS

[MBD+25] Christopher Molloy, Jeremy Banks, Steven H. H. Ding, Furkan Alaca, Philippe Charland, and Andrew Walenstein. Mecha: a neural-symbolic open-set homogeneous decision fusion approach for zero-day malware similarity detection. *IEEE Transactions on Software Engineering*, 51(2): 621–637, February 2025. CODEN IESEDJ. ISSN 0098-

5589 (print), 1939-3520 (electronic).

Moran:2024:ADD

[MBdlRT24] Jesús Morán, Antonia Bertolino, Claudio de la Riva, and Javier Tuya. Automatic debugging of design faults in MapReduce applications. *IEEE Transactions on Software Engineering*, 50(4):956–978, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mili:2023:DRF

[MBE+23] Hafedh Mili, Imen Benzarti, Amel Elkharraz, Ghizlane Elboussaidi, Yann-Gaël Guéhéneuc, and Petko Valtchev. Discovering reusable functional features in legacy object-oriented systems. *IEEE Transactions on Software Engineering*, 49(7):3827–3856, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Menendez:2022:OSO

[MBGC22] Hector D. Menendez, Michele Boreale, Daniele Gorla, and David Clark. Output sampling for output diversity in automatic unit test generation. *IEEE Transactions on Software Engineering*, 48(1): 295–308, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Menghi:2025:CCT

[MBV+25] Claudio Menghi, Eugene Balai, Darren Valovcin, Christoph Sticksel, and Akshay Rajhans. Completeness and consistency of tabular requirements: an SMT-based verification approach. *IEEE Transactions on Software Engineering*, 51(2): 595–620, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Menendez:2022:HFI

[MC22] Hector D. Menendez and David Clark. Hashing fuzzing: Introducing input diversity to improve crash detection. *IEEE Transactions on Software Engineering*, 48(9):3540–3553, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mylopoulos:2025:RRN

[MC25] John Mylopoulos and Lawrence Chung. Representing and reasoning with non-functional requirements: a retrospective. *IEEE Transactions on Software Engineering*, 51(3): 759–761, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Melegati:2024:QSS

[MCG24] Jorge Melegati, Kieran Conboy, and Daniel Graziotin. Qualitative surveys in software engineering research:

Definition, critical review, and guidelines. *IEEE Transactions on Software Engineering*, 50(12):3172–3187, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mo:2021:AAP

[MCK+21] Ran Mo, Yuanfang Cai, Rick Kazman, Lu Xiao, and Qiong Feng. Architecture anti-patterns: Automatically detectable violations of design principles. *IEEE Transactions on Software Engineering*, 47 (5):1008–1028, May 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mastropaolo:2023:UTL

[MCP+23] Antonio Mastropaolo, Nathan Cooper, David Nader Palacio, Simone Scalabrino, Denys Poshyvanyk, Rocco Oliveto, and Gabriele Bavota. Using transfer learning for code-related tasks. *IEEE Transactions on Software Engineering*, 49(4):1580–1598, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mahmood:2024:VPE

[MÇS+24] Wardah Mahmood, Gül Çalıklı, Daniel Strüber, Ralf Lämmel, Mukelabai Mukelabai, and Thorsten Berger. Virtual platform: Effective and seamless variability management for software systems. *IEEE Transactions on Software Engineering*, 50(11): 2753–2785, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mahmud:2023:DAA

[MCY23] Tarek Mahmud, Meiru Che, and Guowei Yang. Detecting Android API compatibility issues with API differences. *IEEE Transactions on Software Engineering*, 49(7): 3857–3871, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mu:2021:PFP

[MDX+21] Dongliang Mu, Yunlan Du, Jianhao Xu, Jun Xu, Xinyu Xing, Bing Mao, and Peng Liu. POMP++: Facilitating postmortem program diagnosis with value-set analysis. *IEEE Transactions on Software Engineering*, 47(9):1929–1942, September 2021.

Medvidovic:2025:SER

[Med25] Nenad Medvidović. Software engineering research trends 1994–2024: Stepping beyond the lamppost. *IEEE Transactions on Software Engineering*, 51(3):685–688, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Menzies:2025:RDM

[Men25] Tim Menzies. Retrospective: Data mining static code attributes to learn defect predictors. *IEEE Transactions on Software Engineering*, 51 (3):858–863, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Melegati:2022:XME

[MEW22] Jorge Melegati, Henry Edison, and Xiaofeng Wang. XPro: a model to explain the limited adoption and implementation of experimentation in software startups. *IEEE Transactions on Software Engineering*, 48(6):1929–1946, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Martinez:2023:HOA

[MFM23] Matias Martinez, Jean-Rémy Falleri, and Martin Monperrus. Hyperparameter optimization for AST differencing. *IEEE Transactions on Software Engineering*, 49(10): 4814–4828, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Martins:2020:RES

[MG20] Luiz Eduardo G. Martins and Tony Gorschek. Requirements engineering for safety-critical systems: An interview study with industry practitioners. *IEEE Transactions on Software Engineering*, 46 (4):346–361, April 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Meng:2020:EOS

[MGW20] Ying Meng, Gregory Gay, and Michael Whalen. Ensuring the observability of structural test obligations. *IEEE Transactions on Software Engineering*, 46(7):748–772, July 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Masoudian:2024:MEC

[MHAZ24] Maryam Masoudian, Heqing Huang, Morteza Amini, and Charles Zhang. Mole: Efficient crash reproduction in Android applications with enforcing necessary UI events. *IEEE Transactions on Software Engineering*, 50(8):2200–2218, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Masood:2022:RWS

[MHB22a] Zainab Masood, Rashina Hoda, and Kelly Blincoe. Real world scrum: a grounded theory of variations in practice. *IEEE Transactions on Software Engineering*, 48(5): 1579–1591, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Masood:2022:WDS

[MHB22b] Zainab Masood, Rashina Hoda, and Kelly Blincoe. What drives and sustains self-assignment in agile teams. *IEEE Transactions on Software Engineering*, 48(9):3626–3639, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mukelabai:2023:FLF

[MHBS23] Mukelabai Mukelabai, Kevin Hermann, Thorsten Berger, and Jan-Philipp Steghöfer. FeatRacer: Locating features through assisted traceability. *IEEE Transactions on Software Engineering*, 49(12): 5060–5083, December 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Murphy-Hill:2022:EIA

[MHDH+22] Emerson Murphy-Hill, Jillian Dicker, Margaret Morrow Hodges, Carolyn D. Egelman, Ciera Jaspan, Lan Cheng, Elizabeth Kammer, Ben Holtz, Matthew A. Jorde, Andrea Knight Dolan, and Collin Green. Engineering impacts of anonymous author code review: a field experiment. *IEEE Transactions on Software Engineering*, 48(7): 2495–2509, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Madampe:2022:FTR

[MHG22] Kashumi Madampe, Rashina Hoda, and John Grundy. A faceted taxonomy of requirements changes in agile contexts. *IEEE Transactions on Software Engineering*, 48(10): 3737–3752, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Madampe:2023:ERC

[MHG23a] Kashumi Madampe, Rashina Hoda, and John Grundy. The emotional roller coaster of responding to requirements changes in software engineering. *IEEE Transactions on Software Engineering*, 49(3): 1171–1187, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Madampe:2023:FEO

[MHG23b] Kashumi Madampe, Rashina Hoda, and John Grundy. A framework for emotion-oriented requirements change handling in agile software engineering. *IEEE Transactions on Software Engineering*, 49 (5):3325–3343, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Manes:2021:ASE

[MHH+21] Valentin J. M. Manès, HyungSeok Han, Choongwoo Han, Sang Kil Cha, Manuel Egele, Edward J.

Schwartz, and Maverick Woo. The art, science, and engineering of fuzzing: A survey. *IEEE Transactions on Software Engineering*, 47(11): 2312–2331, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Murphy-Hill:2021:WPS

[MHJS+21] E. Murphy-Hill, C. Jaspan, C. Sadowski, D. Shepherd, M. Phillips, C. Winter, A. Knight, E. Smith, and M. Jorde. What predicts software developers productivity? *IEEE Transactions on Software Engineering*, 47(3): 582–594, March 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Marcen:2024:SLR

[MIL+24] Ana C. Marcén, Antonio Iglesias, Raúl Lapeña, Francisca Pérez, and Carlos Cetina. A systematic literature review of model-driven engineering using machine learning. *IEEE Transactions on Software Engineering*, 50(9):2269–2293, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mauerer:2022:SST

[MJT+22] Wolfgang Mauerer, Mitchell Joblin, Damian A. Tamburri, Carlos Paradis, Rick Kazman, and Sven Apel. In search of socio-technical congruence: a large-scale longitudinal study. *IEEE Transactions on Software Engineering*, 48(8):3159–3184, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mercan:2022:FCI

[MJY22] Hanefi Mercan, Arsalan Javeed, and Cemal Yilmaz. Flexible combinatorial interaction testing. *IEEE Transactions on Software Engineering*, 48(3): 1030–1066, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mder:2021:RAC

[MKJ21] Patrick Mäder, Tobias Kuschke, and Mario Janke. Reactive auto-completion of modeling activities. *IEEE Transactions on Software Engineering*, 47 (7):1431–1451, July 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mandrioli:2022:TSA

[MM22a] Claudio Mandrioli and Martina Maggio. Testing self-adaptive software with probabilistic guarantees on performance metrics: Extended and comparative results. *IEEE Transactions on Software Engineering*, 48(9):3554–3572, September 2022. CODEN IESEDJ. ISSN 0098-

5589 (print), 1939-3520 (electronic).

Martinez:2022:WDD

[MM22b] Matias Martinez and Bruno Gois Mateus. Why did developers migrate Android applications from Java to Kotlin? *IEEE Transactions on Software Engineering*, 48(11): 4521–4534, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Martinson:2025:FPF

[MMGB25] Johan Martinson, Wardah Mahmood, Jude Gyimah, and Thorsten Berger. FM-PRO: a feature modeling process. *IEEE Transactions on Software Engineering*, 51(1):262–282, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Muntean:2021:IIR

[MMS+21] Paul Muntean, Martin Monperrus, Hao Sun, Jens Grossklags, and Claudia Eckert. IntRepair: Informed repairing of integer overflows. *IEEE Transactions on Software Engineering*, 47(10):2225–2241, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mancini:2022:HUR

[MMT22] Toni Mancini, Igor Melatti, and Enrico Tronci. Anyhorizon uniform random sampling and enumeration of constrained scenarios for simulation-based formal verification. *IEEE Transactions on Software Engineering*, 48 (10):4002–4013, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mancini:2023:OHP

[MMT23] Toni Mancini, Igor Melatti, and Enrico Tronci. Optimizing highly-parallel simulation-based verification of cyber-physical systems. *IEEE Transactions on Software Engineering*, 49(9):4443–4455, September 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ma:2022:MAU

[MMZ+22] Yuxing Ma, Audris Mockus, Russel Zaretzki, Randy Bradley, and Bogdan Bichescu. A methodology for analyzing uptake of software technologies among developers. *IEEE Transactions on Software Engineering*, 48(2):485–501, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Meyer:2021:EGW

[MMZF21] André N. Meyer, Gail C. Murphy, Thomas Zimmermann, and Thomas Fritz. Enabling good work habits in software developers through reflective

goal-setting. *IEEE Transactions on Software Engineering*, 47(9):1872–1885, September 2021.

Mondal:2022:PCR

[MN22] Shouvick Mondal and Rupesh Nasre. `Colosseum`: Regression test prioritization by delta displacement in test coverage. *IEEE Transactions on Software Engineering*, 48(10): 4060–4073, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Malavolta:2023:JDC

[MNS+23] Ivano Malavolta, Kishan Nirghin, Gian Luca Scoccia, Simone Romano, Salvatore Lombardi, Giuseppe Scanniello, and Patricia Lago. JavaScript dead code identification, elimination, and empirical assessment. *IEEE Transactions on Software Engineering*, 49(7):3692–3714, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Meunier:2023:LES

[MPH23] Quentin L. Meunier, Etienne Pons, and Karine Heydemann. LeakageVerif: Efficient and scalable formal verification of leakage in symbolic expressions. *IEEE Transactions on Software Engineering*, 49(6): 3359–3375, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mehrotra:2021:FDM

[MPM21] Abhinav Mehrotra, Veljko Pejovic, and Mirco Musolesi. FutureWare: Designing a middleware for anticipatory mobile computing. *IEEE Transactions on Software Engineering*, 47(10):2107–2124, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mohanani:2022:HTR

[MRTM22] Rahul Mohanani, Paul Ralph, Burak Turhan, and Vladimir Mandi . How templated requirements specifications inhibit creativity in software engineering. *IEEE Transactions on Software Engineering*, 48 (10):4074–4086, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mercaldo:2022:FEC

[MS22] Francesco Mercaldo and Antonella Santone. Formal equivalence checking for mobile malware detection and family classification. *IEEE Transactions on Software Engineering*, 48(7):2643–2657, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Motwani:2022:QAP

[MSB+22] Manish Motwani, Mauricio Soto, Yuriy Brun, René Just, and Claire Le Goues. Quality of automated program repair on real-world defects.

IEEE Transactions on Software Engineering, 48(2):637–661, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Morales:2021:MPJ

[MSG21] Rodrigo Morales, Rubén Saborido, and Yann-Gaël Guéhéneuc. MoMIT: Porting a JavaScript interpreter on a quarter coin. *IEEE Transactions on Software Engineering*, 47(12):2771–2785, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mehrotra:2023:ICL

[MSJP23] Nikita Mehrotra, Akash Sharma, Anmol Jindal, and Rahul Purandare. Improving cross-language code clone detection via code representation learning and graph neural networks. *IEEE Transactions on Software Engineering*, 49(11): 4846–4868, November 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Minani:2024:SRI

[MSMG24] Jean Baptiste Minani, Fatima Sabir, Naouel Moha, and Yann-Gaël Guéhéneuc. A systematic review of IoT systems testing: Objectives, approaches, tools, and challenges. *IEEE Transactions on Software Engineering*, 50 (4):785–815, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mohanani:2020:CBS

[MST+20] R. Mohanani, I. Salman, B. Turhan, P. Rodríguez, and P. Ralph. Cognitive biases in software engineering: a systematic mapping study. *IEEE Transactions on Software Engineering*, 46(12): 1318–1339, December 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Marussy:2022:AGC

[MSV22] Kristóf Marussy, Oszkár Semeráth, and Dániel Varró. Automated generation of consistent graph models with multiplicity reasoning. *IEEE Transactions on Software Engineering*, 48(5):1610–1629, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Meyer:2022:DDT

[MSZ+22] André N. Meyer, Chris Satterfield, Manuela Züger, Katja Kevic, Gail C. Murphy, Thomas Zimmermann, and Thomas Fritz. Detecting developers task switches and types. *IEEE Transactions on Software Engineering*, 48(1): 225–240, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Menghi:2023:MSP

[MTA+23] Claudio Menghi, Christos Tsigkanos, Mehrnoosh Askarpour, Patrizio Pelliccione, Gricel Vázquez, Radu Calinescu, and Sergio García. Mission specification patterns for mobile robots: Providing support for quantitative properties. *IEEE Transactions on Software Engineering*, 49(4): 2741–2760, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Medvidovic:2025:SAD

[MTD25] Nenad Medvidović, Richard N. Taylor, and Eric M. Dashofy. Software architecture description revisited. *IEEE Transactions on Software Engineering*, 51(3):789–794, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Menghi:2021:SPR

[MTP+21] Claudio Menghi, Christos Tsigkanos, Patrizio Pelliccione, Carlo Ghezzi, and Thorsten Berger. Specification patterns for robotic missions. *IEEE Transactions on Software Engineering*, 47(10): 2208–2224, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mohanani:2021:RFA

[MTR21] Rahul Mohanani, Burak Turhan, and Paul Ralph. Requirements framing affects design creativity. *IEEE Transactions on Software Engineering*, 47(5):936–947, May 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Meyers:2020:FTV

[MVDS20] Bart Meyers, Hans Vangheluwe, Joachim Denil, and Rick Salay. A framework for temporal verification support in domain-specific modelling. *IEEE Transactions on Software Engineering*, 46(4): 362–404, April 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Macklon:2023:TTH

[MVR+23] Finlay Macklon, Markos Viggiato, Natalia Romanova, Chris Buzon, Dale Paas, and Cor-Paul Bezemer. A taxonomy of testable HTML5 canvas issues. *IEEE Transactions on Software Engineering*, 49(6):3647–3659, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mahadewa:2021:SIS

[MWB+21] Kulani Mahadewa, Kailong Wang, Guangdong Bai, Ling Shi, Yan Liu, Jin Song Dong, and Zhenkai Liang. Scrutinizing implementations of smart home integrations. *IEEE Transactions on Software Engineering*, 47(12):

2667–2683, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Melo:2021:UDA

[MWdA21] Luis Melo, Igor Wiese, and Marcelo d Amorim. Using Docker to assist Q&A forum users. *IEEE Transactions on Software Engineering*, 47(11): 2563–2574, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Munoz:2024:MFP

[MWTV24] Paula Muñoz, Manuel Wimmer, Javier Troya, and Antonio Vallecillo. Measuring the fidelity of a physical and a digital twin using trace alignments. *IEEE Transactions on Software Engineering*, 50(12): 3122–3145, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ma:2025:DOT

[MWW+25] Xuyan Ma, Yawen Wang, Junjie Wang, Xiaofei Xie, Boyu Wu, Yiguang Yan, Shoubin Li, Fanjiang Xu, and Qing Wang. Diversity-oriented testing for competitive game agent via constraint-guided adversarial agent training. *IEEE Transactions on Software Engineering*, 51(1):66–81, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Mo:2024:ECC

[MWX+24] Qi Mo, Jianeng Wang, Zhongwen Xie, Cong Liu, and Fei Dai. Enforcing correctness of collaborative business processes using plans. *IEEE Transactions on Software Engineering*, 50(9):2313–2336, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ma:2021:EDA

[MXC+21] Suyu Ma, Zhenchang Xing, Chunyang Chen, Cheng Chen, Lizhen Qu, and Guoqiang Li. Easy-to-deploy API extraction by multi-level feature embedding and transfer learning. *IEEE Transactions on Software Engineering*, 47(10): 2296–2311, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ma:2022:PPE

[MXR+22] Fuchen Ma, Zhenyang Xu, Meng Ren, Zijing Yin, Yuanliang Chen, Lei Qiao, Bin Gu, Huizhong Li, Yu Jiang, and Jiaguang Sun. `Pluto`: Exposing vulnerabilities in intercontract scenarios. *IEEE Transactions on Software Engineering*, 48(11):4380–4396, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Muqeet:2024:MNQ

[MYAA24] Asmar Muqeet, Tao Yue, Shaukat Ali, and Paolo Arcaini. Mitigating noise in quantum software testing using machine learning. *IEEE Transactions on Software Engineering*, 50(11): 2947–2961, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Miller:2022:RCF

[MZH22] Barton P. Miller, Mengxiao Zhang, and Elisa R. Heymann. The relevance of classic fuzz testing: Have we solved this one? *IEEE Transactions on Software Engineering*, 48(6):2028–2039, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic). URL `https://arxiv.org/abs/2008.06537`; `https://ieeexplore.ieee.org/document/9309406`.

Ma:2025:IDR

[MZH+25] Xiaoxue Ma, Huiqi Zou, Pinjia He, Jacky Keung, Yishu Li, Xiao Yu, and Federica Sarro. On the influence of data resampling for deep learning-based log anomaly detection: Insights and recommendations. *IEEE Transactions on Software Engineering*, 51(1):243–261, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nahabedian:2020:DUD

[NBD+20] L. Nahabedian, V. Braberman, N. D'Ippolito, S. Honiden, J. Kramer, K. Tei, and S. Uchitel. Dynamic update of discrete event controllers. *IEEE Transactions on Software Engineering*, 46(11): 1220–1240, November 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Neri:2022:CQI

[NBO22] Ana Neri, Rui Soares Barbosa, and José N. Oliveira. Compiling quantamorphisms for the IBM Q experience. *IEEE Transactions on Software Engineering*, 48(11): 4339–4356, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Niu:2024:NDE

[NC24] Zifeng Niu and Giuliano Casale. Neural density estimation of response times in layered software systems. *IEEE Transactions on Software Engineering*, 50(3):636–650, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Newman:2022:EAA

[NDA+22] Christian D. Newman, Michael J. Decker, Reem S. Alsuhaibani, Anthony Peruma, Mohamed Wiem Mkaouer, Satyajit Mohapatra, Tejal Vishnoi, Marcos

Zampieri, Timothy J. Sheldon, and Emily Hill. An ensemble approach for annotating source code identifiers with part-of-speech tags. *IEEE Transactions on Software Engineering*, 48(9):3506–3522, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nguyen:2022:RAF

[NDD+22] Phuong T. Nguyen, Juri Di Rocco, Claudio Di Sipio, Davide Di Ruscio, and Massimiliano Di Penta. Recommending API function calls and code snippets to support software development. *IEEE Transactions on Software Engineering*, 48(7):2417–2438, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nagaria:2022:HSD

[NH22] Bhaveet Nagaria and Tracy Hall. How software developers mitigate their errors when developing code. *IEEE Transactions on Software Engineering*, 48(6):1853–1867, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nassif:2022:GUT

[NHSR22] Mathieu Nassif, Alexa Hernandez, Ashvitha Sridharan, and Martin P. Robillard. Generating unit tests for documentation. *IEEE Transactions on Software Engineering*, 48(9):3268–3279, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nguyen:2023:MGD

[NLCK+23] Truong Giang Nguyen, Thanh Le-Cong, Hong Jin Kang, Ratnadira Widyasari, Chengran Yang, Zhipeng Zhao, Bowen Xu, Jiayuan Zhou, Xin Xia, Ahmed E. Hassan, Xuan-Bach D. Le, and David Lo. Multi-granularity detector for vulnerability fixes. *IEEE Transactions on Software Engineering*, 49(8):4035–4057, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Noei:2023:ESR

[NLGZ23] Shayan Noei, Heng Li, Stefanos Georgiou, and Ying Zou. An empirical study of refactoring rhythms and tactics in the software development process. *IEEE Transactions on Software Engineering*, 49(12):5103–5119, December 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ndukwe:2023:PUC

[NLM23] Ifeanyi G. Ndukwe, Sherlock A. Licorish, and Stephen G. MacDonell. Perceptions on the utility of community question and answer websites like Stack Overflow to software develop-

ers. *IEEE Transactions on Software Engineering*, 49(4): 2413–2425, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nashaat:2024:TEF

[NM24] Mona Nashaat and James Miller. Towards efficient fine-tuning of language models with organizational data for automated software review. *IEEE Transactions on Software Engineering*, 50(9):2240–2253, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nikolaidis:2023:ATM

[NMA+23] Nikolaos Nikolaidis, Nikolaos Mittas, Apostolos Ampatzoglou, Elvira-Maria Arvanitou, and Alexander Chatzigeorgiou. Assessing TD macromanagement: a nested modeling statistical approach. *IEEE Transactions on Software Engineering*, 49(4):2996–3007, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nitin:2024:YAD

[NMAR24] Vikram Nitin, Anne Mulhern, Sanjay Arora, and Baishakhi Ray. Yuga: Automatically detecting lifetime annotation bugs in the Rust language. *IEEE Transactions on Software Engineering*, 50(10): 2602–2613, October 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nguyen:2022:USS

[NND22] ThanhVu Nguyen, KimHao Nguyen, and Matthew B. Dwyer. Using symbolic states to infer numerical invariants. *IEEE Transactions on Software Engineering*, 48(10): 3877–3899, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Niu:2020:IFC

[NNL+20a] X. Niu, C. Nie, J. Y. Lei, H. Leung, and X. Wang. Identifying failure-causing schemas in the presence of multiple faults. *IEEE Transactions on Software Engineering*, 46(2): 141–162, February 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Niu:2020:IAC

[NNL+20b] Xintao Niu, Changhai Nie, Hareton Leung, Yu Lei, Xiaoyin Wang, Jiaxi Xu, and Yan Wang. An interleaving approach to combinatorial testing and failure-inducing interaction identification. *IEEE Transactions on Software Engineering*, 46 (6):584–615, June 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Notland:2023:REB

[NNL23] Jakob Svennevik Notland, Mariusz Nowostawski, and Jingyue Li. Runtime evolution of Bitcoin's consensus rules. *IEEE Transactions on Software Engineering*, 49(9):4477–4495, September 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nguyen:2022:VFL

[NNNV22] Thu-Trang Nguyen, Kien-Tuan Ngo, Son Nguyen, and Hieu Dinh Vo. A variability fault localization approach for software product lines. *IEEE Transactions on Software Engineering*, 48(10): 4100–4118, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nucci:2020:TCP

[NPZL20] Dario Di Nucci, Annibale Panichella, Andy Zaidman, and Andrea De Lucia. A test case prioritization genetic algorithm guided by the hypervolume indicator. *IEEE Transactions on Software Engineering*, 46(6):674–696, 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nassif:2023:ICS

[NR23] Mathieu Nassif and Martin P. Robillard. Identifying concepts in software projects. *IEEE Transactions on Software Engineering*, 49 (7):3660–3674, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nadri:2022:RBD

[NRPN22] Reza Nadri, Gema Rodríguez-Pérez, and Meiyappan Nagappan. On the relationship between the developer's perceptible race and ethnicity and the evaluation of contributions in OSS. *IEEE Transactions on Software Engineering*, 48 (8):2955–2968, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nayebi:2021:MTO

[NRZ21] M. Nayebi, G. Ruhe, and T. Zimmermann. Mining treatment-outcome constructs from sequential software engineering data. *IEEE Transactions on Software Engineering*, 47(2):393–411, February 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nong:2023:OSS

[NSHL+23] Yu Nong, Rainy Sharma, Abdelwahab Hamou-Lhadj, Xiapu Luo, and Haipeng Cai. Open science in software engineering: a study on deep learning-based vulnerability detection. *IEEE Transactions on Software Engineering*, 49(4):1983–2005, April 2023.

CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Neelofar:2023:ISA

[NSMMA23] Neelofar Neelofar, Kate Smith-Miles, Mario Andrés Muñoz, and Aldeida Aleti. Instance space analysis of search-based software testing. *IEEE Transactions on Software Engineering*, 49(4):2642–2660, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Niu:2022:ECT

[NSW+22] Xintao Niu, Yanjie Sun, Huayao Wu, Gang Li, Changhai Nie, Lei Yu, and Xiaoyin Wang. Enhance combinatorial testing with metamorphic relations. *IEEE Transactions on Software Engineering*, 48(12): 5007–5029, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nassif:2020:ACS

[NTR20] M. Nassif, C. Treude, and M. P. Robillard. Automatically categorizing software technologies. *IEEE Transactions on Software Engineering*, 46(1):20–32, January 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nuseibeh:2025:EWB

[Nus25] Bashar Nuseibeh. Engineering within boundaries when software has none. *IEEE Transactions on Software Engineering*, 51(3):677–680, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Natella:2020:AEB

[NWCS20] R. Natella, S. Winter, D. Cotroneo, and N. Suri. Analyzing the effects of bugs on software interfaces. *IEEE Transactions on Software Engineering*, 46 (3):280–301, March 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Niu:2022:TPS

[NWN+22] Xintao Niu, Huayao Wu, Changhai Nie, Yu Lei, and Xiaoyin Wang. A theory of pending schemas in combinatorial testing. *IEEE Transactions on Software Engineering*, 48 (10):4119–4151, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ni:2022:RSU

[NXL+22] Chao Ni, Xin Xia, David Lo, Xiang Chen, and Qing Gu. Revisiting supervised and unsupervised methods for effort-aware cross-project defect prediction. *IEEE Transactions on Software Engineering*, 48 (3):786–802, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Nair:2020:FFC

[NYM+20] Vivek Nair, Zhe Yu, Tim Menzies, Norbert Siegmund, and Sven Apel. Finding faster configurations using FLASH. *IEEE Transactions on Software Engineering*, 46 (7):794–811, July 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Noei:2021:TMU

[NZZ21] E. Noei, F. Zhang, and Y. Zou. Too many user-reviews! What should app developers look at first? *IEEE Transactions on Software Engineering*, 47(2): 367–378, February 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Offutt:2025:RCB

[OD25] Jeff Offutt and Richard DeMillo. Retrospective on: Constraint-based automatic test data generation. *IEEE Transactions on Software Engineering*, 51(3):754–758, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ou:2023:SGL

[ODTS23] Weihan Ou, Steven H. H. Ding, Yuan Tian, and Leo Song. SCS-Gan: Learning functionality-agnostic stylometric representations for source code authorship verification. *IEEE Transactions on Software Engineering*, 49(4): 1426–1442, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ojdanic:2023:SVS

[OGK+23] Milos Ojdanic, Aayush Garg, Ahmed Khanfir, Renzo Degiovanni, Mike Papadakis, and Yves Le Traon. Syntactic versus semantic similarity of artificial and real faults in mutation testing studies. *IEEE Transactions on Software Engineering*, 49(7):3922–3938, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Okutan:2023:EVA

[OMM+23] Ahmet Okutan, Peter Mell, Mehdi Mirakhorli, Igor Khokhlov, Joanna C. S. Santos, Danielle Gonzalez, and Steven Simmons. Empirical validation of automated vulnerability curation and characterization. *IEEE Transactions on Software Engineering*, 49(5): 3241–3260, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Oliveira:2025:UCU

[OSdO+25] Delano Oliveira, Reydne Santos, Benedito de Oliveira, Martin Monperrus, Fernando Castor, and Fernanda Madeiral. Understanding code understandability improvements in code reviews. *IEEE Transac-*

tions on Software Engineering, 51(1):14–37, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ouatiti:2023:ESL

[OSKH23] Youssef Esseddiq Ouatiti, Mohammed Sayagh, Noureddine Kerzazi, and Ahmed E. Hassan. An empirical study on log level prediction for multi-component systems. *IEEE Transactions on Software Engineering*, 49(2):473–484, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Palomba:2021:BTA

[PAA+21] F. Palomba, D. Andrew Tamburri, F. Arcelli Fontana, R. Oliveto, A. Zaidman, and A. Serebrenik. Beyond technical aspects: How do community smells influence the intensity of code smells? *IEEE Transactions on Software Engineering*, 47(1):108–129, January 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Parnas:2025:TIS

[Par25] David Lorge Parnas. Three "Influential" software design papers. *IEEE Transactions on Software Engineering*, 51 (3):710–712, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Perera:2023:EAU

[PATB23] Anjana Perera, Aldeida Aleti, Burak Turhan, and Marcel Böhme. An experimental assessment of using theoretical defect predictors to guide search-based software testing. *IEEE Transactions on Software Engineering*, 49(1):131–146, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Perez:2021:TEA

[PAV21] A. Perez, R. Abreu, and A. Van Deursen. A theoretical and empirical analysis of program spectra diagnosability. *IEEE Transactions on Software Engineering*, 47(2): 412–431, February 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Pinto:2022:PPP

[PBC+22] Pedro Pinto, João Bispo, João M. P. Cardoso, Jorge G. Barbosa, Davide Gadioli, Gianluca Palermo, Jan Martinovič, Martin Golasowski, Kateřina Slaninová, Radim Cmar, and Cristina Silvano. `Pegasus`: Performance engineering for software applications targeting HPC systems. *IEEE Transactions on Software Engineering*, 48(3): 732–754, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Paolieri:2021:OTQ

[PBCV21] Marco Paolieri, Marco Biagi, Laura Carnevali, and Enrico Vicario. The ORIS Tool: Quantitative evaluation of non-Markovian systems. *IEEE Transactions on Software Engineering*, 47(6): 1211–1225, June 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Peldszus:2024:URS

[PBJ24] Sven Peldszus, Jens Bürger, and Jan Jürjens. UMLsecRT: Reactive security monitoring of Java applications with round-trip engineering. *IEEE Transactions on Software Engineering*, 50(1):16–47, January 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Parasaram:2022:TCS

[PBM22] Nikhil Parasaram, Earl T. Barr, and Sergey Mechtaev. Trident: Controlling side effects in automated program repair. *IEEE Transactions on Software Engineering*, 48(12): 4717–4732, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Pham:2021:SGF

[PBS+21] Van-Thuan Pham, Marcel Böhme, Andrew E. Santosa, Alexandru R. zvan C. ciulescu, and Abhik Roychoudhury. Smart greybox fuzzing. *IEEE Transactions on Software Engineering*, 47(9):1980–1997, September 2021.

Paterson:2020:OEQ

[PC20] Colin Paterson and Radu Calinescu. Observation-enhanced QoS analysis of component-based systems. *IEEE Transactions on Software Engineering*, 46(5):526–548, May 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Peng:2023:FBF

[PCM23] Kewen Peng, Joymallya Chakraborty, and Tim Menzies. FairMask: Better fairness via model-based rebalancing of protected attributes. *IEEE Transactions on Software Engineering*, 49(4):2426–2439, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Peng:2022:RTI

[PCY22] Zi Peng, Tse-Hsun Chen, and Jinqiu Yang. Revisiting test impact analysis in continuous testing from the perspective of code dependencies. *IEEE Transactions on Software Engineering*, 48(6): 1979–1993, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Panach:2021:EMD

[PDM+21] J. I. Panach, Ó. Dieste, B. Marín, S. España, S. Vegas, Ó. Pastor, and N. Juristo. Evaluating model-driven development claims with respect to quality: A family of experiments. *IEEE Transactions on Software Engineering*, 47(1):130–145, January 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Poremba:2023:NTS

[PDV23] Joseph Poremba, Nancy A. Day, and Amirhossein Vakili. New techniques for static symmetry breaking in many-sorted finite model finding. *IEEE Transactions on Software Engineering*, 49(6): 3487–3503, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Paz:2021:CME

[PEM21] Andrés Paz, Ghizlane El Boussaidi, and Hafedh Mili. `checsdm`: A method for ensuring consistency in heterogeneous safety-critical system design. *IEEE Transactions on Software Engineering*, 47(12): 2713–2739, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Perez:2022:EHF

[PFAC22] Francisca Pérez, Jaime Font, Lorena Arcega, and Carlos Cetina. Empowering the human as the fitness function in search-based model-driven engineering. *IEEE Transactions on Software Engineering*, 48(11):4553–4568, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Prana:2022:IEE

[PFR+22] Gede Artha Azriadi Prana, Denae Ford, Ayushi Rastogi, David Lo, Rahul Purandare, and Nachiappan Nagappan. Including everyone, everywhere: Understanding opportunities and challenges of geographic gender-inclusion in OSS. *IEEE Transactions on Software Engineering*, 48(9): 3394–3409, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Pan:2024:LSB

[PGB24] Rongqi Pan, Taher A. Ghaleb, and Lionel C. Briand. LTM: Scalable and black-box similarity-based test suite minimization based on language models. *IEEE Transactions on Software Engineering*, 50(11): 3053–3070, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Perez:2022:DRB

[PGPa+22] Jorge E. Pérez, Ángel González-Prieto, Jessica D 'az, Daniel

López-Fernández, Javier García-Martín, and Agustín Yagüe. DevOps research-based teaching using qualitative research and inter-coder agreement. *IEEE Transactions on Software Engineering*, 48(9):3378–3393, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Papis:2022:EET

[PGSS22] Bartosz Papis, Konrad Grochowski, Kamil Subzda, and Kamil Sijko. Experimental evaluation of test-driven development with interns working on a real industrial project. *IEEE Transactions on Software Engineering*, 48(5):1644–1664, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Prudjinski:2024:ERT

[PHL24] Micha Prudjinski, Irit Hadar, and Gil Luria. Exploring the role of team security climate in the implementation of security by design: a case study in the defense sector. *IEEE Transactions on Software Engineering*, 50(5):1065–1079, May 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Petrovi:2022:PMT

[PIFJ22] Goran Petrovi , Marko Ivankovi , Gordon Fraser, and René Just. Practical mutation testing at scale: a view from Google. *IEEE Transactions on Software Engineering*, 48 (10):3900–3912, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Pfleeger:2025:EBS

[PK25] Shari Lawrence Pfleeger and Barbara Ann Kitchenham. Evidence-based software engineering guidelines revisited. *IEEE Transactions on Software Engineering*, 51(3):814–819, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Paixao:2021:ICR

[PKH+21] Matheus Paixao, Jens Krinke, DongGyun Han, Chaiyong Ragkhitwetsagul, and Mark Harman. The impact of code review on architectural changes. *IEEE Transactions on Software Engineering*, 47 (5):1041–1059, May 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Perez:2021:SCC

[PL21] D. D. Perez and W. Le. Specifying callback control flow of mobile apps using finite automata. *IEEE Transactions on Software Engineering*, 47 (2):379–392, February 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Peng:2023:RBE

[PLG+23] Yun Peng, Shuqing Li, Wenwei Gu, Yichen Li, Wenxuan Wang, Cuiyun Gao, and Michael R. Lyu. Revisiting, benchmarking and exploring API recommendation: How far are we? *IEEE Transactions on Software Engineering*, 49(4):1876–1897, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Park:2023:SAJ

[PLHR23] Jihee Park, Sungho Lee, Jaemin Hong, and Sukyoung Ryu. Static analysis of JNI programs via binary decompilation. *IEEE Transactions on Software Engineering*, 49(5): 3089–3105, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Peng:2022:DRP

[PM22] Kewen Peng and Tim Menzies. Defect reduction planning (using TimeLIME). *IEEE Transactions on Software Engineering*, 48(7):2510–2525, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Pan:2021:ERJ

[PMC+21] Weifeng Pan, Hua Ming, Carl K. Chang, Zijiang Yang, and Dae-Kyoo Kim. ElementRank: Ranking Java software classes and packages using a multilayer complex network-based approach. *IEEE Transactions on Software Engineering*, 47(10):2272–2295, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Padala:2022:HGB

[PMF+22] Hema Susmita Padala, Christopher Mendez, Felipe Fronchetti, Igor Steinmacher, Zoe Steine-Hanson, Claudia Hilderbrand, Amber Horvath, Charles Hill, Logan Simpson, Margaret Burnett, Marco Gerosa, and Anita Sarma. How gender-biased tools shape newcomer experiences in OSS projects. *IEEE Transactions on Software Engineering*, 48(1):241–259, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Pastore:2022:PTA

[PMGM22] Fabrizio Pastore, Daniela Micucci, Michell Guzman, and Leonardo Mariani. `TkT`: Automatic inference of timed and extended pushdown automata. *IEEE Transactions on Software Engineering*, 48 (2):617–636, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Pan:2023:PPD

[PMKY23] Weifeng Pan, Hua Ming, Dae-Kyoo Kim, and Zijiang Yang. Pride: Prioritizing

documentation effort based on a PageRank-like algorithm and simple filtering rules. *IEEE Transactions on Software Engineering*, 49(3):1118–1151, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Prestat:2024:DTB

[PMVA24] Dimitri Prestat, Naouel Moha, Roger Villemaire, and Florent Avellaneda. DynAMICS: a tool-based method for the specification and dynamic detection of Android behavioral code smells. *IEEE Transactions on Software Engineering*, 50(4):765–784, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Paltenghi:2024:FAE

[PPHZ24] Matteo Paltenghi, Rahul Pandita, Austin Z. Henley, and Albert Ziegler. Follow-up attention: an empirical study of developer and neural model code exploration. *IEEE Transactions on Software Engineering*, 50(10):2568–2582, October 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Panach:2022:FEC

[PPJ22] Jose Ignacio Panach, Óscar Pastor, and Natalia Juristo. A family of experiments to compare two model-driven development tools vs a traditional development method. *IEEE Transactions on Software Engineering*, 48(12): 4802–4817, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Pashchenko:2022:VMC

[PPP+22] Ivan Pashchenko, Henrik Plate, Serena Elisa Ponta, Antonino Sabetta, and Fabio Massacci. Vuln4Real: a methodology for counting actually vulnerable dependencies. *IEEE Transactions on Software Engineering*, 48(5): 1592–1609, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Passos:2021:SFS

[PQM+21] L. Passos, R. Queiroz, M. Mukelabai, T. Berger, S. Apel, K. Czarnecki, and J. A. Padilla. A study of feature scattering in the Linux kernel. *IEEE Transactions on Software Engineering*, 47(1): 146–164, January 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Prenner:2022:MMS

[PR22] Julian Aron Prenner and Romain Robbes. Making the most of small software engineering datasets with modern machine learning. *IEEE Transactions on Software Engineering*, 48(12):

5050–5067, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Peitek:2020:LPH

[PSA+20] Norman Peitek, Janet Siegmund, Sven Apel, Christian Kästner, Chris Parnin, Anja Bethmann, Thomas Leich, Gunter Saake, and André Brechmann. A look into programmers' heads. *IEEE Transactions on Software Engineering*, 46(4):442–462, April 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Porter:2025:RAS

[PSV25] Adam A. Porter, Harvey Siy, and Lawrence Votta. A reflection on "Advances in software inspections". *IEEE Transactions on Software Engineering*, 51(3):728–731, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Pornprasit:2023:PDT

[PT23] Chanathip Pornprasit and Chakkrit Kla Tantithamthavorn. `DeepLineDP`: Towards a deep learning approach for line-level defect prediction. *IEEE Transactions on Software Engineering*, 49(1): 84–98, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Papadopoulos:2021:MPR

[PVB+21] Alessandro Vittorio Papadopoulos, Laurens Versluis, André Bauer, Nikolas Herbst, Jóakim von Kistowski, Ahmed Ali-Eldin, Cristina L. Abad, José Nelson Amaral, Petr Tůma, and Alexandru Iosup. Methodological principles for reproducible performance evaluation in cloud computing. *IEEE Transactions on Software Engineering*, 47(8): 1528–1543, August 2021.

Palacio:2024:TTC

[PVC+24] David Nader Palacio, Alejandro Velasco, Nathan Cooper, Alvaro Rodriguez, Kevin Moran, and Denys Poshyvanyk. Toward a theory of causation for interpreting neural code models. *IEEE Transactions on Software Engineering*, 50(5):1215–1243, May 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Pradhan:2021:CCB

[PWA+21] D. Pradhan, S. Wang, S. Ali, T. Yue, and M. Liaaen. CBGA-ES+: a cluster-based genetic algorithm with non-dominated elitist selection for supporting multi-objective test optimization. *IEEE Transactions on Software Engineering*, 47(1):86–107, January 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Palma:2025:FSH

[PWSG25] Marco Edoardo Palma, Alex Wolf, Pasquale Salza, and Harald C. Gall. On-the-fly syntax highlighting: Generalisation and speed-ups. *IEEE Transactions on Software Engineering*, 51(2):355–370, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Pan:2022:GGT

[PXP+22] Minxue Pan, Tongtong Xu, Yu Pei, Zhong Li, Tian Zhang, and Xuandong Li. GUI-guided test script repair for mobile apps. *IEEE Transactions on Software Engineering*, 48(3): 910–929, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Pei:2023:LAE

[PXY+23] Kexin Pei, Zhou Xuan, Junfeng Yang, Suman Jana, and Baishakhi Ray. Learning approximate execution semantics from traces for binary function similarity. *IEEE Transactions on Software Engineering*, 49(4):2776–2790, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Perez:2022:UAQ

[PZC22] Francisca Pérez, Tewfik Ziadi, and Carlos Cetina. Utilizing automatic query reformulations as genetic operations to improve feature location in software models. *IEEE Transactions on Software Engineering*, 48(2):713–731, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Qin:2024:UDR

[QCL+24] Boqin Qin, Yilun Chen, Haopeng Liu, Hua Zhang, Qiaoyan Wen, Linhai Song, and Yiying Zhang. Understanding and detecting real-world safety issues in Rust. *IEEE Transactions on Software Engineering*, 50(6):1306–1324, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Qiu:2022:DJT

[QGX+22] Fangcheng Qiu, Zhipeng Gao, Xin Xia, David Lo, John Grundy, and Xinyu Wang. Deep just-in-time defect localization. *IEEE Transactions on Software Engineering*, 48(12): 5068–5086, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Qian:2023:DRN

[QHL+23] Peng Qian, Jianting He, Lingling Lu, Siwei Wu, Zhipeng Lu, Lei Wu, Yajin Zhou, and Qinming He. Demystifying random number in Ethereum smart contract: Taxonomy, vulnerability identification, and attack detection. *IEEE*

Transactions on Software Engineering, 49(7):3793–3810, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Qiu:2024:VDM

[QLH+24] Fangcheng Qiu, Zhongxin Liu, Xing Hu, Xin Xia, Gang Chen, and Xinyu Wang. Vulnerability detection via multiple-graph-based code representation. *IEEE Transactions on Software Engineering*, 50(8): 2178–2199, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Qin:2022:APR

[QTL+22] Boqin Qin, Tengfei Tu, Ziheng Liu, Tingting Yu, and Linhai Song. Algorithmic profiling for real-world complexity problems. *IEEE Transactions on Software Engineering*, 48 (7):2680–2694, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Qu:2021:UKC

[QZC+21] Y. Qu, Q. Zheng, J. Chi, Y. Jin, A. He, D. Cui, H. Zhang, and T. Liu. Using K-core decomposition on class dependency networks to improve bug prediction model's practical performance. *IEEE Transactions on Software Engineering*, 47(2): 348–366, February 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Qiu:2022:TEA

[QZCP22] Kun Qiu, Zheng Zheng, Tsong Yueh Chen, and Pak-Lok Poon. Theoretical and empirical analyses of the effectiveness of metamorphic relation composition. *IEEE Transactions on Software Engineering*, 48(3):1001–1017, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rebai:2022:EDO

[RAK+22] Soumaya Rebai, Vahid Alizadeh, Marouane Kessentini, Houcem Fehri, and Rick Kazman. Enabling decision and objective space exploration for interactive multi-objective refactoring. *IEEE Transactions on Software Engineering*, 48(5):1560–1578, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rossolini:2023:ICD

[RBB23] Giulio Rossolini, Alessandro Biondi, and Giorgio Buttazzo. Increasing the confidence of deep neural networks by coverage analysis. *IEEE Transactions on Software Engineering*, 49(2):802–815, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rao:2020:IDF

[RBPS20] M. Rao, D. F. Bacon, D. C. Parkes, and M. I. Seltzer. Incentivizing deep fixes in software economies. *IEEE Transactions on Software Engineering*, 46(1):51–70, January 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Reinhartz-Berger:2022:RSB

[RBZ22] Iris Reinhartz-Berger and Anna Zamansky. Reuse of similarly behaving software through polymorphism-inspired variability mechanisms. *IEEE Transactions on Software Engineering*, 48(3): 773–785, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rosa:2022:EES

[RCMB22] Wilson Rosa, Bradford K. Clark, Raymond Madachy, and Barry W. Boehm. Empirical effort and schedule estimation models for agile processes in the US DoD. *IEEE Transactions on Software Engineering*, 48(8):3117–3130, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ragavan:2021:VCS

[RCP+21] Sruti Srinivasa Ragavan, Mihai Codoban, David Piorkowski, Danny Dig, and Margaret Burnett. Version control systems: an information foraging perspective. *IEEE Transactions on Software Engineering*, 47(8):1644–1655, August 2021.

Ren:2023:USC

[RCS+23] Ranci Ren, John W. Castro, Adrián Santos, Oscar Dieste, and Silvia T. Acuña. Using the SOCIO chatbot for UML modelling: a family of experiments. *IEEE Transactions on Software Engineering*, 49(1): 364–383, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Reid:2023:NCR

[RdWT23] Brittany Reid, Marcelo d'Amorim, Markus Wagner, and Christoph Treude. NCQ: Code reuse support for Node.js developers. *IEEE Transactions on Software Engineering*, 49(5): 3205–3225, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ritschel:2022:CBB

[RKH+22] Nico Ritschel, Vladimir Kovalenko, Reid Holmes, Ronald Garcia, and David C. Shepherd. Comparing block-based programming models for two-armed robots. *IEEE Transactions on Software Engineering*, 48(5):1630–1643, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rezk:2022:GCP

[RKM22] Christophe Rezk, Yasutaka Kamei, and Shane McIntosh. The ghost commit problem when identifying fix-inducing changes: an empirical study of Apache projects. *IEEE Transactions on Software Engineering*, 48(9):3297–3309, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ragkhitwetsagul:2021:TCS

[RKP+21] C. Ragkhitwetsagul, J. Krinke, M. Paixao, G. Bianco, and R. Oliveto. Toxic code snippets on Stack Overflow. *IEEE Transactions on Software Engineering*, 47(3):560–581, March 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rao:2022:CTG

[RLL+22] Chang Rao, Nan Li, Yu Lei, Jin Guo, Yadong Zhang, Raghu N. Kacker, and D. Richard Kuhn. Combinatorial test generation for multiple input models with shared parameters. *IEEE Transactions on Software Engineering*, 48(7): 2606–2628, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Raatikainen:2023:IMI

[RML+23] Mikko Raatikainen, Quim Motger, Clara Marie Lüders, Xavier Franch, Lalli Myllyaho, Elina Kettunen, Jordi Marco, Juha Tiihonen, Mikko Halonen, and Tomi Männistö. Improved management of issue dependencies in issue trackers of large collaborative projects. *IEEE Transactions on Software Engineering*, 49(4):2128–2148, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rodriguez:2020:KSV

[RMT20] P. Rodríguez, E. Mendes, and B. Turhan. Key stakeholders value propositions for feature selection in software-intensive products: an industrial case study. *IEEE Transactions on Software Engineering*, 46(12): 1340–1363, December 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rochkind:2025:RSC

[Roc25] Marc J. Rochkind. A retrospective on the Source Code Control System. *IEEE Transactions on Software Engineering*, 51(3):695–699, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rahman:2023:DCP

[RP23] Akond Rahman and Chris Parnin. Detecting and characterizing propagation of security weaknesses in puppet-based infrastructure manage-

ment. *IEEE Transactions on Software Engineering*, 49(6): 3536–3553, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rodriguez-Perez:2022:WEB

[RPNR22] Gema Rodríguez-Pérez, Meiyappan Nagappan, and Gregorio Robles. Watch out for extrinsic bugs! A case study of their impact in just-in-time bug prediction models on the OpenStack Project. *IEEE Transactions on Software Engineering*, 48(4):1400–1416, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Russo:2022:GDP

[RS22] Daniel Russo and Klaas-Jan Stol. Gender differences in personality traits of software engineers. *IEEE Transactions on Software Engineering*, 48 (3):819–834, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rajapaksha:2022:SGD

[RTJ+22] Dilini Rajapaksha, Chakkrit Tantithamthavorn, Jirayus Jiarpakdee, Christoph Bergmeir, John Grundy, and Wray Buntine. SQAPlanner: Generating data-informed software quality improvement plans. *IEEE Transactions on Software Engineering*, 48(8):2814–2835, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rothermel:2025:PTC

[RU25] Gregg Rothermel and Roland Untch. On "Prioritizing test cases for regression testing". *IEEE Transactions on Software Engineering*, 51(3):802–807, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rodriguez:2022:TVV

[RUM22] Pilar Rodríguez, Cathy Urquhart, and Emilia Mendes. A theory of value for value-based feature selection in software engineering. *IEEE Transactions on Software Engineering*, 48(2):466–484, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Razzaq:2022:EFC

[RVK+22] Abdul Razzaq, Anthony Ventresque, Rainer Koschke, Andrea De Lucia, and Jim Buckley. The effect of feature characteristics on the performance of feature location techniques. *IEEE Transactions on Software Engineering*, 48(6): 2066–2085, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Romano:2020:MSI

[RVSP20] S. Romano, C. Vendome, G. Scanniello, and D. Poshyvanyk. A multi-study investigation into dead code. *IEEE Transactions on Software Engineering*, 46(1):71–99, January 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rajbahadur:2021:IDN

[RWKH21] Gopi Krishnan Rajbahadur, Shaowei Wang, Yasutaka Kamei, and Ahmed E. Hassan. Impact of discretization noise of the dependent variable on machine learning classifiers in software engineering. *IEEE Transactions on Software Engineering*, 47(7): 1414–1430, July 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rajbahadur:2022:IFI

[RWO+22] Gopi Krishnan Rajbahadur, Shaowei Wang, Gustavo A. Oliva, Yasutaka Kamei, and Ahmed E. Hassan. The impact of feature importance methods on the interpretation of defect classifiers. *IEEE Transactions on Software Engineering*, 48 (7):2245–2261, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Randell:2025:LBR

[RX25] Brian Randell and Jie Xu. Looking back on recovery blocks and conversations. *IEEE Transactions on Software Engineering*, 51(3):689–694, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Rong:2024:DQE

[RYZ+24] Guoping Rong, Yongda Yu, Yifan Zhang, He Zhang, Haifeng Shen, Dong Shao, Hongyu Kuang, Min Wang, Zhao Wei, Yong Xu, and Juhong Wang. Distilling quality enhancing comments from code reviews to underpin reviewer recommendation. *IEEE Transactions on Software Engineering*, 50(7): 1658–1674, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Spinellis:2021:EUS

[SA21] Diomidis Spinellis and Paris Avgeriou. Evolution of the Unix system architecture: An exploratory case study. *IEEE Transactions on Software Engineering*, 47(6):1134–1163, June 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sas:2023:ATD

[SA23] Darius Sas and Paris Avgeriou. An architectural technical debt index based on machine learning and architectural smells. *IEEE Transactions on Software Engineer-*

ing, 49(8):4169–4195, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sarhan:2022:SMC

[SABZ22] Qusay I. Sarhan, Bestoun S. Ahmed, Miroslav Bures, and Kamal Z. Zamli. Software module clustering: an in-depth literature analysis. *IEEE Transactions on Software Engineering*, 48(6):1905–1928, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Shahin:2023:ASP

[SAC23] Ramy Shahin, Murad Akhundov, and Marsha Chechik. Annotative software product line analysis using variability-aware datalog. *IEEE Transactions on Software Engineering*, 49(3):1323–1341, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sun:2023:DET

[SAK+23] Tiezhu Sun, Kevin Allix, Kisub Kim, Xin Zhou, Dongsun Kim, David Lo, Tegawendé F. Bissyandé, and Jacques Klein. DexBERT: Effective, task-agnostic and fine-grained representation learning of Android bytecode. *IEEE Transactions on Software Engineering*, 49(10):4691–4706, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Saenz-Adan:2022:IPC

[SAPGIM22] Carlos Sáenz-Adán, Beatriz Pérez, Francisco J. García-Izquierdo, and Luc Moreau. Integrating provenance capture and UML with UML2PROV: Principles and experience. *IEEE Transactions on Software Engineering*, 48(1):53–68, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sjoberg:2023:CVS

[SB23] Dag I. K. Sjøberg and Gunnar Rye Bergersen. Construct validity in software engineering. *IEEE Transactions on Software Engineering*, 49(3): 1374–1396, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Shen:2024:SPE

[SB24] Yuchen Shen and Travis Breaux. Stakeholder preference extraction from scenarios. *IEEE Transactions on Software Engineering*, 50(1): 69–84, January 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Samuel:2022:DNC

[SBDR22] Binny M. Samuel, Hillol Bala, Sherae L. Daniel, and V. Ramesh. Deconstructing

the nature of collaboration in organizations open source software development: The impact of developer and task characteristics. *IEEE Transactions on Software Engineering*, 48(10):3969–3987, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sharafi:2022:ECS

[SBFW22] Zohreh Sharafi, Ian Bertram, Michael Flanagan, and Westley Weimer. Eyes on code: a study on developers' code navigation strategies. *IEEE Transactions on Software Engineering*, 48(5):1692–1704, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Salama:2021:SSE

[SBL21] Maria Salama, Rami Bahsoon, and Patricia Lago. Stability in software engineering: Survey of the state-of-the-art and research directions. *IEEE Transactions on Software Engineering*, 47(7): 1468–1510, July 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Scalabrino:2021:AAC

[SBV+21] S. Scalabrino, G. Bavota, C. Vendome, M. Linares-Vásquez, D. Poshyvanyk, and R. Oliveto. Automatically assessing code understandability. *IEEE Transactions on Software Engineering*, 47(3): 595–613, March 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sun:2023:TAF

[SCL+23] Xiaoyu Sun, Xiao Chen, Yonghui Liu, John Grundy, and Li Li. Taming Android fragmentation through lightweight crowdsourced testing. *IEEE Transactions on Software Engineering*, 49(6): 3599–3615, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Shi:2023:CLS

[SCZ+23] Chaochen Shi, Borui Cai, Yao Zhao, Longxiang Gao, Keshav Sood, and Yong Xiang. CoSS: Leveraging statement semantics for code summarization. *IEEE Transactions on Software Engineering*, 49(6): 3472–3486, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Silva:2021:RML

[SdSS+21] Danilo Silva, João Paulo da Silva, Gustavo Santos, Ricardo Terra, and Marco Tulio Valente. RefDiff 2.0: A multi-language refactoring detection tool. *IEEE Transactions on Software Engineering*, 47(12): 2786–2802, December 2021. CODEN IESEDJ. ISSN 0098-

5589 (print), 1939-3520 (electronic).

Sousa:2022:SAP

[SFC22a] Tiago Boldt Sousa, Hugo Sereno Ferreira, and Filipe Figueiredo Correia. A survey on the adoption of patterns for engineering software for the cloud. *IEEE Transactions on Software Engineering*, 48(6): 2128–2140, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Su:2022:WMA

[SFC+22b] Ting Su, Lingling Fan, Sen Chen, Yang Liu, Lihua Xu, Geguang Pu, and Zhendong Su. Why my app crashes? Understanding and benchmarking framework-specific exceptions of Android apps. *IEEE Transactions on Software Engineering*, 48(4):1115–1137, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sun:2021:MMR

[SFP+21] Chang-Ai Sun, An Fu, Pak-Lok Poon, Xiaoyuan Xie, Huai Liu, and Tsong Yueh Chen. METRIC++: a metamorphic relation identification technique based on input plus output domains. *IEEE Transactions on Software Engineering*, 47(9):1764–1785, September 2021.

Silva:2024:ECR

[SGG+24] Denini Silva, Martin Gruber, Satyajit Gokhale, Ellen Arteca, Alexi Turcotte, Marcelo d'Amorim, Wing Lam, Stefan Winter, and Jonathan Bell. The effects of computational resources on flaky tests. *IEEE Transactions on Software Engineering*, 50(12): 3104–3121, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Santos:2020:AFE

[SGJ20] Adrian Santos, Omar Gómez, and Natalia Juristo. Analyzing families of experiments in SE: A systematic mapping study. *IEEE Transactions on Software Engineering*, 46(5): 566–583, May 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sabir:2022:MMA

[SGP+22] Fatima Sabir, Yann-Gaël Guéhéneuc, Francis Palma, Naouel Moha, Ghulam Rasool, and Hassan Akhtar. A mixed-method approach to recommend corrections and correct REST antipatterns. *IEEE Transactions on Software Engineering*, 48(11): 4319–4338, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sun:2023:EGT

[SGP+23] Baicai Sun, Dunwei Gong, Feng Pan, Xiangjuan Yao, and Tian Tian. Evolutionary generation of test suites for multi-path coverage of MPI programs with non-determinism. *IEEE Transactions on Software Engineering*, 49(6):3504–3523, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sun:2022:IES

[SGTY22] Baicai Sun, Dunwei Gong, Tian Tian, and Xiangjuan Yao. Integrating an ensemble surrogate model's estimation into test data generation. *IEEE Transactions on Software Engineering*, 48(4): 1336–1350, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sun:2024:MLT

[SGY+24] Weifeng Sun, Zhenting Guo, Meng Yan, Zhongxin Liu, Yan Lei, and Hongyu Zhang. Method-level test-to-code traceability link construction by semantic correlation learning. *IEEE Transactions on Software Engineering*, 50(10): 2656–2676, October 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sayagh:2021:CIA

[SH21] Mohammed Sayagh and Ahmed E. Hassan. ConfigMiner: Identifying the appropriate configuration options for config-related user questions by mining online forums. *IEEE Transactions on Software Engineering*, 47(12):2907–2918, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Seibt:2022:LSS

[SHC+22] Georg Seibt, Florian Heck, Guilherme Cavalcanti, Paulo Borba, and Sven Apel. Leveraging structure in software merge: an empirical study. *IEEE Transactions on Software Engineering*, 48(11): 4590–4610, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Shreeve:2022:BLP

[SHE+22] Benjamin Shreeve, Joseph Hallett, Matthew Edwards, Kopo M. Ramokapane, Richard Atkins, and Awais Rashid. The best laid plans or lack thereof: Security decision-making of different stakeholder groups. *IEEE Transactions on Software Engineering*, 48(5):1515–1528, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Shepperd:2025:ESP

[She25] Martin Shepperd. "Estimating software project effort using analogies": Reflections after 28 years. *IEEE Transactions on Software Engineering*, 51(3):778–782, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Seaman:2025:QRM

[SHF25] Carolyn B. Seaman, Rashina Hoda, and Robert Feldt. Qualitative research methods in software engineering: Past, present, and future. *IEEE Transactions on Software Engineering*, 51(3): 783–788, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sharma:2021:FSB

[SHM21] Vaibhav Sharma, Kesha Hietala, and Stephen McCamant. Finding substitutable binary code by synthesizing adapters. *IEEE Transactions on Software Engineering*, 47 (8):1626–1643, August 2021.

Santiesteban:2023:CAH

[SHWA23] Priscila Santiesteban, Yu Huang, Westley Weimer, and Hammad Ahmad. CirFix: Automated hardware repair and its real-world applications. *IEEE Transactions on Software Engineering*, 49(7):3736–3752, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Shin:2024:AEM

[SHWW24] Jiho Shin, Hadi Hemmati, Moshi Wei, and Song Wang. Assessing evaluation metrics for neural test oracle generation. *IEEE Transactions on Software Engineering*, 50(9): 2337–2349, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sondhi:2022:MSM

[SJR+22] Devika Sondhi, Mayank Jobanputra, Divya Rani, Salil Purandare, Sakshi Sharma, and Rahul Purandare. Mining similar methods for test adaptation. *IEEE Transactions on Software Engineering*, 48(7): 2262–2276, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

SAYAGH:2020:SCE

[SKAP20] Mohammed Sayagh, Noureddine Kerzazi, Bram Adams, and Fabio Petrillo. Software configuration engineering in practice interviews, survey, and systematic literature review. *IEEE Transactions on Software Engineering*, 46 (6):646–673, June 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Shaw:2025:RAS

[SKR25] Mary Shaw, Daniel V. Klein, and Theodore L. Ross. Revisiting abstractions for software architecture and tools to support them. *IEEE Transactions on Software Engineering*, 51 (3):768–773, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Shi:2024:PMD

[SLS+24] Chenghang Shi, Haofeng Li, Yulei Sui, Jie Lu, Lian Li, and Jingling Xue. Pearl: a multi-derivation approach to efficient CFL-reachability solving. *IEEE Transactions on Software Engineering*, 50(9): 2379–2397, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Su:2022:QVM

[SLZR22] Guoxin Su, Li Liu, Minjie Zhang, and David S. Rosenblum. Quantitative verification for monitoring event-streaming systems. *IEEE Transactions on Software Engineering*, 48(2):538–550, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Song:2023:PCE

[SM23] Liyan Song and Leandro L. Minku. A procedure to continuously evaluate predictive performance of just-in-time software defect prediction models during software development. *IEEE Transactions on Software Engineering*, 49(2): 646–666, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Scoccia:2021:ETA

[SMA+21] Gian Luca Scoccia, Ivano Malavolta, Marco Autili, Amleto Di Salle, and Paola Inverardi. Enhancing trustability of Android applications via user-centric flexible permissions. *IEEE Transactions on Software Engineering*, 47 (10):2032–2051, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sarro:2022:LMM

[SMPH22] Federica Sarro, Rebecca Moussa, Alessio Petrozziello, and Mark Harman. Learning from mistakes: Machine learning enhanced human expert effort estimates. *IEEE Transactions on Software Engineering*, 48(6):1868–1882, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Silva:2025:AMS

[SMS+25] Kelson Silva, Jorge Melegati, Fabio Silveira, Xiaofeng Wang, Mauricio Ferreira, and Eduardo Guerra. ArchHypo: Managing software

architecture uncertainty using hypotheses engineering. *IEEE Transactions on Software Engineering*, 51(2):430–448, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Schafer:2024:EEU

[SNET24] Max Schäfer, Sarah Nadi, Aryaz Eghbali, and Frank Tip. An empirical evaluation of using large language models for automated unit test generation. *IEEE Transactions on Software Engineering*, 50(1): 85–105, January 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sangwan:2022:OSR

[SNNO22] Raghvinder S. Sangwan, Ashkan Negahban, Robert L. Nord, and Ipek Ozkaya. Optimization of software release planning considering architectural dependencies, cost, and value. *IEEE Transactions on Software Engineering*, 48(4): 1369–1384, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Saidani:2022:DCI

[SOM22] Islem Saidani, Ali Ouni, and Mohamed Wiem Mkaouer. Detecting continuous integration skip commits using multi-objective evolutionary search. *IEEE Transactions on Software Engineering*, 48(12): 4873–4891, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Soremekun:2022:IH

[SPH+22] Ezekiel Soremekun, Esteban Pavese, Nikolas Havrikov, Lars Grunske, and Andreas Zeller. Inputs from Hell. *IEEE Transactions on Software Engineering*, 48(4):1138–1153, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sharma:2022:LCS

[SPK22] Shachi Sharma, Parag C. Pendharkar, and Karmeshu. Learning component size distributions for software cost estimation: Models based on arithmetic and shifted geometric means rules. *IEEE Transactions on Software Engineering*, 48(12):5136–5147, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sanchez:2024:MTP

[SPS+24] Ana B. Sánchez, José A. Parejo, Sergio Segura, Amador Durán, and Mike Papadakis. Mutation testing in practice: Insights from open-source software developers. *IEEE Transactions on Software Engineering*, 50(5):1130–1143, May 2024. CODEN IESEDJ.

ISSN 0098-5589 (print), 1939-3520 (electronic).

Stocco:2023:MGS

[SPT23] Andrea Stocco, Brian Pulfer, and Paolo Tonella. Mind the gap! A study on the transferability of virtual versus physical-world testing of autonomous driving systems. *IEEE Transactions on Software Engineering*, 49(4):1928–1940, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Soltani:2020:SBC

[SPv20] M. Soltani, A. Panichella, and A. van Deursen. Search-based crash reproduction and its impact on debugging. *IEEE Transactions on Software Engineering*, 46(12):1294–1317, December 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Svajlenko:2021:MIF

[SR21] Jeffrey Svajlenko and Chanchal K. Roy. The mutation and injection framework: Evaluating clone detection tools with mutation analysis. *IEEE Transactions on Software Engineering*, 47(5):1060–1087, May 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Soares:2023:RTS

[SRG+23] Elvys Soares, Márcio Ribeiro, Rohit Gheyi, Guilherme Amaral, and André Santos. Refactoring test smells with JUnit 5: Why should developers keep up-to-date? *IEEE Transactions on Software Engineering*, 49(3):1152–1170, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Simon:2023:CFT

[SRS23] Sebastian Simon, Nicolai Ruckel, and Norbert Siegmund. CfgNet: A framework for tracking equality-based configuration dependencies across a software project. *IEEE Transactions on Software Engineering*, 49(8):3955–3971, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Salman:2022:WLC

[SRT+22] Iflaah Salman, Pilar Rodríguez, Burak Turhan, Ayşe Tosun, and Arda Güreller. What leads to a confirmatory or disconfirmatory behavior of software testers? *IEEE Transactions on Software Engineering*, 48(4):1351–1368, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sharifi:2023:IHB

[SSBA23] Sepehr Sharifi, Donghwan Shin, Lionel C. Briand, and Nathan Aschbacher. Identifying the hazard boundary of ML-enabled autonomous systems using cooperative coevolutionary search. *IEEE Transactions on Software Engineering*, 49(12):5120–5138, December 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Salza:2023:ETL

[SSGG23] Pasquale Salza, Christoph Schwizer, Jian Gu, and Harald C. Gall. On the effectiveness of transfer learning for code search. *IEEE Transactions on Software Engineering*, 49(4):1804–1822, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sun:2023:CFS

[SSL+23] Jingling Sun, Ting Su, Kai Liu, Chao Peng, Zhao Zhang, Geguang Pu, Tao Xie, and Zhendong Su. Characterizing and finding system setting-related defects in Android apps. *IEEE Transactions on Software Engineering*, 49(4): 2941–2963, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sokolowski:2024:AIC

[SSS24] Daniel Sokolowski, David Spielmann, and Guido Salvaneschi. Automated infrastructure as code program testing. *IEEE Transactions on Software Engineering*, 50(6): 1585–1599, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Spray:2022:BMS

[SSSC22] John Spray, Roopak Sinha, Arnab Sen, and Xingbin Cheng. Building maintainable software using abstraction layering. *IEEE Transactions on Software Engineering*, 48(11): 4397–4410, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Salman:2023:CBT

[STRM23] Iflaah Salman, Burak Turhan, Robert Rama , and Vladimir Mandi . Confirmation bias and time pressure: a family of experiments in software testing. *IEEE Transactions on Software Engineering*, 49(12): 5203–5222, December 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Schafer:2023:SEE

[SvdALS23] Bernhard Schäfer, Han van der Aa, Henrik Leopold, and Heiner Stuckenschmidt. Sketch2Process: End-to-end BPMN sketch

recognition based on neural networks. *IEEE Transactions on Software Engineering*, 49(4):2621–2641, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Santos:2021:PGA

[SVOJ21] Adrian Santos, Sira Vegas, Markku Oivo, and Natalia Juristo. A procedure and guidelines for analyzing groups of software engineering replications. *IEEE Transactions on Software Engineering*, 47(9): 1742–1763, September 2021.

Soto-Valero:2023:AST

[SVTTB23] César Soto-Valero, Deepika Tiwari, Tim Toady, and Benoit Baudry. Automatic specialization of third-party Java dependencies. *IEEE Transactions on Software Engineering*, 49(11):5027–5045, November 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Shi:2022:ERP

[SWC+22] Yong Shi, Mingzhi Wen, Filipe R. Cogo, Boyuan Chen, and Zhen Ming Jiang. An experience report on producing verifiable builds for large-scale commercial systems. *IEEE Transactions on Software Engineering*, 48(9): 3361–3377, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sun:2024:FPS

[SWF+24] Yi Sun, Chengpeng Wang, Gang Fan, Qingkai Shi, and Xiangyu Zhang. Fast and precise static null exception analysis with synergistic preprocessing. *IEEE Transactions on Software Engineering*, 50(11): 3022–3036, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sui:2020:VFB

[SX20] Yulei Sui and Jingling Xue. Value-flow-based demand-driven pointer analysis for C and C++. *IEEE Transactions on Software Engineering*, 46(8):812–835, August 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Song:2023:SSG

[SXM23] Jiayang Song, Xuan Xie, and Lei Ma. `SIEGE`: A semantics-guided safety enhancement framework for AI-Enabled cyber-physical systems. *IEEE Transactions on Software Engineering*, 49(8): 4058–4080, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Song:2024:LMB

[SXS+24] Da Song, Xuan Xie, Jiayang Song, Derui Zhu, Yuheng

Huang, Felix Juefei-Xu, and Lei Ma. LUNA: a model-based universal analysis framework for large language models. *IEEE Transactions on Software Engineering*, 50(7):1921–1948, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Shi:2025:MSL

[SXYG25] Chaochen Shi, Yong Xiang, Jiangshan Yu, and Longxiang Gao. MM-SCS: Leveraging multimodal features to enhance smart contract code search. *IEEE Transactions on Software Engineering*, 51(2): 638–649, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Sohn:2021:EEF

[SY21] Joengju Sohn and Shin Yoo. Empirical evaluation of fault localisation using code and change metrics. *IEEE Transactions on Software Engineering*, 47(8):1605–1625, August 2021.

Sun:2023:RTS

[SYLL23] Weifeng Sun, Meng Yan, Zhongxin Liu, and David Lo. Robust test selection for deep neural networks. *IEEE Transactions on Software Engineering*, 49(12): 5250–5278, December 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Su:2024:HSA

[SYW+24] Zhuo Su, Zehong Yu, Dongyan Wang, Yixiao Yang, Rui Wang, Wanli Chang, Aiguo Cui, and Yu Jiang. HSTCG: State-aware Simulink model test case generation with heuristic strategy. *IEEE Transactions on Software Engineering*, 50(12):3088–3103, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Salako:2023:UAS

[SZ23] Kizito Salako and Xingyu Zhao. The unnecessity of assuming statistically independent tests in Bayesian software reliability assessments. *IEEE Transactions on Software Engineering*, 49(4):2829–2838, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Storey:2021:TTS

[SZB+21] Margaret-Anne Storey, Thomas Zimmermann, Christian Bird, Jacek Czerwonka, Brendan Murphy, and Eirini Kalliamvakou. Towards a theory of software developer job satisfaction and perceived productivity. *IEEE Transactions on Software Engineering*, 47 (10):2125–2142, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Temple:2021:EAM

[TAJ21] Paul Temple, Mathieu Acher, and Jean-Marc Jézéquel. Empirical assessment of multimorphic testing. *IEEE Transactions on Software Engineering*, 47(7):1511–1527, July 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tomasdottir:2020:AJL

[TAV20] Kristín Fjóla Tómasdóttir, Maurício Aniche, and Arie Van Deursen. The adoption of JavaScript linters in practice: A case study on ESLint. *IEEE Transactions on Software Engineering*, 46(8):863–891, August 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Traini:2023:DUM

[TC23] Luca Traini and Vittorio Cortellessa. DeLag: Using multi-objective optimization to enhance the detection of latency degradation patterns in service-based systems. *IEEE Transactions on Software Engineering*, 49(6): 3554–3580, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Torres:2023:RVC

[TCA+23] Adriano Torres, Pedro Costa, Luis Amaral, Jonata Pastro, Rodrigo Bonifácio, Marcelo d'Amorim, Owolabi Legunsen, Eric Bodden, and Edna Dias Canedo. Runtime verification of crypto APIs: an empirical study. *IEEE Transactions on Software Engineering*, 49(10): 4510–4525, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tan:2023:SAA

[TCS+23] Youshuai Tan, Jinfu Chen, Weiyi Shang, Tao Zhang, Sen Fang, Xiapu Luo, Zijie Chen, and Shuhao Qi. STRE: An automated approach to suggesting app developers when to stop reading reviews. *IEEE Transactions on Software Engineering*, 49 (8):4135–4151, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tufano:2024:CRA

[TDM+24] Rosalia Tufano, Ozren Dabi , Antonio Mastropaolo, Matteo Ciniselli, and Gabriele Bavota. Code review automation: Strengths and weaknesses of the state of the art. *IEEE Transactions on Software Engineering*, 50(2):338–353, February 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tosun:2021:IID

[TDV+21] Ayse Tosun, Oscar Dieste, Sira Vegas, Dietmar Pfahl, Kerli Rungi, and Natalia Ju-

risto. Investigating the impact of development task on external quality in test-driven development: An industry experiment. *IEEE Transactions on Software Engineering*, 47(11):2438–2456, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tizard:2023:SRE

[TDWB23] James Tizard, Peter Devine, Hechen Wang, and Kelly Blincoe. A software requirements ecosystem: Linking forum, issue tracker, and FAQs for requirements management. *IEEE Transactions on Software Engineering*, 49(4):2381–2393, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tushev:2022:SLR

[TEM22] Miroslav Tushev, Fahimeh Ebrahimi, and Anas Mahmoud. A systematic literature review of anti-discrimination design strategies in the digital sharing economy. *IEEE Transactions on Software Engineering*, 48(12):5148–5157, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Torkar:2022:MAA

[TFF+22] Richard Torkar, Carlo A. Furia, Robert Feldt, Francisco Gomes de Oliveira Neto, Lucas Gren, Per Lenberg, and Neil A. Ernst. A method to assess and argue for practical significance in software engineering. *IEEE Transactions on Software Engineering*, 48(6):2053–2065, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Trinkenreich:2022:PGE

[TGW+22] Bianca Trinkenreich, Mariam Guizani, Igor Wiese, Tayana Conte, Marco Gerosa, Anita Sarma, and Igor Steinmacher. Pots of gold at the end of the rainbow: What is success for open source contributors? *IEEE Transactions on Software Engineering*, 48(10): 3940–3953, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Thongtanunam:2021:RDT

[TH21] Patanamon Thongtanunam and Ahmed E. Hassan. Review dynamics and their impact on software quality. *IEEE Transactions on Software Engineering*, 47(12): 2698–2712, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Turker:2023:IAD

[THBEF23] Uraz Cengiz Türker, Robert M. Hierons, Gerassimos Barlas, and Khaled El-Fakih. Incomplete adaptive distin-

guishing sequences for non-deterministic FSMs. *IEEE Transactions on Software Engineering*, 49(9):4371–4389, September 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Turker:2024:AFS

[THEF+24] Uraz Cengiz Türker, Robert M. Hierons, Khaled El-Fakih, Mohammad Reza Mousavi, and Ivan Y. Tyukin. Accelerating finite state machine-based testing using reinforcement learning. *IEEE Transactions on Software Engineering*, 50 (3):574–597, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tantithamthavorn:2020:ICR

[THM20] C. Tantithamthavorn, A. E. Hassan, and K. Matsumoto. The impact of class rebalancing techniques on the performance and interpretation of defect prediction models. *IEEE Transactions on Software Engineering*, 46(11): 1200–1219, November 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Teymourian:2022:FCA

[TII22] Navid Teymourian, Habib Izadkhah, and Ayaz Isazadeh. A fast clustering algorithm for modularization of large-scale software systems. *IEEE Transactions on Software Engineering*, 48(4):1451–1462, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tu:2024:CMS

[TJH+24] Haoxin Tu, Lingxiao Jiang, Jiaqi Hong, Xuhua Ding, and He Jiang. Concretely mapped symbolic memory locations for memory error detection. *IEEE Transactions on Software Engineering*, 50(7):1747–1767, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tang:2022:DCW

[TJZ+22] Yixuan Tang, He Jiang, Zhide Zhou, Xiaochen Li, Zhilei Ren, and Weiqiang Kong. Detecting compiler warning defects via diversity-guided program mutation. *IEEE Transactions on Software Engineering*, 48(11): 4411–4432, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tsantalis:2022:PR

[TKD22] Nikolaos Tsantalis, Ameya Ketkar, and Danny Dig. `RefactoringMiner 2.0`. *IEEE Transactions on Software Engineering*, 48(3):930–950, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tamburri:2023:RBO

[TKF23] Damian A. Tamburri, Rick Kazman, and Hamed Fahimi. On the relationship between organizational structure patterns and architecture in agile teams. *IEEE Transactions on Software Engineering*, 49(1): 325–347, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

TerBeek:2020:FQM

[TLLV20] M. H. Ter Beek, A. Legay, A. L. Lafuente, and A. Vandin. A framework for quantitative modeling and analysis of highly (re)configurable systems. *IEEE Transactions on Software Engineering*, 46(3): 321–345, March 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tong:2021:KSE

[TLW21] Haonan Tong, Bin Liu, and Shihai Wang. Kernel spectral embedding transfer ensemble for heterogeneous defect prediction. *IEEE Transactions on Software Engineering*, 47(9): 1886–1906, September 2021.

Tang:2024:CVS

[TLZL24] Yutian Tang, Zhijie Liu, Zhichao Zhou, and Xiapu Luo. ChatGPT vs SBST: a comparative assessment of unit test suite generation. *IEEE Transactions on Software Engineering*, 50(6):1340–1359, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tsoukalas:2024:LGE

[TMA+24] Dimitrios Tsoukalas, Nikolaos Mittas, Elvira-Maria Arvanitou, Apostolos Ampatzoglou, Alexander Chatzigeorgiou, and Dionysios Kehagias. Local and global explainability for technical debt identification. *IEEE Transactions on Software Engineering*, 50 (8):2110–2123, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tiwari:2024:MPB

[TMB24] Deepika Tiwari, Martin Monperrus, and Benoit Baudry. Mimicking production behavior with generated mocks. *IEEE Transactions on Software Engineering*, 50(11): 2921–2946, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tsoukalas:2022:MLT

[TMC+22] Dimitrios Tsoukalas, Nikolaos Mittas, Alexander Chatzigeorgiou, Dionysios Kehagias, Apostolos Ampatzoglou, Theodoros Amanatidis, and Lefteris Angelis. Machine learning for technical debt identification. *IEEE Transactions on Software Engineering*, 48(12):4892–4906, December 2022. CODEN IESEDJ. ISSN

0098-5589 (print), 1939-3520 (electronic).

Tabassum:2023:CPO

[TMF23] Sadia Tabassum, Leandro L. Minku, and Danyi Feng. Cross-project online just-in-time software defect prediction. *IEEE Transactions on Software Engineering*, 49(1): 268–287, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tawosi:2023:AEE

[TMS23] Vali Tawosi, Rebecca Moussa, and Federica Sarro. Agile effort estimation: Have we solved the problem yet? Insights from a replication study. *IEEE Transactions on Software Engineering*, 49(4): 2677–2697, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tang:2024:EBI

[TNHB24] Lingxiao Tang, Chao Ni, Qiao Huang, and Lingfeng Bao. Enhancing bug-inducing commit identification: a fine-grained semantic analysis approach. *IEEE Transactions on Software Engineering*, 50(11): 3037–3052, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Trubiani:2023:ADS

[TPBF23] Catia Trubiani, Riccardo Pinciroli, Andrea Biaggi, and Francesca Arcelli Fontana. Automated detection of software performance antipatterns in Java-based applications. *IEEE Transactions on Software Engineering*, 49(4): 2873–2891, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tamburri:2021:ECS

[TPK21] D. A. Tamburri, F. Palomba, and R. Kazman. Exploring community smells in open-source: an automated approach. *IEEE Transactions on Software Engineering*, 47 (3):630–652, March 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Thome:2020:IAE

[TSBB20] J. Thomé, L. K. Shar, D. Bianculli, and L. Briand. An integrated approach for effective injection vulnerability analysis of Web applications through security slicing and hybrid constraint solving. *IEEE Transactions on Software Engineering*, 46(2):163–195, February 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tawosi:2022:MOS

[TSPH22] Vali Tawosi, Federica Sarro, Alessio Petrozziello, and Mark Harman. Multi-objective software effort estimation: a replication study. *IEEE Transactions on Software Engineering*, 48(8):3185–3205, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tei:2023:TSM

[TTO23] Kenji Tei, Yasuyuki Tahara, and Akihiko Ohsuga. Towards scalable model checking of reflective systems via labeled transition systems. *IEEE Transactions on Software Engineering*, 49(3):1299–1322, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tang:2022:SSA

[TWZ+22] Yutian Tang, Haoyu Wang, Xian Zhan, Xiapu Luo, Yajin Zhou, Hao Zhou, Qiben Yan, Yulei Sui, and Jacky Keung. A systematical study on application performance management libraries for apps. *IEEE Transactions on Software Engineering*, 48(8):3044–3065, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tian:2024:ICI

[TYL+24] Xiangbo Tian, Shi Ying, Tiangang Li, Mengting Yuan, Ruijin Wang, Yishi Zhao, and Jianga Shang. iTCRL: Causal-intervention-based trace contrastive representation learning for microservice systems. *IEEE Transactions on Software Engineering*, 50(10): 2583–2601, October 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tu:2022:BDL

[TYM22] Huy Tu, Zhe Yu, and Tim Menzies. Better data labelling with EMBLEM (and how that impacts defect prediction). *IEEE Transactions on Software Engineering*, 48 (1):278–294, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tu:2024:ICB

[TZJ+24] Haoxin Tu, Zhide Zhou, He Jiang, Imam Nur Bani Yusuf, Yuxian Li, and Lingxiao Jiang. Isolating compiler bugs by generating effective witness programs with large language models. *IEEE Transactions on Software Engineering*, 50(7):1768–1788, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tang:2022:PXT

[TZL+22] Yutian Tang, Hao Zhou, Xiapu Luo, Ting Chen, Haoyu Wang, Zhou Xu, and Yan Cai. `XDebloat`: Towards au-

tomated feature-oriented app debloating. *IEEE Transactions on Software Engineering*, 48(11):4501–4520, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tong:2024:MMS

[TZL+24] Haonan Tong, Dalin Zhang, Jiqiang Liu, Weiwei Xing, Lingyun Lu, Wei Lu, and Yumei Wu. MASTER: Multi-source transfer weighted ensemble learning for multiple sources cross-project defect prediction. *IEEE Transactions on Software Engineering*, 50(5):1281–1305, May 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tang:2025:DCE

[TZL+25] Yixuan Tang, Jingxuan Zhang, Xiaochen Li, Zhiqiu Huang, and He Jiang. Detecting compiler error recovery defects via program mutation exploration. *IEEE Transactions on Software Engineering*, 51(2): 389–412, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Tan:2023:UME

[TZZ23] Xin Tan, Minghui Zhou, and Li Zhang. Understanding mentors engagement in OSS communities via Google Summer of Code. *IEEE Transactions on Software Engineering*, 49(5):3106–3130, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Uddin:2021:UHW

[UBGK21] Gias Uddin, Olga Baysal, Latifa Guerrouj, and Foutse Khomh. Understanding how and why developers seek and analyze API-related opinions. *IEEE Transactions on Software Engineering*, 47(4): 694–735, April 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Udeshi:2021:GBD

[UC21] Sakshi Udeshi and Sudipta Chattopadhyay. Grammar based directed testing of machine learning systems. *IEEE Transactions on Software Engineering*, 47(11): 2487–2503, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Uchitel:2024:SSE

[UCD+24] Sebastian Uchitel, Marsha Chechik, Massimiliano Di Penta, Bram Adams, Nazareno Aguirre, Gabriele Bavota, Domenico Bianculli, Kelly Blincoe, Ana Cavalcanti, Yvonne Dittrich, Filomena Ferrucci, Rashina Hoda, LiGuo Huang, David Lo, Michael R. Lyu, Lei Ma, Jonathan I. Maletic, Leonardo Mariani, Collin McMillan,

Tim Menzies, Martin Monperrus, Ana Moreno, Nachiappan Nagappan, Liliana Pasquale, Patrizio Pelliccione, Michael Pradel, Rahul Purandare, Sukyoung Ryu, Mehrdad Sabetzadeh, Alexander Serebrenik, Jun Sun, Kla Tantithamthavorn, Christoph Treude, Manuel Wimmer, Yingfei Xiong, Tao Yue, Andy Zaidman, Tao Zhang, and Hao Zhong. Scoping software engineering for AI: The TSE perspective. *IEEE Transactions on Software Engineering*, 50(11):2709–2711, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Uchitel:2024:DR

[Uch24] Sebastian Uchitel. Distinguished reviewers 2023. *IEEE Transactions on Software Engineering*, 50(3):359, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Uchitel:2025:YTS

[Uch25] Sebastian Uchitel. 50 years of *Transactions on Software Engineering*. *IEEE Transactions on Software Engineering*, 51 (3):663–665, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Uddin:2021:AMO

[UK21] G. Uddin and F. Khomh. Automatic mining of opinions expressed about APIs in Stack Overflow. *IEEE Transactions on Software Engineering*, 47 (3):522–559, March 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ullah:2022:BLD

[UO22] Sami Ullah and Heekuck Oh. BinDiffNN: Learning distributed representation of assembly for robust binary diffing against semantic differences. *IEEE Transactions on Software Engineering*, 48(9): 3442–3466, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

vanBeest:2023:CIR

[vBGC+23] Nick van Beest, Heerko Groefsema, Adrian Cryer, Guido Governatori, Silvano Colombo Tosatto, and Hannah Burke. Cross-instance regulatory compliance checking of business process event logs. *IEEE Transactions on Software Engineering*, 49(11):4917–4931, November 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Vierhauser:2021:ISC

[VBW+21] Michael Vierhauser, Sean Bayley, Jane Wyngaard, Wandi Xiong, Jinghui Cheng, Joshua Huseman, Robyn Lutz, and Jane Cleland-Huang. Interlocking safety cases for un-

manned autonomous systems in shared airspaces. *IEEE Transactions on Software Engineering*, 47(5):899–918, May 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Vilela:2020:SPR

[VCMG20] J. Vilela, J. Castro, L. E. G. Martins, and T. Gorschek. Safety practices in requirements engineering: The Uni-REPM safety module. *IEEE Transactions on Software Engineering*, 46(3):222–250, March 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Vigano:2023:DDM

[VCPB23] Enrico Viganò, Oscar Cornejo, Fabrizio Pastore, and Lionel C. Briand. Data-driven mutation analysis for cyber-physical systems. *IEEE Transactions on Software Engineering*, 49(4):2182–2201, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Valero:2022:CAC

[VDBP+22] Valentín Valero, Gregorio Díaz, Juan Boubeta-Puig, Hermenegilda Macià, and Enrique Brazález. A compositional approach for complex event pattern modeling and transformation to colored Petri nets with black sequencing transitions. *IEEE Transactions on Software Engineering*, 48(7):2584–2605, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

vanderLinden:2022:ISF

[vdLWHR22] Dirk van der Linden, Emma Williams, Joseph Hallett, and Awais Rashid. The impact of surface features on choice of (in)Secure answers by Stackoverflow readers. *IEEE Transactions on Software Engineering*, 48(2):364–376, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

vonderMosel:2023:VPT

[vdMTH23] Julian von der Mosel, Alexander Trautsch, and Steffen Herbold. On the validity of pretrained transformers for natural language processing in the software engineering domain. *IEEE Transactions on Software Engineering*, 49(4):1487–1507, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Viviani:2021:LLD

[VFX+21] Giovanni Viviani, Michalis Famelis, Xin Xia, Calahan Janik-Jones, and Gail C. Murphy. Locating latent design information in developer discussions: a study on pull requests. *IEEE Transactions on Software Engineering*, 47(7):1402–1413, July 2021. CO-

DEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Vale:2022:CRM

[VHFA22] Gustavo Vale, Claus Hunsen, Eduardo Figueiredo, and Sven Apel. Challenges of resolving merge conflicts: a mining and survey study. *IEEE Transactions on Software Engineering*, 48(12):4964–4985, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Vysali:2022:QCM

[VMA22] Shivashree Vysali, Shane McIntosh, and Bram Adams. Quantifying, characterizing, and mitigating flakily covered program elements. *IEEE Transactions on Software Engineering*, 48(3):1018–1029, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Viggiato:2023:IST

[VPBB23] Markos Viggiato, Dale Paas, Chris Buzon, and Cor-Paul Bezemer. Identifying similar test cases that are specified in natural language. *IEEE Transactions on Software Engineering*, 49(3):1027–1043, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Verwijs:2024:DES

[VR24] Christiaan Verwijs and Daniel Russo. The double-edged sword of diversity: How diversity, conflict, and psychological safety impact software teams. *IEEE Transactions on Software Engineering*, 50(1): 141–157, January 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Verdi:2022:ESC

[VSA+22] Morteza Verdi, Ashkan Sami, Jafar Akhondali, Foutse Khomh, Gias Uddin, and Alireza Karami Motlagh. An empirical study of C++ vulnerabilities in crowd-sourced code examples. *IEEE Transactions on Software Engineering*, 48(5): 1497–1514, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Veizaga:2024:ASD

[VSB24] Alvaro Veizaga, Seung Yeob Shin, and Lionel C. Briand. Automated smell detection and recommendation in natural language requirements. *IEEE Transactions on Software Engineering*, 50(4):695–720, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

vonStein:2023:DAT

[vSSE23] Meriel von Stein, David Shriver, and Sebastian El-

baum. DeepManeuver: Adversarial test generation for trajectory manipulation of autonomous vehicles. *IEEE Transactions on Software Engineering*, 49(10):4496–4509, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Weeraddana:2024:CTB

[WAM24] Nimmi Weeraddana, Mahmoud Alfadel, and Shane McIntosh. Characterizing timeout builds in continuous integration. *IEEE Transactions on Software Engineering*, 50(6):1450–1463, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2024:QAO

[WAYA24] Xinyi Wang, Shaukat Ali, Tao Yue, and Paolo Arcaini. Quantum approximate optimization algorithm for test case optimization. *IEEE Transactions on Software Engineering*, 50(12):3249–3264, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Winter:2023:HDD

[WBC+23] Emily Winter, David Bowes, Steve Counsell, Tracy Hall, Sæmundur Haraldsson, Vesna Nowack, and John Woodward. How do developers really feel about bug fixing? Directions for automatic program repair. *IEEE Transactions on Software Engineering*, 49(4):1823–1841, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2021:OLO

[WCG+21] Guanhua Wang, Sudipta Chattopadhyay, Ivan Gotovchits, Tulika Mitra, and Abhik Roychoudhury. `oo7`: Low-overhead defense against Spectre attacks via program analysis. *IEEE Transactions on Software Engineering*, 47(11):2504–2519, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2020:HDU

[WCH20] Shaowei Wang, Tse-Hsun Chen, and Ahmed E. Hassan. How do users revise answers on technical Q&A websites? A case study on Stack Overflow. *IEEE Transactions on Software Engineering*, 46(9):1024–1038, September 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wen:2021:HSB

[WCT+21] Ming Wen, Junjie Chen, Yongqiang Tian, Rongxin Wu, Dan Hao, Shi Han, and Shing-Chi Cheung. Historical spectrum based fault localization. *IEEE Transactions on Software Engineering*, 47(11):2348–2368, November 2021.

CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2024:ITD

[WCW+24] Yong Wang, Wenzhong Cui, Gai-Ge Wang, Jian Wang, and Dunwei Gong. Improving test data generation for MPI program path coverage with FERPSO-IMPR and surrogate-assisted models. *IEEE Transactions on Software Engineering*, 50(3): 495–511, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2022:DDS

[WCXG22] Han Wang, Chunyang Chen, Zhenchang Xing, and John Grundy. DiffTech: Differencing similar technologies from crowd-scale comparison discussions. *IEEE Transactions on Software Engineering*, 48 (7):2399–2416, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2025:USE

[WCZ+25] Zexu Wang, Jiachi Chen, Peilin Zheng, Yu Zhang, Weizhe Zhang, and Zibin Zheng. Unity is strength: Enhancing precision in reentrancy vulnerability detection of smart contract analysis tools. *IEEE Transactions on Software Engineering*, 51(1): 1–13, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2022:DSS

[WDNH22] Wentao Wang, Faryn Dumont, Nan Niu, and Glen Horton. Detecting software security vulnerabilities via requirements dependency analysis. *IEEE Transactions on Software Engineering*, 48(5): 1665–1675, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Weyuker:2025:IAF

[Wey25a] Elaine J. Weyuker. Impact of "An applicable family of data flow testing criteria". *IEEE Transactions on Software Engineering*, 51(3): 737–740, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Weyuker:2025:IES

[Wey25b] Elaine J. Weyuker. Impact of "Evaluating software complexity measures". *IEEE Transactions on Software Engineering*, 51(3):732–736, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2024:DYS

[WFL+24] Yin Wang, Ming Fan, Junfeng Liu, Junjie Tao, Wuxia Jin, Haijun Wang, Qi Xiong, and Ting Liu. Do as you

say: Consistency detection of data practice in program code and privacy policy in mini-app. *IEEE Transactions on Software Engineering*, 50(12): 3225–3248, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2024:JTT

[WGH+24] Haoye Wang, Zhipeng Gao, Xing Hu, David Lo, John Grundy, and Xinyu Wang. Just-in-time TODO-missed commits detection. *IEEE Transactions on Software Engineering*, 50(11):2732–2752, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2024:FCS

[WGL+24a] Shangwen Wang, Mingyang Geng, Bo Lin, Zhensu Sun, Ming Wen, Yepang Liu, Li Li, Tegawendé F. Bissyandé, and Xiaoguang Mao. Fusing code searchers. *IEEE Transactions on Software Engineering*, 50 (7):1852–1866, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wen:2024:LEL

[WGL+24b] Xin-Cheng Wen, Cuiyun Gao, Feng Luo, Haoyu Wang, Ge Li, and Qing Liao. LIVABLE: Exploring long-tailed classification of software vulnerability types. *IEEE Transactions on Software Engineering*, 50(6):1325–1339, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2022:ADV

[WGW+22] Yu Wang, Fengjuan Gao, Linzhang Wang, Tingting Yu, Jianhua Zhao, and Xuandong Li. Automatic detection, validation, and repair of race conditions in interrupt-driven embedded software. *IEEE Transactions on Software Engineering*, 48(1):346–363, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wen:2024:MPB

[WGY+24] Xin-Cheng Wen, Cuiyun Gao, Jiaxin Ye, Yichen Li, Zhihong Tian, Yan Jia, and Xuan Wang. Meta-path based attentional graph learning model for vulnerability detection. *IEEE Transactions on Software Engineering*, 50(3): 360–375, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Walkinshaw:2023:MSO

[WH23] Neil Walkinshaw and Robert M. Hierons. Modelling second-order uncertainty in state machines. *IEEE Transactions on Software Engineering*, 49(5): 3261–3276, May 2023. CODEN IESEDJ. ISSN 0098-

5589 (print), 1939-3520 (electronic).

Wang:2024:STL

[WHC+24] Junjie Wang, Yuchao Huang, Chunyang Chen, Zhe Liu, Song Wang, and Qing Wang. Software testing with large language models: Survey, landscape, and vision. *IEEE Transactions on Software Engineering*, 50(4):911–936, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2023:MDL

[WHG+23] Simin Wang, Liguo Huang, Amiao Gao, Jidong Ge, Tengfei Zhang, Haitao Feng, Ishna Satyarth, Ming Li, He Zhang, and Vincent Ng. Machine/deep learning for software engineering: a systematic literature review. *IEEE Transactions on Software Engineering*, 49(3):1188–1231, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wu:2025:PRM

[WHT+25] Rongxin Wu, Zhiling Huang, Zige Tian, Chengpeng Wang, and Xiangyu Zhang. PackHunter: Recovering missing packages for C/C++ projects. *IEEE Transactions on Software Engineering*, 51(1):206–219, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wei:2020:UDF

[WLC+20] L. Wei, Y. Liu, S.-C. Cheung, H. Huang, X. Lu, and X. Liu. Understanding and detecting fragmentation-induced compatibility issues for Android apps. *IEEE Transactions on Software Engineering*, 46(11):1176–1199, November 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2023:AAR

[WLGT23] Yihui Wang, Huaxiao Liu, Shanquan Gao, and Xiao Tang. Animation2API: API recommendation for the implementation of Android UI animations. *IEEE Transactions on Software Engineering*, 49(9):4411–4428, September 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Werner:2022:CMN

[WLL+22] Colin Werner, Ze Shi Li, Derek Lowlind, Omar Elazhary, Neil Ernst, and Daniela Damian. Continuously managing NFRs: Opportunities and challenges in practice. *IEEE Transactions on Software Engineering*, 48(7): 2629–2642, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Werder:2021:SDP

[WLMR21] Karl Werder, Ye Li, Alexander Maedche, and Balasubramaniam Ramesh. Software development process ambidexterity and project performance: a coordination cost-effectiveness view. *IEEE Transactions on Software Engineering*, 47(4): 836–849, April 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2020:DSF

[WLNT20] S. Wang, T. Liu, J. Nam, and L. Tan. Deep semantic feature learning for software defect prediction. *IEEE Transactions on Software Engineering*, 46(12):1267–1293, December 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2023:TSB

[WLT+23] Yibo Wang, Kai Li, Yuzhe Tang, Jiaqi Chen, Qi Zhang, Xiapu Luo, and Ting Chen. Towards saving blockchain fees via secure and cost-effective batching of smart-contract invocations. *IEEE Transactions on Software Engineering*, 49(4):2980–2995, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2021:ERA

[WLY+21] Haijun Wang, Yun Lin, Zijiang Yang, Jun Sun, Yang Liu, Jinsong Dong, Qinghua Zheng, and Ting Liu. Explaining regressions via alignment slicing and mending. *IEEE Transactions on Software Engineering*, 47(11): 2421–2437, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2023:EDB

[WMY+23] Huaijin Wang, Pingchuan Ma, Yuanyuan Yuan, Zhibo Liu, Shuai Wang, Qiyi Tang, Sen Nie, and Shi Wu. Enhancing DNN-based binary code function search with low-cost equivalence checking. *IEEE Transactions on Software Engineering*, 49(1):226–250, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Winter:2023:LTD

[WNB+23] Emily Winter, Vesna Nowack, David Bowes, Steve Counsell, Tracy Hall, Sæmundur Haraldsson, and John Woodward. Let's talk with developers, not about developers: a review of automatic program repair research. *IEEE Transactions on Software Engineering*, 49(1): 419–436, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wu:2020:ECC

[WNP+20] H. Wu, C. Nie, J. Petke, Y. Jia, and M. Harman.

An empirical comparison of combinatorial testing, random testing and adaptive random testing. *IEEE Transactions on Software Engineering*, 46 (3):302–320, March 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wu:2021:CAC

[WNP+21] Huayao Wu, Changhai Nie, Justyna Petke, Yue Jia, and Mark Harman. Comparative analysis of constraint handling techniques for constrained combinatorial testing. *IEEE Transactions on Software Engineering*, 47(11): 2549–2562, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2022:AGA

[WPGB22] Chunhui Wang, Fabrizio Pastore, Arda Goknil, and Lionel C. Briand. Automatic generation of acceptance test cases from use case specifications: an NLP-based approach. *IEEE Transactions on Software Engineering*, 48(2): 585–616, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2025:DDT

[WPL+25] Jiannan Wang, Hung Viet Pham, Qi Li, Lin Tan, Yu Guo, Adnan Aziz, and Erik Meijer. D3: Differential testing of distributed deep learning with model generation. *IEEE Transactions on Software Engineering*, 51(1): 38–52, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2023:BLM

[WPXM23] Chong Wang, Xin Peng, Zhenchang Xing, and Xiujie Meng. Beyond literal meaning: Uncover and explain implicit knowledge in code through wikipedia-based concept linking. *IEEE Transactions on Software Engineering*, 49(5): 3226–3240, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2023:PBP

[WSP+23] Ying Wang, Peng Sun, Lin Pei, Yue Yu, Chang Xu, Shing-Chi Cheung, Hai Yu, and Zhiliang Zhu. Plumber: Boosting the propagation of vulnerability fixes in the npm ecosystem. *IEEE Transactions on Software Engineering*, 49(5):3155–3181, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2021:AVD

[WSQJ21] J. Wang, J. Sun, S. Qin, and C. Jegourel. Automatically verifying discrete-time complex systems through learning, abstraction and refine-

ment. *IEEE Transactions on Software Engineering*, 47(1): 189–203, January 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2024:CCE

[WTC24] Xite Wang, Senping Tian, and Wei Cui. ContractCheck: Checking Ethereum smart contracts in fine-grained level. *IEEE Transactions on Software Engineering*, 50(7):1789–1806, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wattanakriengkrai:2022:PDL

[WTT+22] Supatsara Wattanakriengkrai, Patanamon Thongtanunam, Chakkrit Tantithamthavorn, Hideaki Hata, and Kenichi Matsumoto. Predicting defective lines using a model-agnostic technique. *IEEE Transactions on Software Engineering*, 48(5):1480–1496, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wagner:2022:CCC

[WW22] Stefan Wagner and Marvin Wyrich. Code comprehension confounders: a study of intelligence and personality. *IEEE Transactions on Software Engineering*, 48(12): 4789–4801, December 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wen:2020:HWD

[WWC20] M. Wen, R. Wu, and S.-C. Cheung. How well do change sequences predict defects? Sequence learning from software changes. *IEEE Transactions on Software Engineering*, 46(11):1155–1175, November 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2021:CCB

[WWC+21] Junjie Wang, Song Wang, Jianfeng Chen, Tim Menzies, Qiang Cui, Miao Xie, and Qing Wang. Characterizing crowds to better optimize worker recommendation in crowdsourced testing. *IEEE Transactions on Software Engineering*, 47(6): 1259–1276, June 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wattanakriengkrai:2023:GBC

[WWK+23] Supatsara Wattanakriengkrai, Dong Wang, Raula Gaikovina Kula, Christoph Treude, Patanamon Thongtanunam, Takashi Ishio, and Kenichi Matsumoto. Giving back: Contributions congruent to library dependency changes in a software ecosystem. *IEEE Transactions on Software Engineering*, 49(4):2566–2579, April 2023. CODEN IESEDJ.

ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2023:KSF

[WWP+23] Kun Wang, Jingyi Wang, Christopher M. Poskitt, Xiangxiang Chen, Jun Sun, and Peng Cheng. K-ST: a formal executable semantics of the structured text language for PLCs. *IEEE Transactions on Software Engineering*, 49 (10):4796–4813, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2022:WDC

[WWW+22] Ying Wang, Rongxin Wu, Chao Wang, Ming Wen, Yepang Liu, Shing-Chi Cheung, Hai Yu, Chang Xu, and Zhiliang Zhu. Will dependency conflicts affect my program's semantics? *IEEE Transactions on Software Engineering*, 48(7):2295–2316, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2023:RPI

[WWW+23] Ying Wang, Yibo Wang, Sinan Wang, Yepang Liu, Chang Xu, Shing-Chi Cheung, Hai Yu, and Zhiliang Zhu. Runtime permission issues in Android apps: Taxonomy, practices, and ways forward. *IEEE Transactions on Software Engineering*, 49(1):185–210, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2021:GAS

[WXG+21] H. Wang, C. Xu, B. Guo, X. Ma, and J. Lu. Generic adaptive scheduling for efficient context inconsistency detection. *IEEE Transactions on Software Engineering*, 47 (3):464–497, March 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wan:2020:PEC

[WXH+20] Z. Wan, X. Xia, A. E. Hassan, D. Lo, J. Yin, and X. Yang. Perceptions, expectations, and challenges in defect prediction. *IEEE Transactions on Software Engineering*, 46(11): 1241–1266, November 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wan:2021:WDP

[WXH21] Zhiyuan Wan, Xin Xia, and Ahmed E. Hassan. What do programmers discuss about blockchain? A case study on the use of balanced LDA and the reference architecture of a domain to capture online discussions about blockchain platforms across Stack Exchange communities. *IEEE Transactions on Software Engineering*, 47(7):1331–1349, July 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wen:2023:EIF

[WXL+23] Ming Wen, Zifan Xie, Kaixuan Luo, Xiao Chen, Yibiao Yang, and Hai Jin. Effective isolation of fault-correlated variables via statistical and mutation analysis. *IEEE Transactions on Software Engineering*, 49(4):2053–2068, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wan:2021:HDM

[WXLM21] Zhiyuan Wan, Xin Xia, David Lo, and Gail C. Murphy. How does machine learning change software development practices? *IEEE Transactions on Software Engineering*, 47(9):1857–1871, September 2021.

Wang:2023:IMA

[WXY+23a] Xiao Wang, Lu Xiao, Tingting Yu, Anne Woepse, and Sunny Wong. From inheritance to mockito: an automatic refactoring approach. *IEEE Transactions on Software Engineering*, 49(4):2791–2814, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wei:2023:ATA

[WXY+23b] Chenhao Wei, Lu Xiao, Tingting Yu, Xinyu Chen, Xiao Wang, Sunny Wong, and Abigail Clune. Automatically tagging the AAA pattern in unit test cases using machine learning models. *IEEE Transactions on Software Engineering*, 49(5):3305–3324, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2023:PTC

[WYG+23] Chaozheng Wang, Yuanhang Yang, Cuiyun Gao, Yun Peng, Hongyu Zhang, and Michael R. Lyu. Prompt tuning in code intelligence: an experimental evaluation. *IEEE Transactions on Software Engineering*, 49(11): 4869–4885, November 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wei:2024:TDG

[WYGL24] Changqing Wei, Xiangjuan Yao, Dunwei Gong, and Huai Liu. Test data generation for mutation testing based on Markov chain usage model and estimation of distribution algorithm. *IEEE Transactions on Software Engineering*, 50 (3):551–573, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wu:2023:EFI

[WYN+23] Huayao Wu, Senyao Yu, Xintao Niu, Changhai Nie, Yu Pei, Qiang He, and Yun Yang. Enhancing fault injection testing of service systems via fault-tolerance bottleneck. *IEEE Transactions on Software Engineering*, 49

(8):4097–4114, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2022:CAP

[WYW+22] Junjie Wang, Ye Yang, Song Wang, Chunyang Chen, Dandan Wang, and Qing Wang. Context-aware personalized crowdtesting task recommendation. *IEEE Transactions on Software Engineering*, 48 (8):3131–3144, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Warnett:2024:UMS

[WZ24] Stephen John Warnett and Uwe Zdun. On the understandability of MLOps system architectures. *IEEE Transactions on Software Engineering*, 50(5):1015–1039, May 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2022:RLG

[WZS+22] Wenhua Wang, Yuqun Zhang, Yulei Sui, Yao Wan, Zhou Zhao, Jian Wu, Philip S. Yu, and Guandong Xu. Reinforcement-learning-guided source code summarization using hierarchical attention. *IEEE Transactions on Software Engineering*, 48(1):102–119, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Wang:2023:UBC

[WZS+23] Yang Wang, Peng Zhang, Maolin Sun, Zeyu Lu, Yibiao Yang, Yutian Tang, Junyan Qian, Zhi Li, and Yuming Zhou. Uncovering bugs in code coverage profilers via control flow constraint solving. *IEEE Transactions on Software Engineering*, 49(11): 4964–4987, November 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic). See corrections [WZS+24].

Wang:2024:CUB

[WZS+24] Yang Wang, Peng Zhang, Maolin Sun, Zeyu Lu, Yibiao Yang, Yutian Tang, Junyan Qian, Zhi Li, and Yuming Zhou. Corrections to uncovering bugs in code coverage profilers via control flow constraint solving. *IEEE Transactions on Software Engineering*, 50(1):158, January 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic). See [WZS+23].

Wu:2022:DQM

[WZXL22] Xiaoxue Wu, Wei Zheng, Xin Xia, and David Lo. Data quality matters: a case study on data label correctness for security bug report prediction. *IEEE Transactions on Software Engineering*, 48(7): 2541–2556, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xiao:2022:DLP

[XCK+22] Lu Xiao, Yuanfang Cai, Rick Kazman, Ran Mo, and Qiong Feng. Detecting the locations and predicting the maintenance costs of compound architectural debts. *IEEE Transactions on Software Engineering*, 48(9):3686–3715, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xu:2024:MUI

[XCM24] Xiaoyan Xu, Filipe R. Cogo, and Shane McIntosh. Mitigating the uncertainty and imprecision of log-based code coverage without requiring additional logging statements. *IEEE Transactions on Software Engineering*, 50(9):2350–2362, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xu:2022:RRF

[XCP+22] Tongtong Xu, Liushan Chen, Yu Pei, Tian Zhang, Minxue Pan, and Carlo A. Furia. Restore: Retrospective fault localization enhancing automated program repair. *IEEE Transactions on Software Engineering*, 48(1):309–326, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xu:2024:CCI

[XGW+24] Zhengkang Xu, Shikai Guo, Yumiao Wang, Rong Chen, Hui Li, Xiaochen Li, and He Jiang. Code comment inconsistency detection based on confidence learning. *IEEE Transactions on Software Engineering*, 50(3): 598–617, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xiang:2022:LNS

[XHL+22] Yi Xiang, Han Huang, Miqing Li, Sizhe Li, and Xiaowei Yang. Looking for novelty in search-based software product line testing. *IEEE Transactions on Software Engineering*, 48(7):2317–2338, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xu:2022:PLD

[XHS+22] Bowen Xu, Thong Hoang, Abhishek Sharma, Chengran Yang, Xin Xia, and David Lo. Post2Vec: Learning distributed representations of Stack Overflow posts. *IEEE Transactions on Software Engineering*, 48(9):3423–3441, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xian:2024:TCL

[XHT+24] Zixiang Xian, Rubing Huang,

Dave Towey, Chunrong Fang, and Zhenyu Chen. TransformCode: a contrastive learning framework for code embedding via subtree transformation. *IEEE Transactions on Software Engineering*, 50(6): 1600–1619, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xia:2024:RLF

[XLC+24a] Yuanjie Xia, Lizhi Liao, Jinfu Chen, Heng Li, and Weiyi Shang. Reducing the length of field-replay based load testing. *IEEE Transactions on Software Engineering*, 50(8): 1967–1983, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xie:2024:MTI

[XLC24b] Xiaoyuan Xie, Xingpeng Li, and Songqiang Chen. Metamorphic testing of image captioning systems via image-level reduction. *IEEE Transactions on Software Engineering*, 50(11):2962–2982, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xie:2024:TMP

[XLY+24] Huan Xie, Yan Lei, Meng Yan, Shanshan Li, Xiaoguang Mao, Yue Yu, and David Lo. Towards more precise coincidental correctness detection with deep semantic learning. *IEEE Transactions on Software Engineering*, 50(12): 3265–3289, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xiao:2023:SNN

[XSQ+23] Ya Xiao, Wenjia Song, Jingyuan Qi, Bimal Viswanath, Patrick McDaniel, and Danfeng Yao. Specializing neural networks for cryptographic code completion applications. *IEEE Transactions on Software Engineering*, 49(6):3524–3535, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xia:2022:SMO

[XSSM22] Tianpei Xia, Rui Shu, Xipeng Shen, and Tim Menzies. Sequential model optimization for software effort estimation. *IEEE Transactions on Software Engineering*, 48(6): 1994–2009, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xiao:2022:CMS

[XWM+22] Tao Xiao, Dong Wang, Shane McIntosh, Hideaki Hata, Raula Gaikovina Kula, Takashi Ishio, and Kenichi Matsumoto. Characterizing and mitigating self-admitted technical debt in build systems. *IEEE Transactions on*

Software Engineering, 48(10): 4214–4228, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xue:2024:ACM

[XWY+24] Pengyu Xue, Linhao Wu, Zhongxing Yu, Zhi Jin, Zhen Yang, Xinyi Li, Zhenyu Yang, and Yue Tan. Automated commit message generation with large language models: an empirical study and beyond. *IEEE Transactions on Software Engineering*, 50(12): 3208–3224, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xue:2019:ASC

[XXCL19] Y. Xue, Z. Xu, M. Chandramohan, and Y. Liu. Accurate and scalable cross-architecture cross-OS binary code search with emulation. *IEEE Transactions on Software Engineering*, 45(11): 1125–1149, November 2019. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic). See author affiliation correction [XXCL21].

Xue:2021:EAS

[XXCL21] Yinxing Xue, Zhengzi Xu, Mahinthan Chandramohan, and Yang Liu. Erratum to Accurate and Scalable Cross-Architecture Cross-OS Binary Code Search With Emulation. *IEEE Transactions on Software Engineering*, 47 (5):1088, May 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic). See [XXCL19].

Xu:2024:PPT

[XYAA24] Qinghua Xu, Tao Yue, Shaukat Ali, and Maite Arratibel. Pretrain, prompt, and transfer: Evolving digital twins for time-to-event analysis in cyber-physical systems. *IEEE Transactions on Software Engineering*, 50(6):1464–1477, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xie:2022:DMR

[XYWH22] Xinqiang Xie, Xiaochun Yang, Bin Wang, and Qiang He. DevRec: Multi-relationship embedded software developer recommendation. *IEEE Transactions on Software Engineering*, 48(11):4357–4379, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xiao:2024:APV

[XYWX24] Yuan-An Xiao, Chenyang Yang, Bo Wang, and Yingfei Xiong. Accelerating patch validation for program repair with interception-based execution scheduling. *IEEE Transactions on Software Engineering*, 50(3):618–635, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xue:2022:PPA

[XZL+22] Lei Xue, Hao Zhou, Xiapu Luo, Le Yu, Dinghao Wu, Yajin Zhou, and Xiaobo Ma. `PackerGrind`: an adaptive unpacking system for Android apps. *IEEE Transactions on Software Engineering*, 48(2): 551–570, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Xu:2023:PPP

[XZY+23] Xi Xu, Qinghua Zheng, Zheng Yan, Ming Fan, Ang Jia, Zhaohui Zhou, Haijun Wang, and Ting Liu. PatchDiscovery: Patch presence test for identifying binary vulnerabilities based on key basic blocks. *IEEE Transactions on Software Engineering*, 49(12): 5279–5294, December 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yuan:2020:AAR

[YB20] Y. Yuan and W. Banzhaf. ARJA: Automated repair of Java programs via multi-objective genetic programming. *IEEE Transactions on Software Engineering*, 46(10): 1040–1067, October 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yaraghi:2023:SAT

[YBKB23] Ahmadreza Saboor Yaraghi, Mojtaba Bagherzadeh, Nafiseh Kahani, and Lionel C. Briand. Scalable and accurate test case prioritization in continuous integration contexts. *IEEE Transactions on Software Engineering*, 49(4):1615–1639, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yu:2021:CUE

[YBSM21] Zhongxing Yu, Chenggang Bai, Lionel Seinturier, and Martin Monperrus. Characterizing the usage, evolution and impact of Java annotations in practice. *IEEE Transactions on Software Engineering*, 47(5):969–986, May 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yu:2024:FHA

[YCM24] Zhe Yu, Joymallya Chakraborty, and Tim Menzies. FairBalance: How to achieve equalized odds with data preprocessing. *IEEE Transactions on Software Engineering*, 50(9):2294–2312, September 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yin:2020:SCA

[YDLW20] Liangze Yin, Wei Dong, Wanwei Liu, and Ji Wang. On scheduling constraint abstraction for multi-threaded program verification. *IEEE Transactions on Software Engineering*, 46(5):549–565, May

2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yu:2024:PAS

[YFD+24] Shengcheng Yu, Chunrong Fang, Mingzhe Du, Zimin Ding, Zhenyu Chen, and Zhendong Su. Practical, automated scenario-based mobile app testing. *IEEE Transactions on Software Engineering*, 50(7):1949–1966, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yang:2022:CTE

[YFL+22] Jia Yang, Cai Fu, Xiao-Yang Liu, Heng Yin, and Pan Zhou. Codee: a tensor embedding scheme for binary code search. *IEEE Transactions on Software Engineering*, 48(7): 2224–2244, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yu:2022:ISA

[YFTM22] Zhe Yu, Fahmid Morshed Fahid, Huy Tu, and Tim Menzies. Identifying self-admitted technical debts with jitterbug: a two-step approach. *IEEE Transactions on Software Engineering*, 48 (5):1676–1691, May 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yu:2023:MAC

[YFZ+23] Shengcheng Yu, Chunrong Fang, Quanjun Zhang, Zhihao Cao, Yexiao Yun, Zhenfei Cao, Kai Mei, and Zhenyu Chen. Mobile app crowdsourced test report consistency detection via deep image-and-text fusion understanding. *IEEE Transactions on Software Engineering*, 49(8):4115–4134, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yin:2025:LLD

[YGL+25] Shouyu Yin, Shikai Guo, Hui Li, Chenchen Li, Rong Chen, Xiaochen Li, and He Jiang. Line-level defect prediction by capturing code contexts with graph convolutional networks. *IEEE Transactions on Software Engineering*, 51(1):172–191, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Ye:2022:ACO

[YGM+22] He Ye, Jian Gu, Matias Martinez, Thomas Durieux, and Martin Monperrus. Automated classification of overfitting patches with statically extracted code features. *IEEE Transactions on Software Engineering*, 48(8):2920–2938, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yang:2024:FLS

[YHG+24] Yanming Yang, Xing Hu, Zhipeng Gao, Jinfu Chen, Chao Ni, Xin Xia, and David Lo. Federated learning for software engineering: a case study of code clone detection and defect prediction. *IEEE Transactions on Software Engineering*, 50(2):296–321, February 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yu:2020:CDT

[YHW20] Tingting Yu, Zunchen Huang, and Chao Wang. ConTesa: Directed test suite augmentation for concurrent software. *IEEE Transactions on Software Engineering*, 46(4): 405–419, April 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yedida:2023:HFA

[YKT+23] Rahul Yedida, Hong Jin Kang, Huy Tu, Xueqi Yang, David Lo, and Tim Menzies. How to find actionable static analysis warnings: a case study with FindBugs. *IEEE Transactions on Software Engineering*, 49(4):2856–2872, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yamagata:2021:FCP

[YLA+21] Yoriyuki Yamagata, Shuang Liu, Takumi Akazaki, Yihai Duan, and Jianye Hao. Falsification of cyber-physical systems using deep reinforcement learning. *IEEE Transactions on Software Engineering*, 47(12):2823–2840, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yu:2021:PTA

[YLC+21] L. Yu, X. Luo, J. Chen, H. Zhou, T. Zhang, H. Chang, and H. K. N. Leung. PPChecker: Towards accessing the trustworthiness of Android apps privacy policies. *IEEE Transactions on Software Engineering*, 47(2):221–242, February 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yu:2024:FFF

[YLH+24] Xiao Yu, Lei Liu, Xing Hu, Jacky Wai Keung, Jin Liu, and Xin Xia. Fight fire with fire: How much can we trust ChatGPT on source code-related tasks? *IEEE Transactions on Software Engineering*, 50(12):3435–3453, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yedida:2022:VOD

[YM22] Rahul Yedida and Tim Menzies. On the value of oversampling for deep learning in software defect prediction. *IEEE Transactions on Soft-*

ware Engineering, 48(8):3103–3116, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yandrapally:2023:FBT

[YM23] Rahul Krishna Yandrapally and Ali Mesbah. Fragment-based test generation for web apps. *IEEE Transactions on Software Engineering*, 49(3):1086–1101, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yu:2023:LRB

[YMC+23] Zhongxing Yu, Matias Martinez, Zimin Chen, Tegawendé F. Bissyandé, and Martin Monperrus. Learning the relation between code features and code transforms with structured prediction. *IEEE Transactions on Software Engineering*, 49(7):3872–3900, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yin:2024:MBE

[YNW24] Xin Yin, Chao Ni, and Shaohua Wang. Multitask-based evaluation of open-source LLM on software vulnerability. *IEEE Transactions on Software Engineering*, 50(11):3071–3087, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yang:2024:MLS

[YNWC24] Haoran Yang, Yu Nong, Shaowei Wang, and Haipeng Cai. Multi-language software development: Issues, challenges, and solutions. *IEEE Transactions on Software Engineering*, 50(3):512–533, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yuan:2024:PVD

[YPW24] Yuanyuan Yuan, Qi Pang, and Shuai Wang. Provably valid and diverse mutations of real-world media data for DNN testing. *IEEE Transactions on Software Engineering*, 50(5):1040–1064, May 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yao:2022:ISA

[YSSH22] Kundi Yao, Mohammed Sayagh, Weiyi Shang, and Ahmed E. Hassan. Improving state-of-the-art compression techniques for log management tools. *IEEE Transactions on Software Engineering*, 48(8):2748–2760, August 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yu:2021:IVI

[YTWM21] Zhe Yu, Christopher Theisen, Laurie Williams, and Tim Menzies. Improving vul-

nerability inspection efficiency using active learning. *IEEE Transactions on Software Engineering*, 47(11): 2401–2420, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yu:2023:TAL

[YWL+23] Le Yu, Haoyu Wang, Xiapu Luo, Tao Zhang, Kang Liu, Jiachi Chen, Hao Zhou, Yutian Tang, and Xusheng Xiao. Towards automatically localizing function errors in mobile apps with user reviews. *IEEE Transactions on Software Engineering*, 49(4): 1464–1486, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yue:2023:GSD

[YWR23] Yang Yue, Yi Wang, and David Redmiles. Off to a good start: Dynamic contribution patterns and technical success in an OSS newcomer's early career. *IEEE Transactions on Software Engineering*, 49(2):529–548, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yan:2022:JTD

[YXF+22] Meng Yan, Xin Xia, Yuanrui Fan, Ahmed E. Hassan, David Lo, and Shanping Li. Just-in-time defect identification and localization: a two-phase framework. *IEEE Transactions on Software Engineering*, 48(1):82–101, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yang:2024:SBA

[YXZ+24] Zhou Yang, Bowen Xu, Jie M. Zhang, Hong Jin Kang, Jieke Shi, Junda He, and David Lo. Stealthy backdoor attack for code models. *IEEE Transactions on Software Engineering*, 50(4):721–741, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yang:2024:MOS

[YYW24] Minghao Yang, Shunkun Yang, and W. Eric Wong. Multi-objective software defect prediction via multi-source uncertain information fusion and multi-task multi-view learning. *IEEE Transactions on Software Engineering*, 50(8):2054–2076, August 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yang:2024:CTN

[YZC+24] Guang Yang, Yu Zhou, Xiang Chen, Xiangyu Zhang, Terry Yue Zhuo, and Taolue Chen. Chain-of-thought in neural code generation: From and for lightweight language models. *IEEE Transactions on Software Engineering*, 50(9): 2437–2457, September 2024.

CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yao:2022:OGT

[YZP+22] Xiangjuan Yao, Gongjie Zhang, Feng Pan, Dunwei Gong, and Changqing Wei. Orderly generation of test data via sorting mutant branches based on their dominance degrees for weak mutation testing. *IEEE Transactions on Software Engineering*, 48(4):1169–1184, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Yang:2024:GMU

[YZW+24] Zhou Yang, Zhipeng Zhao, Chenyu Wang, Jieke Shi, Dongsun Kim, DongGyun Han, and David Lo. Gotcha! This model uses my code! Evaluating membership leakage risks in code models. *IEEE Transactions on Software Engineering*, 50(12): 3290–3306, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zolfagharian:2023:SBT

[ZAB+23] Amirhossein Zolfagharian, Manel Abdellatif, Lionel C. Briand, Mojtaba Bagherzadeh, and Ramesh S. A search-based testing approach for deep reinforcement learning agents. *IEEE Transactions on Software Engineering*, 49(7): 3715–3735, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zolfagharian:2025:SSM

[ZABS25] Amirhossein Zolfagharian, Manel Abdellatif, Lionel C. Briand, and Ramesh S. SMARLA: a safety monitoring approach for deep reinforcement learning agents. *IEEE Transactions on Software Engineering*, 51(1):82–105, January 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zozas:2023:FPC

[ZBA23] Ioannis Zozas, Stamatia Bibi, and Apostolos Ampatzoglou. Forecasting the principal of code technical debt in JavaScript applications. *IEEE Transactions on Software Engineering*, 49(4):2498–2512, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zeng:2025:QAS

[ZBD+25] Liangzhao Zeng, Boualem Benatallah, Marlon Dumas, Jayant Kalagnanam, and Anne H. H. Ngu. QoS-aware service composition: a retrospective. *IEEE Transactions on Software Engineering*, 51 (3):836–841, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2021:WCR

[ZCZ+21] Tao Zhang, Jiachi Chen, Xian Zhan, Xiapu Luo, David Lo, and He Jiang. Where2Change: Change request localization for app reviews. *IEEE Transactions on Software Engineering*, 47(11): 2590–2616, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2024:DVT

[ZFC+24] Fangyuan Zhang, Lingling Fan, Sen Chen, Miaoying Cai, Sihan Xu, and Lida Zhao. Does the vulnerability threaten our projects? Automated vulnerable API detection for third-party libraries. *IEEE Transactions on Software Engineering*, 50(11): 2906–2920, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2024:ABA

[ZFS+24] Quanjun Zhang, Chunrong Fang, Weisong Sun, Yan Liu, Tieke He, Xiaodong Hao, and Zhenyu Chen. APPT: Boosting automated patch correctness prediction via fine-tuning pre-trained models. *IEEE Transactions on Software Engineering*, 50(3):474–494, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:CML

[ZGZ+23] Weiwei Zhang, Shengjian Guo, Hongyu Zhang, Yulei Sui, Yinxing Xue, and Yun Xu. Challenging machine learning-based clone detectors via semantic-preserving code transformations. *IEEE Transactions on Software Engineering*, 49(5):3052–3070, May 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zeller:2025:SIF

[ZH25] Andreas Zeller and Ralf Hildebrandt. Simplifying and isolating failure-inducing input: a retrospective on delta debugging. *IEEE Transactions on Software Engineering*, 51 (3):820–824, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zamprogno:2023:DHL

[ZHHA23] Lucas Zamprogno, Braxton Hall, Reid Holmes, and Joanne M. Atlee. Dynamic human-in-the-loop assertion generation. *IEEE Transactions on Software Engineering*, 49(4):2337–2351, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2022:MLT

[ZHML22] Jie M. Zhang, Mark Harman, Lei Ma, and Yang Liu. Machine learning testing: Survey, landscapes and

horizons. *IEEE Transactions on Software Engineering*, 48 (1):1–36, January 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2022:PCI

[ZHX+22] Neng Zhang, Qiao Huang, Xin Xia, Ying Zou, David Lo, and Zhenchang Xing. `Chatbot4QR`: Interactive query refinement for technical question retrieval. *IEEE Transactions on Software Engineering*, 48(4):1185–1211, April 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2023:MMD

[ZHX+23] Yingnan Zhou, Xue Hu, Sihan Xu, Yan Jia, Yuhao Liu, Junyong Wang, Guangquan Xu, Wei Wang, Shaoying Liu, and Thar Baker. Multi-misconfiguration diagnosis via identifying correlated configuration parameters. *IEEE Transactions on Software Engineering*, 49(10): 4624–4638, October 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2021:EAD

[ZJR+21] Jingxuan Zhang, He Jiang, Zhilei Ren, Tao Zhang, and Zhiqiu Huang. Enriching API documentation with code samples and usage scenarios from crowd knowledge. *IEEE Transactions on Software Engineering*, 47(6):1299–1314, June 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhong:2023:NNG

[ZKR23] Ziyuan Zhong, Gail Kaiser, and Baishakhi Ray. Neural network guided evolutionary fuzzing for finding traffic violations of autonomous vehicles. *IEEE Transactions on Software Engineering*, 49(4): 1860–1875, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:ADJ

[ZKX+23] Ying Zhang, Md Mahir Asef Kabir, Ya Xiao, Danfeng Yao, and Na Meng. Automatic detection of Java cryptographic API misuses: Are we there yet? *IEEE Transactions on Software Engineering*, 49(1): 288–303, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:FFA

[ZLA+23] Zhenya Zhang, Deyun Lyu, Paolo Arcaini, Lei Ma, Ichiro Hasuo, and Jianjun Zhao. FalsifAI: Falsification of AI-Enabled hybrid control systems guided by time-aware coverage criteria. *IEEE Transactions on Software Engineering*, 49(4):1842–1859, April 2023. CODEN IESEDJ. ISSN

0098-5589 (print), 1939-3520 (electronic).

Zou:2020:HPP

[ZLC+20] Weiqin Zou, David Lo, Zhenyu Chen, Xin Xia, Yang Feng, and Baowen Xu. How practitioners perceive automated bug report management techniques. *IEEE Transactions on Software Engineering*, 46(8): 836–862, August 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2024:AEG

[ZLC+24a] Mengxi Zhang, Huaxiao Liu, Chunyang Chen, Guangyong Gao, Han Li, and Jian Zhao. AccessFixer: Enhancing GUI accessibility for low vision users with R-GCN model. *IEEE Transactions on Software Engineering*, 50(2):173–189, February 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhu:2024:CSS

[ZLC+24b] Jingyun Zhu, Kaixuan Li, Sen Chen, Lingling Fan, Junjie Wang, and Xiaofei Xie. A comprehensive study on static application security testing (SAST) tools for Android. *IEEE Transactions on Software Engineering*, 50(12): 3385–3402, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhan:2022:RTP

[ZLF+22] Xian Zhan, Tianming Liu, Lingling Fan, Li Li, Sen Chen, Xiapu Luo, and Yang Liu. Research on third-party libraries in Android apps: a taxonomy and systematic literature review. *IEEE Transactions on Software Engineering*, 48(10): 4181–4213, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:BEE

[ZLG+23] Jingxuan Zhang, Siyuan Liu, Lina Gong, Haoxiang Zhang, Zhiqiu Huang, and He Jiang. BEQAIN: an effective and efficient identifier normalization approach with BERT and the question answering system. *IEEE Transactions on Software Engineering*, 49(4): 2597–2620, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2021:SBR

[ZLH+21] Jie M. Zhang, Feng Li, Dan Hao, Meng Wang, Hao Tang, Lu Zhang, and Mark Harman. A study of bug resolution characteristics in popular programming languages. *IEEE Transactions on Software Engineering*, 47(12): 2684–2697, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:VDL

[ZLH+23] Junwei Zhang, Zhongxin Liu, Xing Hu, Xin Xia, and Shanping Li. Vulnerability detection by learning from syntax-based execution paths of code. *IEEE Transactions on Software Engineering*, 49(8):4196–4212, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhong:2024:DDD

[ZLH+24] Chenxing Zhong, Shanshan Li, Huang Huang, Xiaodong Liu, Zhikun Chen, Yi Zhang, and He Zhang. Domain-driven design for microservices: an evidence-based investigation. *IEEE Transactions on Software Engineering*, 50(6):1425–1449, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zou:2021:SCD

[ZLK+21] Weiqin Zou, David Lo, Pavneet Singh Kochhar, Xuan-Bach Dinh Le, Xin Xia, Yang Feng, Zhenyu Chen, and Baowen Xu. Smart contract development: Challenges and opportunities. *IEEE Transactions on Software Engineering*, 47(10):2084–2106, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2021:ESB

[ZLL+21] Mengshi Zhang, Yaoxian Li, Xia Li, Lingchao Chen, Yuqun Zhang, Lingming Zhang, and Sarfraz Khurshid. An empirical study of boosting spectrum-based fault localization via PageRank. *IEEE Transactions on Software Engineering*, 47(6):1089–1113, June 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhan:2022:SAA

[ZLL+22] Xian Zhan, Tianming Liu, Yepang Liu, Yang Liu, Li Li, Haoyu Wang, and Xiapu Luo. A systematic assessment on Android third-party library detection tools. *IEEE Transactions on Software Engineering*, 48(11): 4249–4273, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2022:PCP

[ZLM+22] Peng Zhang, Yanhui Li, Wanwangying Ma, Yibiao Yang, Lin Chen, Hongmin Lu, Yuming Zhou, and Baowen Xu. `CBUA`: A probabilistic, predictive, and practical approach for evaluating test suite effectiveness. *IEEE Transactions on Software Engineering*, 48(3):1067–1096, March 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:CAN

[ZLM+23] Zhuo Zhang, Yan Lei, Xiaoguang Mao, Meng Yan, Xin Xia, and David Lo. Context-aware neural fault localization. *IEEE Transactions on Software Engineering*, 49(7): 3939–3954, July 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:NRD

[ZLS+23] Guofu Zhang, Lei Li, Zhaopin Su, Zhisheng Shao, Miqing Li, Bin Li, and Xin Yao. New reliability-driven bounds for architecture-based multi-objective testing resource allocation. *IEEE Transactions on Software Engineering*, 49(4): 2513–2529, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhao:2023:PAM

[ZLW+23] Yanjie Zhao, Li Li, Haoyu Wang, Qiang He, and John Grundy. `APIMatchmaker`: Matching the right APIs for supporting the development of Android apps. *IEEE Transactions on Software Engineering*, 49(1):113–130, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zheng:2024:ESC

[ZLWC24] Wei Zheng, Lidan Lin, Xiaoxue Wu, and Xiang Chen. An empirical study on correlations between deep neural network fairness and neuron coverage criteria. *IEEE Transactions on Software Engineering*, 50(3):391–412, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zou:2021:ESF

[ZLX+21] D. Zou, J. Liang, Y. Xiong, M. D. Ernst, and L. Zhang. An empirical study of fault localization families and their combinations. *IEEE Transactions on Software Engineering*, 47(2):332–347, February 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:CCPa

[ZLXY23] Chunyong Zhang, Bin Liu, Yang Xin, and Liangwei Yao. CPVD: Cross project vulnerability detection based on graph attention network and domain adaptation. *IEEE Transactions on Software Engineering*, 49(8):4152–4168, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2024:HDD

[ZLY+24a] Tanghaoran Zhang, Yao Lu, Yue Yu, Xinjun Mao, Yang Zhang, and Yuxin Zhao. How do developers adapt code snippets to their contexts? An empirical study of context-

based code snippet adaptations. *IEEE Transactions on Software Engineering*, 50(11): 2712–2731, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2024:LGS

[ZLY+24b] Ziyi Zhou, Mingchen Li, Huiqun Yu, Guisheng Fan, Penghui Yang, and Zijie Huang. Learning to generate structured code summaries from hybrid code context. *IEEE Transactions on Software Engineering*, 50(10): 2512–2528, October 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2024:DCR

[ZLZ+24] Mengxi Zhang, Huaxiao Liu, Yuheng Zhou, Chunyang Chen, Pei Huang, and Jian Zhao. Don't confuse! Redrawing GUI navigation flow in mobile apps for visually impaired users. *IEEE Transactions on Software Engineering*, 50(12):3351–3368, December 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhong:2025:RMM

[ZLZ+25] Chenxing Zhong, Shanshan Li, He Zhang, Huang Huang, Lanxin Yang, and Yuanfang Cai. Refactoring microservices to microservices in support of evolutionary design. *IEEE Transactions on Software Engineering*, 51(2):484–502, February 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2021:CES

[ZMH+21] Long Zhang, Brice Morin, Philipp Haller, Benoit Baudry, and Martin Monperrus. A chaos engineering system for live analysis and falsification of exception-handling in the JVM. *IEEE Transactions on Software Engineering*, 47(11): 2534–2548, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2021:FAD

[ZPX+21] X. Zhou, X. Peng, T. Xie, J. Sun, C. Ji, W. Li, and D. Ding. Fault analysis and debugging of microservice systems: Industrial survey, benchmark system, and empirical study. *IEEE Transactions on Software Engineering*, 47(2):243–260, February 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2024:ACM

[ZQS+24] Yuxia Zhang, Zhiqing Qiu, Klaas-Jan Stol, Wenhui Zhu, Jiaxin Zhu, Yingchen Tian, and Hui Liu. Automatic commit message generation: a critical review and directions for future work. *IEEE Trans-*

actions on Software Engineering, 50(4):816–835, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2022:PCC

[ZRDD22] Pengcheng Zhang, Bin Ren, Hai Dong, and Qiyin Dai. `CAGFuzz`: Coverage-guided adversarial generative fuzzing testing for image-based deep learning systems. *IEEE Transactions on Software Engineering*, 48(11):4630–4646, November 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2024:SPB

[ZRL+24] Bing Zhang, Rong Ren, Jia Liu, Mingcai Jiang, Jiadong Ren, and Jingyue Li. SQLPsdem: a proxy-based mechanism towards detecting, locating and preventing second-order SQL injections. *IEEE Transactions on Software Engineering*, 50(7):1807–1826, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2021:URB

[ZSC+21] Yu Zhou, Yanqi Su, Taolue Chen, Zhiqiu Huang, Harald Gall, and Sebastiano Panichella. User review-based change file localization for mobile applications. *IEEE Transactions on Software Engineering*, 47(12): 2755–2770, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zheng:2024:DBL

[ZSC+24] Zibin Zheng, Jianzhong Su, Jiachi Chen, David Lo, Zhijie Zhong, and Mingxi Ye. DAppSCAN: Building large-scale datasets for smart contract weaknesses in DApp projects. *IEEE Transactions on Software Engineering*, 50(6):1360–1373, June 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2020:MRE

[ZSCT20] Z. Q. Zhou, L. Sun, T. Y. Chen, and D. Towey. Metamorphic relations for enhancing system understanding and use. *IEEE Transactions on Software Engineering*, 46(10): 1120–1154, October 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:DMA

[ZSM23] Weiyi Zhang, Zoran Salcic, and Avinash Malik. Designing, modeling and analysis of GALS software systems. *IEEE Transactions on Software Engineering*, 49(8): 3989–4003, August 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2023:SBA

[ZST+23] Yuan Zhou, Yang Sun, Yun Tang, Yuqi Chen, Jun Sun, Christopher M. Poskitt, Yang Liu, and Zijiang Yang. Specification-based autonomous driving system testing. *IEEE Transactions on Software Engineering*, 49(6):3391–3410, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:FCS

[ZTT+23] Xinhai Zhang, Jianbo Tao, Kaige Tan, Martin Törngren, José Manuel Gaspar Sánchez, Muhammad Rusyadi Ramli, Xin Tao, Magnus Gyllenhammar, Franz Wotawa, Naveen Mohan, Mihai Nica, and Hermann Felbinger. Finding critical scenarios for automated driving systems: a systematic mapping study. *IEEE Transactions on Software Engineering*, 49(3):991–1026, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2021:MRT

[ZTW21] Zhi Quan Zhou, T. H. Tse, and Matt Witheridge. Metamorphic robustness testing: Exposing hidden defects in citation statistics and journal impact factors. *IEEE Transactions on Software Engineering*, 47(6):1164–1183, June 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2021:SAB

[ZWB+21] Jiayuan Zhou, Shaowei Wang, Cor-Paul Bezemer, Ying Zou, and Ahmed E. Hassan. Studying the association between Bountysource bounties and the issue-addressing likelihood of GitHub issue reports. *IEEE Transactions on Software Engineering*, 47(12): 2919–2933, December 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2021:ESO

[ZWC+21] Haoxiang Zhang, Shaowei Wang, Tse-Hsun Chen, Ying Zou, and Ahmed E. Hassan. An empirical study of obsolete answers on Stack Overflow. *IEEE Transactions on Software Engineering*, 47(4): 850–862, April 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:CFR

[ZWC+23] Wuqi Zhang, Lili Wei, Shing-Chi Cheung, Yepang Liu, Shuqing Li, Lu Liu, and Michael R. Lyu. Combatting front-running in smart contracts: Attack mining, benchmark construction and vulnerability detector evaluation. *IEEE Transactions on Software Engineering*, 49(6): 3630–3646, June 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2021:RAS

[ZWCH21] Haoxiang Zhang, Shaowei Wang, Tse-Hsun Chen, and Ahmed E. Hassan. Reading answers on Stack Overflow: Not enough! *IEEE Transactions on Software Engineering*, 47(11):2520–2533, November 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zimmermann:2025:RMV

[ZWDZ25] Thomas Zimmermann, Peter Weißgerber, Stephan Diehl, and Andreas Zeller. A retrospective on mining version histories to guide software changes. *IEEE Transactions on Software Engineering*, 51 (3):842–847, March 2025. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhu:2024:SPW

[ZWH+24] Jie Zhu, Leye Wang, Xiao Han, Anmin Liu, and Tao Xie. Safety and performance, why not both? Bi-objective optimized model compression against heterogeneous attacks toward AI software deployment. *IEEE Transactions on Software Engineering*, 50(3): 376–390, March 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2022:SCC

[ZWL+22] Haoxiang Zhang, Shaowei Wang, Heng Li, Tse-Hsun Chen, and Ahmed E. Hassan. A study of C/C++ code weaknesses on Stack Overflow. *IEEE Transactions on Software Engineering*, 48(7): 2359–2375, July 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhao:2023:AHM

[ZWL+23a] Yingquan Zhao, Zan Wang, Shuang Liu, Jun Sun, Junjie Chen, and Xiang Chen. Achieving high MAP-coverage through pattern constraint reduction. *IEEE Transactions on Software Engineering*, 49(1):99–112, January 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2023:UTR

[ZWL+23b] Xu Zhou, Pengfei Wang, Chenyifan Liu, Tai Yue, Yingying Liu, Congxi Song, Kai Lu, Qidi Yin, and Xu Han. UltraFuzz: Towards resource-saving in distributed fuzzing. *IEEE Transactions on Software Engineering*, 49(4):2394–2412, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2024:SAA

[ZWLD24] Pengcheng Zhang, Ben Wang, Xiapu Luo, and Hai Dong. SCAnoGenerator: Automatic anomaly injection for Ethereum smart contracts.

IEEE Transactions on Software Engineering, 50(11): 2983–3006, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhong:2022:IBS

[ZWM22] Hao Zhong, Xiaoyin Wang, and Hong Mei. Inferring bug signatures to detect real bugs. *IEEE Transactions on Software Engineering*, 48(2):571–584, February 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2022:AAT

[ZWQR22] Junbin Zhang, Yingying Wang, Lina Qiu, and Julia Rubin. Analyzing Android taint analysis tools: FlowDroid, Amandroid, and DroidSafe. *IEEE Transactions on Software Engineering*, 48(10): 4014–4040, October 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2022:AFT

[ZWS+22] Peixin Zhang, Jingyi Wang, Jun Sun, Xinyu Wang, Guoliang Dong, Xingen Wang, Ting Dai, and Jin Song Dong. Automatic fairness testing of neural classifiers through adversarial sampling. *IEEE Transactions on Software Engineering*, 48(9):3593–3612, September 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhu:2024:BPA

[ZWS+24] Shunkai Zhu, Jingyi Wang, Jun Sun, Jie Yang, Xingwei Lin, Tianyi Wang, Liyi Zhang, and Peng Cheng. Better pay attention whilst fuzzing. *IEEE Transactions on Software Engineering*, 50(2):190–208, February 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:CCPb

[ZWX+23] Fan Zhang, Qianmei Wu, Bohan Xuan, Yuqi Chen, Wei Lin, Christopher M. Poskitt, Jun Sun, and Binbin Chen. Constructing cyber-physical system testing suites using active sensor fuzzing. *IEEE Transactions on Software Engineering*, 49(11):4829–4845, November 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2020:ADR

[ZWY+20] Yu Zhou, Changzhi Wang, Xin Yan, Taolue Chen, Sebastiano Panichella, and Harald Gall. Automatic detection and repair recommendation of directive defects in Java API documentation. *IEEE Transactions on Software Engineering*, 46(9):1004–1023, September 2020. CODEN IESEDJ.

ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhao:2023:LSE

[ZXB+23] Yutong Zhao, Lu Xiao, Andre B. Bondi, Bihuan Chen, and Yang Liu. A large-scale empirical study of real-life performance issues in open source projects. *IEEE Transactions on Software Engineering*, 49 (2):924–946, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2024:LLL

[ZXK+24] Xin Zhou, Bowen Xu, Kisub Kim, DongGyun Han, Hung Huu Nguyen, Thanh Le-Cong, Junda He, Bach Le, and David Lo. Leveraging large language model for automatic patch correctness assessment. *IEEE Transactions on Software Engineering*, 50(11): 2865–2883, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:DPR

[ZXL+23] Yao Zhang, Xiaofei Xie, Yi Li, Yun Lin, Sen Chen, Yang Liu, and Xiaohong Li. Demystifying performance regressions in string solvers. *IEEE Transactions on Software Engineering*, 49(3):947–961, March 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhao:2024:PAF

[ZXW24] Yutong Zhao, Lu Xiao, and Sunny Wong. A platform-agnostic framework for automatically identifying performance issue reports with heuristic linguistic patterns. *IEEE Transactions on Software Engineering*, 50(7):1704–1725, July 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2024:ARN

[ZXZ+24] Zejun Zhang, Zhenchang Xing, Dehai Zhao, Xiwei Xu, Liming Zhu, and Qinghua Lu. Automated refactoring of non-idiomatic Python code with Pythonic idioms. *IEEE Transactions on Software Engineering*, 50(11): 2827–2848, November 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2022:BAR

[ZYC+22] Yu Zhou, Xinying Yang, Taolue Chen, Zhiqiu Huang, Xiaoxing Ma, and Harald Gall. Boosting API recommendation with implicit feedback. *IEEE Transactions on Software Engineering*, 48(6): 2157–2172, June 2022. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2023:TRB

[ZYF+23] Ziyi Zhou, Huiqun Yu, Guisheng Fan, Zijie Huang, and Kang Yang. Towards retrieval-based neural code summarization: a meta-learning approach. *IEEE Transactions on Software Engineering*, 49(4):3008–3031, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:PRD

[ZYGR23] Xunhui Zhang, Yue Yu, Georgios Gousios, and Ayushi Rastogi. Pull request decisions explained: an empirical overview. *IEEE Transactions on Software Engineering*, 49(2):849–871, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:BSC

[ZYX+23] Pengcheng Zhang, Qifan Yu, Yan Xiao, Hai Dong, Xiapu Luo, Xiao Wang, and Meng Zhang. BiAn: Smart contract source code obfuscation. *IEEE Transactions on Software Engineering*, 49(9):4456–4476, September 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2020:TYD

[ZYZ+20] Xiaodong Zhang, Zijiang Yang, Qinghua Zheng, Yu Hao, Pei Liu, and Ting Liu. Tell you a definite answer: Whether your data is tainted during thread scheduling. *IEEE Transactions on Software Engineering*, 46(9):916–931, September 2020. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhan:2023:EDE

[ZYZY23] Dongyang Zhan, Xiangzhan Yu, Hongli Zhang, and Lin Ye. ErrHunter: Detecting error-handling bugs in the Linux kernel through systematic static analysis. *IEEE Transactions on Software Engineering*, 49(2):684–698, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:TAC

[ZZC+23] Xiaowei Zhang, Weiqin Zou, Lin Chen, Yanhui Li, and Yuming Zhou. Towards the analysis and completion of syntactic structure ellipsis for inline comments. *IEEE Transactions on Software Engineering*, 49(4):2285–2302, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2024:CGS

[ZZF+24] Zhichao Zhou, Yuming Zhou, Chunrong Fang, Zhenyu Chen, Xiapu Luo, Jingzhu He, and Yutian Tang. Coverage goal selector for combining multiple criteria in

search-based unit test generation. *IEEE Transactions on Software Engineering*, 50(4): 854–883, April 2024. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhou:2023:CHP

[ZZH23] Naweiluo Zhou, Huan Zhou, and Dennis Hoppe. Containerization for high performance computing systems: Survey and prospects. *IEEE Transactions on Software Engineering*, 49(4):2722–2740, April 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2021:CPO

[ZZMJ21] Yuxia Zhang, Minghui Zhou, Audris Mockus, and Zhi Jin. Companies participation in OSS development: An empirical study of OpenStack. *IEEE Transactions on Software Engineering*, 47(10): 2242–2259, October 2021. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).

Zhang:2023:WAF

[ZZX+23] Neng Zhang, Ying Zou, Xin Xia, Qiao Huang, David Lo, and Shanping Li. Web APIs: Features, issues, and expectations a large-scale empirical study of web APIs from two publicly accessible registries using Stack Overflow and a user survey. *IEEE Transactions on Software Engineering*, 49(2):498–528, February 2023. CODEN IESEDJ. ISSN 0098-5589 (print), 1939-3520 (electronic).