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## Title word cross-reference

**5s** [GFWK04].

**abbreviations** [YKHW06]. **aboutness** [WSBC01]. **Abstract** [MTKY92]. **Abstraction** [FP94]. **Accelerating** [ZZL<sup>+</sup>15]. **Access** [Gla97, RS97, WS90, BFF<sup>+</sup>03, CDR10]. **Accesses** [CZ93]. **accessibility** [CDH<sup>+</sup>09]. **Accessing** [Dun97]. **Accounting** [MK16b]. **Accuracy** [ES13, JGP<sup>+</sup>07]. **Acknowledgment** [Ano95]. **ACM** [All89, All91, dR19]. **Acoustic** [MO12]. **Acquisition** [BWS<sup>+</sup>17]. **across** [IH07, TLKW16]. **Act** [CW94, KM97]. **actions** [YHYO01]. **Active** [CZZ<sup>+</sup>17, WHFG92, DEL<sup>+</sup>00, HJZL09]. **Activities** [LAL<sup>+</sup>17]. **Activity** [CHBS15]. **Ad** [CGM05, KL09]. **adaptation** [CBZ11].

**k** [KZP10, ZTM<sup>+</sup>17, ZLF<sup>+</sup>17]. **N** [CWZ<sup>+</sup>20, DK04, LPLH19, PV19, SHN17, XHW<sup>+</sup>19, Coh97]. **O(1)** [Non13].

**-Gram** [PV19]. **-Grams** [Coh97, SHN17]. **-learning** [GWLC06]. **-nearest** [KZP10]. **-workspace** [Non13].

**100-year** [Gla04, GL05].

**2007** [Mar08b]. **2008** [Mar08b]. **2009** [Cal12]. **2012** [Cal12].

**3D** [ABW93]. **3DIS** [AM89].

**Adapting** [LMZ20, CDH<sup>+</sup>09]. **Adaptive** [BHMW07, Bul95, LJQY19, BDS04, CCC09, LBS08]. **Adaptively** [DMUN19]. **adaptivity** [RSG09]. **added** [MLDGH04]. **Additive** [DLN<sup>+</sup>16]. **Additivity** [KSVS16]. **Adjusted** [LCL<sup>+</sup>17]. **Adversarial** [CZX<sup>+</sup>19]. **Advertisement** [ZLF<sup>+</sup>17]. **Advertising** [ZGN<sup>+</sup>17]. **Affect** [Fer17, MLK<sup>+</sup>18, WZL<sup>+</sup>19]. **affiliated** [BM02]. **after** [Gla04]. **Against** [ZLF<sup>+</sup>17]. **age** [Mar08a]. **Agents** [PYF<sup>+</sup>92]. **Aggregated** [AC16, AC19, CSZD15]. **aggregates** [MS01]. **Aggregation** [GCC12, TP05]. **agree** [BM02]. **Agreement** [DL16]. **Algebra** [FR97, GZC89]. **Algorithm** [BR96, CGB19, VB98, CL03, KT05, PMPJ11]. **Algorithms** [AZ12, GR95, Kon04, Pal15, SC19, ZZL<sup>+</sup>15, BM12, DK04, PF03, TS10]. **Align** [HLL<sup>+</sup>17]. **Alignment** [YHS<sup>+</sup>12]. **alleviate** [HCZ04]. **Allows** [Man97]. **alphabets** [Non13]. **Ambiguity** [KC92]. **Among** [Fer17, LM90]. **Analyses** [MC14b]. **Analysis** [BHH<sup>+</sup>16, BB93, BRS92, CGB19, CMR91, CSZD15, EMG11, MK16a, PPGK04, PR16, SE91, ZH17, dODMS20, ACS08, Car12, CJRY12, CHS99, GWR99, GL06, LM01, LWA08, MPHS03, PR09, SC09, XC00]. **Analysis-Based** [PR16]. **analyzing** [SNS<sup>+</sup>05]. **Anchor** [LCL04]. **annotate** [CDH<sup>+</sup>09]. **Annotation** [SLZ<sup>+</sup>19]. **annotations** [AF07]. **annotator** [ZWRL19]. **Answer** [CCC<sup>+</sup>12, HWN<sup>+</sup>19, MAL16, KSNM10, MS01, Ack98]. **answer-ranking** [KSNM10]. **Answering** [AA16, BGQT07, MAL16, PHK12, TM19, ZWMH19, CTM12, CKC07, KSNM10, KEW01, Lin07, MPHS03]. **App** [CHN<sup>+</sup>17, HL17, YZW<sup>+</sup>17]. **Application** [EMS19, GPS93, GH96, MKF91, RN96, WSBC01, LCH07, SSS11, PGD07]. **Applications** [JTL<sup>+</sup>17, SS93, WLS<sup>+</sup>17, WBB<sup>+</sup>90, ZLF<sup>+</sup>17, ZXZL20, DDH<sup>+</sup>09, FP00, HJZL09, dOTM01]. **applied** [ZL04]. **Applying** [HCZ04]. **Approach** [AA16, BK90, CFC<sup>+</sup>19, FB91, GPS93, HLC<sup>+</sup>20, KLHK13, Kwo95, MMLP97, NWZC12, QZX<sup>+</sup>20, TQH15, WXLC13, WHL<sup>+</sup>16, YSZ<sup>+</sup>17, YHS<sup>+</sup>12, YCZ<sup>+</sup>15, ZZL<sup>+</sup>15, AC08, ASST05, CdMRB01, CC05, Fuh99, GWLC06, GWR99, GP00, HHWL01, LM01, LCL04, MS01, Owe02, PZMRN05, WMJ05, YKHW06, ZFL<sup>+</sup>07]. **Approaches** [CCC<sup>+</sup>12, Gru92, MC14b]. **Approximate** [ABB<sup>+</sup>15, PMD01, Web13, ARSZ03]. **Approximation** [LJQY19]. **approximations** [MOT11]. **Apps** [LAL<sup>+</sup>17, USN<sup>+</sup>17, WLG<sup>+</sup>17]. **Arabic** [ANW17, AA16, DM07]. **Architecture** [AAL<sup>+</sup>20, KL91, KEL95, PYF<sup>+</sup>92, PSDB99]. **Architectures** [WLY<sup>+</sup>14, CML00]. **Archival** [ANW17, ZJT16]. **Archives** [CCC<sup>+</sup>12]. **Areas** [HY20]. **Arithmetic** [MNW98]. **Arnoldi** [WW10]. **Array** [NCZG14]. **Article** [USN<sup>+</sup>17]. **Articulating** [KMdRS06]. **Artifact** [CR92]. **ask** [GL05]. **ASM** [BR96]. **Aspect** [GCH<sup>+</sup>19]. **Aspects** [MSMO18]. **Assessing** [LA08]. **assessment** [PTL08]. **Assessors** [FFM17]. **Assimilation** [ZXZL20]. **Assimilation-contrast** [ZXZL20]. **Assistance** [CWL<sup>+</sup>20]. **Assisted** [CH96, ZWMH19, ZK20]. **association** [TL03, WZZ04, YWYL08]. **Associations** [SLHS93, ZHY14, HZSL13]. **Associative** [COR13, HCZ04, RBV09]. **Assumptions** [Coo95, FP94]. **Attention** [HWN<sup>+</sup>19, APJL20]. **Attentive** [GCH<sup>+</sup>19, GCN<sup>+</sup>19]. **Attitudes** [Ols89]. **Attributed** [MLZ<sup>+</sup>20]. **Attributes** [DCT<sup>+</sup>17, MLZ<sup>+</sup>20]. **Attribution** [Sav12]. **Auction** [APJL20]. **Audio** [HSH93]. **augment** [BM12]. **Augmented** [ZHZ<sup>+</sup>19]. **Augmenting** [Ack98, TGS16]. **Author** [Ano93, Ano96a, Ano97, Cro98, RZCG<sup>+</sup>10]. **author-topic** [RZCG<sup>+</sup>10]. **authority** [LS02]. **authorization** [BJS99]. **Authors**

[Ano94a]. **Authorship** [Sav12]. **Auto** [CRD16]. **Auto-Completion** [CRD16]. **Automata** [SFR98]. **Automated** [ADW94, KM97, SSCT09]. **Automatic** [BJL<sup>+</sup>07, GS91, PBF<sup>+</sup>89, RBV09, CdMRB01, GWR99, GIS03, LSOS06, LWA08]. **Automatically** [ZZH<sup>+</sup>18, YKHW06]. **AutoWeb** [FP00]. **Auxiliary** [DYL<sup>+</sup>20, LDW<sup>+</sup>17]. **Availability** [ZLW16]. **Aware** [AC18, BWS<sup>+</sup>17, CS16, GXTL14, GCH<sup>+</sup>19, LJHL17, LXW<sup>+</sup>17, MJH15, TQH15, WQL<sup>+</sup>19, YZW<sup>+</sup>17, ZGCC18, IG08, WLFT18, YCZ<sup>+</sup>15, ZWRL19, FFM17]. **AZFin** [SC09].

**Badge** [WHFG92]. **balance** [PSPBY10]. **Bandits** [JMD20]. **Based** [APCC15, AKFA15, AK18, AOK14, AA16, BCFG15, BC14, BA18, CGB19, CE89, CFP95, CW94, CWZ<sup>+</sup>20, CDM15, EMG11, Fuh89, GPS93, GCC12, GR96, IC16, JVA<sup>+</sup>15, Koi95, Kwo90, LCJ<sup>+</sup>16, LPY94, LCL<sup>+</sup>17, LGQL19, LCJ<sup>+</sup>19, NWZC12, PPPR13, PGW<sup>+</sup>17, PR16, QLNY19, QFZ<sup>+</sup>19, Res93, SC19, Sav12, SZS17, SE91, SSGC89, SF89, SFR98, SLW<sup>+</sup>20, TBC96, Tuz95, VHJC11, WLY<sup>+</sup>14, Won94, XC98, YW15, YC94, YHY<sup>+</sup>17, ZZL<sup>+</sup>15, ZZZ<sup>+</sup>16, dMdSsdA<sup>+</sup>08, ADCU08, AV02, BBD11, CC01, CDH<sup>+</sup>09, Car12, CZJ07, CL06, CCC09, CSLN10, CC05, Coh00, DK04, DDH<sup>+</sup>09, EKK99, EKK00, FBN<sup>+</sup>12, FCD02, FG04, HHWL01, HHC<sup>+</sup>10, IH07, JK02, KNS04, LBS08, LLBS18, Lin07, LHSC11, MPS07, MC10b, Owe02, PTKJ07, PZMRN05, QZXP06, QHLY20, SZ09, TM10, WS90, WMJ05, XHW<sup>+</sup>19, YKHW06, ZKG08, ZRZ02, ZK20, dOTM01]. **Baseline** [AA16]. **Baselines** [KSVS16]. **Bases** [ZWMH19]. **basic** [TS10]. **Basis** [RL94, Mel08]. **batch** [HJZL09]. **Bayesian** [LCJ<sup>+</sup>19, SLW<sup>+</sup>20, YCZ<sup>+</sup>15]. **Be** [FC17]. **Behavior** [AC16, HL17, LHH<sup>+</sup>19, LCPD19, LMZ20, MBST17, OS96, SSY<sup>+</sup>17]. **Behavioral** [RSD<sup>+</sup>13]. **Behaviors** [YCZ<sup>+</sup>16]. **Behaviour** [BACF17, SBM<sup>+</sup>17]. **Belief** [WH15, ZM14, LBS08]. **belief-revision-based** [LBS08]. **Benchmarking** [AOK14, WSBC01]. **Beneath** [KL00, PR04]. **Bennett** [Gru92]. **Bernoulli** [LA08]. **Best** [MAL16, SW90]. **Best-Match** [SW90]. **between** [MTKY92]. **Bias** [FN96, PHK12]. **biased** [MZ08]. **Biases** [WH15]. **Bidirectional** [MTKY92, ZLL<sup>+</sup>20]. **Big** [DCT<sup>+</sup>17, SSY<sup>+</sup>17]. **Billion** [ZNL<sup>+</sup>17]. **Billion-Scale** [ZNL<sup>+</sup>17]. **Binary** [MNZ19]. **biomedical** [YKHW06]. **block** [CHS99]. **Blocks** [FC91]. **blogosphere** [CSJS10]. **Bloom** [AL13]. **Boies** [Gru92]. **Boolean** [CGMP99]. **Boosting** [BMMC19, CJZ<sup>+</sup>16, FPSO06, CBZ11]. **BoRe** [LMZ20]. **both** [WZZ04]. **bound** [MOT11]. **Bounded** [HSS<sup>+</sup>09]. **Breaking** [MK16a, SC09]. **broadcast** [LSOS06]. **Broker** [TGL<sup>+</sup>97]. **Brotli** [AFF<sup>+</sup>19]. **Browse** [LMW<sup>+</sup>14]. **Browse-to-Search** [LMW<sup>+</sup>14]. **Browsing** [CS94, SF89, SFR98, Yan15, BKGM<sup>+</sup>02, MC06]. **Budget** [ZAL<sup>+</sup>16]. **Budgets** [NGMD17]. **Building** [DWLW09, HZG20, MRYGM01, RP98, VL90, WW94]. **Burst** [HZW02]. **business** [KL00]. **Buttons** [Bie92].

**C** [PBF<sup>+</sup>89]. **C-TODOS** [PBF<sup>+</sup>89]. **Cache** [WLY<sup>+</sup>14]. **caching** [PSPBY10, FPSO06]. **Can** [FC17]. **cancer** [SNS<sup>+</sup>05]. **candidate** [AL13]. **capacity** [PSPBY10]. **Captions** [GR96]. **Capture** [RS97]. **Capturing** [HSH93]. **card** [BSST03]. **Carlo** [LCL<sup>+</sup>17]. **Cascading** [TQH15]. **Case** [HE91, WW94, Luz12, Gul96, MC10b]. **casual** [LLC03]. **Cat** [BWS<sup>+</sup>17]. **Cat-Mobile** [BWS<sup>+</sup>17]. **Categorical** [QFZ<sup>+</sup>19]. **Categories** [CJZ<sup>+</sup>16, BBD11]. **Categorization** [ADW94, LPY94, YC94, CS99, GWLC06]. **Category** [CCC<sup>+</sup>12]. **Causal** [ZJT16]. **CBMIR** [APCC15]. **CD** [KBD89].

**CD-ROM** [KBD89]. **chains** [AL13]. **Challenges** [HZG20]. **Change** [CZZ<sup>+</sup>17, YGZ15]. **changed** [LHSC11]. **Changes** [MK16b]. **Channel** [LPLH19]. **Characteristics** [CL18, Guy18]. **characterization** [CSJS10]. **Charter** [Ano94b]. **Check** [YCZ<sup>+</sup>16]. **Check-in** [YCZ<sup>+</sup>16]. **Checking** [SFR98]. **Chemical** [SMGM11]. **Chimera** [ATW00]. **Claims** [CR92]. **CLAIRE** [TMT06]. **Class** [COR13, PYC<sup>+</sup>19, GCT99]. **Classical** [Ruh94]. **Classification** [CZZ<sup>+</sup>17, COR13, DG95, ES13, EMS19, HQZ17, IG08, LCX<sup>+</sup>19, LBC<sup>+</sup>19, PR16, RL94, ZWRL19, ZZD<sup>+</sup>20, ACS08, BJL<sup>+</sup>07, GIS03, LWSA10, PS05, SPS<sup>+</sup>06, TMT06]. **Classification-aware** [IG08]. **classifier** [GWLC06]. **Cleaning** [ES13]. **ClearBoard** [IKG93]. **Click** [LXW<sup>+</sup>17, MCL<sup>+</sup>12, ZML<sup>+</sup>19, LWSA10]. **clicks** [JGP<sup>+</sup>07]. **clip** [HSS<sup>+</sup>09]. **Clipping** [USN<sup>+</sup>17]. **Close** [OOSC93, YWYL08]. **Cluster** [LGRK18, ADCU08, HHC<sup>+</sup>10]. **cluster-based** [ADCU08, HHC<sup>+</sup>10]. **cluster-skipping** [ADCU08]. **Clustered** [PV17]. **Clustering** [Can93, LRZ<sup>+</sup>17, TM10, CL06, KM13, MLDGH04, TG10, WNZ02, ZFL<sup>+</sup>07]. **Clustering-based** [TM10]. **Clusters** [KL09]. **CLV** [FC91]. **CO** [GZW<sup>+</sup>18]. **Coalition** [RP98]. **Coalition-Building** [RP98]. **Coding** [MNW98]. **Coherence** [AC16]. **coherent** [JZ06]. **Cold** [HCC<sup>+</sup>16, SZS17]. **Cold-Start** [HCC<sup>+</sup>16, SZS17]. **Collaborative** [AK18, CCCD19, DHY<sup>+</sup>19, GXTL14, PYC<sup>+</sup>19, RR98, SYX<sup>+</sup>17, TM91, WHL<sup>+</sup>16, XHW<sup>+</sup>19, ZLL<sup>+</sup>20, HKTR04, Hof04, HCZ04, IH07, WdVR08, XHYY09]. **Collection** [CFGM02, FKS19, PF03]. **Collections** [Gla97, KC15, ZJT16, BC13, CW02]. **Collective** [LGQL19]. **Combination** [FP94, CRG02]. **Combine** [FFM17, MO12, MS01]. **combined** [WZB04]. **combinFormation** [KKS<sup>+</sup>08]. **Combining** [AOU12, MC10a]. **Comments** [HLL<sup>+</sup>17]. **Commerce** [KM97]. **Communicating** [LM90]. **Communication** [Mar94, CSJS10]. **communicative** [YHYO01]. **Communities** [LZLM19, Pal15]. **Community** [CCC<sup>+</sup>12, PHK12]. **Compact** [ZNL<sup>+</sup>17, Zob06]. **comparable** [TLJ<sup>+</sup>07]. **Comparative** [CSZD15]. **Comparing** [ANW17, Guy18, IC16, PF03, PS05]. **Comparison** [HWD13, OOSC93, TFS<sup>+</sup>12]. **Complete** [MS01, PTL08]. **Completion** [CRD16]. **Complex** [PL94, CL03, PVGM11]. **Complexity** [CWL<sup>+</sup>20]. **Component** [Gul96, Kwo90]. **Components** [Kwo90]. **composition** [KKS<sup>+</sup>08]. **Compressed** [BCPN14, Man97, PGW<sup>+</sup>17, ADCU08, SNZBY00]. **Compression** [BK90, BKR97, KBD89, Man97, PGW<sup>+</sup>17, ZZL<sup>+</sup>15, BFPN10, CW02, KT05]. **Compressor** [AFF<sup>+</sup>19]. **computationally** [GCT99]. **compute** [GGMW03]. **Computer** [All91, FN96, HE91, Jac91, Ols89, SE91, SZ93]. **Computer-Human** [All91]. **Computerized** [GH96, SM95]. **Computers** [FZC93]. **Computing** [CDF01, Ruh94, WZC<sup>+</sup>17, WW10]. **Concept** [EMG11, FGM<sup>+</sup>02, Owe02]. **Concept-Based** [EMG11, Owe02]. **Concepts** [BF98, CL03, FG04]. **Conceptual** [Gul96, ISW92, PBF<sup>+</sup>89, RR98]. **concerns** [WH09]. **Conclusions** [GTW<sup>+</sup>18]. **Concordances** [BKR97]. **Conference** [Cro89b]. **Confidence** [Web13, WKF<sup>+</sup>12]. **Configurations** [DMUN19]. **Congestions** [WZC<sup>+</sup>17]. **Connecting** [GZW<sup>+</sup>18]. **Considerations** [KBD89]. **Consistency** [Gru92, WNS<sup>+</sup>17, Wie92]. **constant** [Non13]. **Constituent** [MH89]. **Constraints** [ZLW16, PVGM11]. **Constructing** [ZML<sup>+</sup>19]. **Construction** [NCZG14, Yan15, BC11]. **Consumption** [LMZ20]. **Content**

[AK18, AOK14, DG95, LCPD19, MK16a, NB97, NWZC12, RS93, SSS11, AF07, CDH<sup>+</sup>09, EKK99, EKK00, KL06, KNS04]. **Content-Based** [AK18, AOK14, NWZC12, EKK99, EKK00, KNS04]. **content-oriented** [KL06]. **Contents** [CS94, EGL<sup>+</sup>97]. **Context** [AC18, BB93, BLWJ15, BWS<sup>+</sup>17, CS99, GBMS99, MJH15, TGS16, UY89, WQL<sup>+</sup>19, YCZ<sup>+</sup>15, FGM<sup>+</sup>02, LBS08, MC06, Mel08, XC00]. **Context-Aware** [AC18, BWS<sup>+</sup>17, MJH15, WQL<sup>+</sup>19, YCZ<sup>+</sup>15]. **Context-sensitive** [CS99, LBS08]. **contexts** [LLC03]. **Contextual** [BKWZ15, DL16, JMD20, MZLK11, MYHL11, SYX<sup>+</sup>17, ASST05]. **contextualized** [BHMW07]. **Continuity** [RRS95]. **Continuous** [GRSD<sup>+</sup>16]. **Continuous-Time** [GRSD<sup>+</sup>16]. **contrast** [ZXZL20]. **contribution** [WW10]. **Control** [Bul95, Gla97, HLNS98, BFF<sup>+</sup>03, Mar08a]. **Controlling** [Koi95]. **Conversation** [SLW<sup>+</sup>20, ZGF<sup>+</sup>20]. **Conversational** [BWS<sup>+</sup>17]. **Converting** [Rad92]. **Convolutional** [DHY<sup>+</sup>19]. **Cooccurrence** [XC98]. **Cooperative** [FLMM91, MLF95, Won94]. **coordinate** [HSS<sup>+</sup>09]. **Copy** [AOK14, TQH15]. **CORE** [EGL<sup>+</sup>97]. **corpora** [RZCG<sup>+</sup>10]. **Corpus** [KLHK13, XC98, GWR99, TLJ<sup>+</sup>07, YKHW06]. **Corpus-Based** [XC98, YKHW06]. **correct** [PTKJ07]. **correction** [DM07]. **Correlation** [Fer17, LHSC11, PR09, PZMRN05]. **Correlation-based** [LHSC11, PZMRN05]. **Correlations** [DHY<sup>+</sup>19]. **Cost** [GXTL14, MCF<sup>+</sup>17]. **Cost-Aware** [GXTL14]. **Cost-Effective** [MCF<sup>+</sup>17]. **Costs** [OSV19]. **course** [PVG11]. **Coverage** [EJ03]. **Covering** [ABB<sup>+</sup>15]. **crawl** [PS05]. **crawler** [AAGY01]. **Crawlers** [FAZC12]. **crawling** [TM10]. **Creating** [TLJ<sup>+</sup>07]. **CrimeNet** [XC05]. **criminal** [XC05]. **Criteria** [Row96]. **Critical** [NCZG14, RJB89]. **criticism** [TL03]. **Critiquing** [FLMM91]. **Cross** [CHN<sup>+</sup>17, CJN20, EMS19, HYH15, JTS16, QHLY20, TL14, GNN<sup>+</sup>10, PTS13, TLJ<sup>+</sup>07]. **Cross-Device** [HYH15]. **cross-domain** [PTS13]. **Cross-Language** [TL14, TLJ<sup>+</sup>07]. **Cross-Lingual** [EMS19, JTS16, GNN<sup>+</sup>10]. **Cross-modal** [CJN20]. **Cross-Platform** [CHN<sup>+</sup>17]. **Cross-session** [QHLY20]. **Crowdsourcing** [BWS<sup>+</sup>17, MMST17, SC19]. **CSCW** [Res93]. **Cumulated** [JK02, KL06]. **Curious** [BWS<sup>+</sup>17]. **Current** [Ols89]. **Cursor** [APJL20]. **Customer** [PR16]. **Customizing** [RS97]. **Cyberchondria** [WH09]. **cyberspace** [AC08]. **Cycle** [CR92].

**D** [NCZG14]. **D-Critical** [NCZG14]. **DAIDA** [JMSV92]. **Danish** [ANW17]. **Data** [AFF<sup>+</sup>19, AARC20, Coh00, DYL<sup>+</sup>20, FC17, GC92, VST<sup>+</sup>14, MTKY92, NFZ19, QFZ<sup>+</sup>19, SLHS93, SSY<sup>+</sup>17, SYX<sup>+</sup>17, TGL<sup>+</sup>97, Tom89, WZC<sup>+</sup>17, WS90, ZWRL19, ZZZ<sup>+</sup>16, BGQT07, BJS99, CDF01, CGM02, FPSO06, HZW02, KZP10, PSDB99, QZXP06, ZCD06]. **Database** [BBT92, FR97, ISW92, KBGW91, KN93, SÖ90, Tom89, VB98, BFF<sup>+</sup>03, CC03, Fuh99, IG08]. **Databases** [CH96, KBGW91, KC95, MK94, NB97, BSST03, CC01, EKK99, EKK00, GWR99, GIS03, KZSD99, LL99, MS01, SSCT09]. **Datasets** [PV19, CL06]. **DBface** [KN93]. **DBpedia** [LCL<sup>+</sup>17]. **DBpedia-Based** [LCL<sup>+</sup>17]. **dead** [Gla04]. **Debiasing** [ZXZL20]. **Decision** [ASV91, ADW94, Won94, YGZ15, BDS04, Fuh99]. **decision-theoretic** [Fuh99]. **decisions** [WLWK08]. **Decomposition** [VFA17, KO98]. **Decoupled** [SGLS93]. **Deductive** [KC95]. **Deep** [AAL<sup>+</sup>20, LW20, LCJ<sup>+</sup>19, RCR<sup>+</sup>18, SSY<sup>+</sup>17, SLW<sup>+</sup>20, TM19, XHW<sup>+</sup>19, YW15, dODMS20]. **DeepMob** [SSY<sup>+</sup>17]. **Defined** [BBT92]. **definitional** [CKC07]. **Delay** [GC92]. **delivery**

[LSOS06]. **Demographic** [DCT<sup>+</sup>17]. **Dependable** [DC10]. **dependencies** [BSV09]. **Dependency** [BLWJ15, QWZ<sup>+</sup>15, YW15]. **dependent** [CDR10, MSOH13, TFS<sup>+</sup>12]. **Derivation** [GH96]. **Deriving** [LAL<sup>+</sup>17]. **Descriptive** [GR96, NZW<sup>+</sup>14]. **Design** [BB93, CMR91, CR92, CW94, ERG<sup>+</sup>89, GPS93, GR95, ISW92, IKG93, LL89, Mos90, OOSC93, PBF<sup>+</sup>89, SZ93, WLY<sup>+</sup>14, AAGY01, BSST03, FCD02, GWLC06, IM05, RR98]. **Design-Evaluation** [ERG<sup>+</sup>89]. **Designing** [KN93]. **Designs** [HSH90]. **Desktop** [WDG17, CDZ08]. **Detachment** [YTD13]. **details** [ES98]. **Detect** [ZAL<sup>+</sup>16]. **Detecting** [AZK12, LHG<sup>+</sup>12]. **Detection** [AOK14, BA18, CTH<sup>+</sup>13, LW20, MCF<sup>+</sup>17, QWZ<sup>+</sup>15, TQH15, ZJT16, Zob06, AC08, CCC09, CFGM02, TFS<sup>+</sup>12, WKF<sup>+</sup>12]. **Developing** [WBB<sup>+</sup>90]. **Development** [Cro89b, Gru92, RN96, SS93, WL97, ATW00, FP00]. **Device** [HYH15, RSG09]. **Devices** [AK18, CMR91, WLS<sup>+</sup>17, ACM<sup>+</sup>02, BKG<sup>+</sup>02]. **Diagnostic** [FTZ11]. **Dialog** [HZG20, CDH<sup>+</sup>09]. **dialog-based** [CDH<sup>+</sup>09]. **Dialogue** [ZHZ<sup>+</sup>19]. **Dictionary** [LPY94]. **Difference** [JYM13]. **Different** [CWL<sup>+</sup>20, LM90, IH07]. **differentials** [TkWW99]. **Difficulty** [ZZH<sup>+</sup>18]. **Diffusion** [GRSD<sup>+</sup>16]. **Digital** [CDM15, EGL<sup>+</sup>97, GR12, SMGM11, WBP<sup>+</sup>16, AF07, Gla04, GL05, GFWK04]. **Dimension** [ACC18, DHY<sup>+</sup>19, Koi93]. **Direct** [HSH90, WKF<sup>+</sup>12, MK94]. **Directed** [ZHC<sup>+</sup>20]. **Directly** [Man97]. **directory** [GKL<sup>+</sup>07]. **DirichletRank** [WTS<sup>+</sup>08]. **disambiguating** [YKHW06]. **Disambiguation** [MKZPK18, SG14]. **Discovering** [LOP<sup>+</sup>13, ZFL<sup>+</sup>07]. **Discovery** [JTS16, OSV19, AAGY01, KKS<sup>+</sup>08, LLPT10, XC05]. **discrete** [KZP10, PRP05, QZXP06]. **Discriminative** [QWZ<sup>+</sup>15]. **Discs** [FC91]. **discussions** [Luz12]. **Display** [Koi95]. **Displays** [HM90]. **Distillation** [CZX<sup>+</sup>19]. **Distorted** [VB98]. **Distributed** [CH96, HEA90, KEL95, KBGW91, KNS04, CML00, DDH<sup>+</sup>09, KM13, LL99, MRYGM01, RSG09]. **Distribution** [Cum14, HCC<sup>+</sup>17]. **Distributions** [PSL16, SV99, XC13]. **Distrust** [FMSS14]. **divergence** [AV02]. **Diversification** [HY20, LYS<sup>+</sup>17, MSMO18]. **Diversifying** [CRD16]. **Diversity** [RBCT14, WZL<sup>+</sup>19, ZLW16]. **DNA** [KT05]. **Document** [ABB<sup>+</sup>15, CGB19, CFP95, CDM15, Cum14, CPL15, DMUN19, FB91, Kwo90, LR96, LCX<sup>+</sup>19, MC14b, MK16b, Na15, NB97, SF89, AOU12, Bod04, CSLN10, CFGM02, DM07, DEL<sup>+</sup>00, HL10, KZSD99, KKB10, PRP05, WX10, YWYL08]. **Documents** [Bie92, BCPN14, Bul95, COR13, Dun97, GZC89, KLHK13, VST<sup>+</sup>14, SMGM11, TSNS19, ZK20, CTM12, FCD02, KFS10, TG10]. **Does** [Fer17, IH07, MLK<sup>+</sup>18, WZL<sup>+</sup>19]. **Domain** [MLK<sup>+</sup>18, VL90, ZH17, CC03, GGMW03, HZG20, MPHS03, PTS13, WR98, YLS<sup>+</sup>11]. **Domain-Specific** [VL90, CC03, YLS<sup>+</sup>11]. **Domains** [HCC<sup>+</sup>16, SBM<sup>+</sup>17, IH07]. **Drawing** [GTW<sup>+</sup>18, TM91]. **Drift** [SKC<sup>+</sup>12]. **driven** [FP00, PSPBY10]. **Dual** [HCY<sup>+</sup>20, ZGF<sup>+</sup>20]. **Dual-factor** [ZGF<sup>+</sup>20]. **Duplicate** [CTH<sup>+</sup>13, JTL<sup>+</sup>17, CFGM02, HHC<sup>+</sup>10, LHSC11]. **durable** [GL05]. **During** [CHBS15, MK16a]. **Dynamic** [AZBC20, BR96, BFNP10, Can93, Cro06, HLC<sup>+</sup>20, LRZ<sup>+</sup>17, WLFT18, ZRT91, JBCF07, LLC03, MOT11]. **Dynamics** [NSK<sup>+</sup>20, WH15, RSD<sup>+</sup>13]. **E-Discovery** [OSV19]. **Early** [CC03, LW20]. **Editor** [OOSC93]. **Editorial** [All89, All91, All94, Cro89a, Cro91, FG93, LH94, MR92, MS93, Mar08a]. **Editors** [VL90]. **Effect** [Dun97, FKS19, YTD13, CDR10]. **Effective** [CS16, KC15, MCF<sup>+</sup>17, PPR13, MWYL01, PMPJ11]. **Effectiveness** [JYM13, MBST17,

TBC96, IH07, MZ08, SV99, XC00]. **Effects** [AC16, AC19, CWL<sup>+</sup>20, KFS10, Mar94, VHJC11, ZXZL20]. **Efficiency** [HWD13]. **Efficient** [BC13, BC14, BA18, BCPN14, BKGM<sup>+</sup>02, CZX<sup>+</sup>19, CZZ<sup>+</sup>20, CTH<sup>+</sup>13, CM10, EKK00, KZSD99, KZP10, KC15, Row96, SC19, TGL<sup>+</sup>97, WZZ04, YHS<sup>+</sup>12, ZGCC18, HZW06, KT05, PMPJ11, PZMRN05, SSCT09]. **Efficiently** [PV19]. **Electricity** [PR16]. **Electronic** [KM97, Mar94, RP98, HDPM08, Mar08a]. **element** [Cro06]. **Elias** [PV17]. **ELSA** [CGB19]. **eludes** [BVKS08]. **email** [CHS99, EBR08, ZKG08]. **Embedded** [Bul95]. **EmbeddedButtons** [Bie92]. **Embedding** [AZBC20, CGB<sup>+</sup>15, DHY<sup>+</sup>19, HCY<sup>+</sup>20, NLF<sup>+</sup>20, PTS13]. **Embeddings** [CCVR17, LDW<sup>+</sup>17, YE18]. **Emergency** [SSY<sup>+</sup>17]. **Emotion** [NSK<sup>+</sup>20, QWZ<sup>+</sup>15]. **Emotional** [QWZ<sup>+</sup>15, SLW<sup>+</sup>20]. **empirical** [CZJ07]. **Emulators** [GR12]. **encapsulation** [ACM<sup>+</sup>02]. **Encoding** [HQZ17, GL05]. **Encounters** [MJH15]. **Encryption** [KBD89]. **Engagement** [NSVB18]. **Engine** [JTS16, WLY<sup>+</sup>14, EJ03, LOP<sup>+</sup>13, SC03, TS10]. **engineer** [HDPM08]. **Engineering** [TS10]. **Engines** [DH97, AOU12, BBMN<sup>+</sup>08, FPSO06, PSPBY10]. **English** [ANW17]. **Enhanced** [BR96, QZX<sup>+</sup>20]. **Enhancing** [LDW<sup>+</sup>17, LZLM19, ZCD06, FSC07]. **enrich** [CDH<sup>+</sup>09]. **Enriching** [KLHK13]. **enrichment** [SPS<sup>+</sup>06]. **Ensemble** [EMS19]. **Ensembles** [DLN<sup>+</sup>16]. **Enterprises** [CH96]. **Entities** [LMW<sup>+</sup>14]. **Entity** [CFC<sup>+</sup>19, LCL<sup>+</sup>17, LGQL19, YHS<sup>+</sup>12, BBD11, LCH07, PTS13]. **Entity-Linking** [CFC<sup>+</sup>19]. **entropy** [GP00]. **enviroments** [ATW00]. **Environment** [AM89, JMSV92, KMKO92, LZ96, SS93, WL97, Cro06]. **Environments** [CFP95, Gul96, CC03, JBCF07, KM13]. **Envoy** [PYF<sup>+</sup>92]. **equalizing** [TkWW99]. **equivalents** [PTKJ07]. **Error** [DM07, MPHS03]. **escalation** [WH09]. **estimate** [Bod04]. **estimates** [SZ09]. **Estimating** [CZ93]. **Estimation** [BF98, GRSD<sup>+</sup>16, LXLZ16, SKC<sup>+</sup>12]. **Evaluating** [ABW93, CML00, FKM<sup>+</sup>05, GR12, HKTR04, JGP<sup>+</sup>07, MC94, WRJV05]. **Evaluation** [BCPN14, CS94, ERG<sup>+</sup>89, FTZ11, FFM17, Fer17, Gru92, GR95, JVA<sup>+</sup>15, Kon04, LL89, MMST17, MMLP97, SLZ<sup>+</sup>19, TBC96, TC91, VSS17, VB98, ZGN<sup>+</sup>17, CJRY12, CL07, GMR09, JK02, JBCF07, KL06, LSOS06]. **evaluations** [KFS10]. **Event** [LLBS18, MSMO18, CCC09, LLPT10]. **Event-based** [LLBS18]. **Events** [LHG<sup>+</sup>12, LXLZ16]. **every** [Gla04]. **Evidence** [MC14a, UCH03, Gla04]. **Evolution** [IM05, LXLZ16, Yan15, ZJT16]. **Evolutionary** [SCG<sup>+</sup>19]. **Evolving** [JMSV92]. **Examining** [KSVS16]. **Example** [YC94, TFS<sup>+</sup>12]. **Example-Based** [YC94]. **Examples** [KLHK13, BBD11]. **Exception** [SM95]. **Exceptions** [SM95]. **Exclusion** [CCVR17]. **expansion** [CdMRB01, GWR99]. **Expectations** [MBST17]. **Expected** [OSV19, CL03, DWLW09]. **Experience** [BBT92]. **Experiences** [DH97]. **Experimental** [WLY<sup>+</sup>14]. **Experiments** [Kwo90, MLF95, Car12, GMR09, IKG93]. **Expert** [ASV91]. **Expertise** [MLK<sup>+</sup>18]. **Experts** [PHK12, BM02]. **Explainable** [AZBC20, CCZ<sup>+</sup>19]. **Explaining** [Mar94]. **Explanation** [Gul96]. **Explanations** [TBCW20]. **Explicit** [EMG11, FMSS14, MSMO18]. **Exploiting** [CL18, FFM17, GGMW03, GNN<sup>+</sup>10, MKF91, QHLY20, TL14, WX10, FPSO06, TLJ<sup>+</sup>07]. **Exploration** [JMD20, Lin07]. **Exploratory** [CS94, HYH15, HL17, LMW<sup>+</sup>14, MLK<sup>+</sup>18, RPE<sup>+</sup>18]. **explorer** [XC05]. **Exploring** [CCC<sup>+</sup>12, EBR08, PHK12, SPKW11, WZW<sup>+</sup>19]. **Expressive** [KM97, SW94]. **Extended** [YWYL08, KL06]. **Extending**

[DEL<sup>+</sup>00, GSR96]. **Extensible** [AM89, KL91]. **Extension** [BR96, GWR99]. **External** [CZX<sup>+</sup>19, NCZG14, NCHW15, TSNS19]. **Extra** [ACC18]. **Extra-Topical** [ACC18]. **Extraction** [CSJS10, JZ06, MKZPK18, PR16, RL94, MC10a, WX10]. **Extractive** [RCR<sup>+</sup>18]. **Eye** [Jac91].

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**gain** [JK02, KL06]. **gain-based** [JK02]. **gap** [WTS<sup>+</sup>08]. **garbling** [DM07]. **Garden** [Ack98]. **Gaussian** [LBC<sup>+</sup>19]. **General** [AFF<sup>+</sup>19, CGB<sup>+</sup>15, Gul96, JTL<sup>+</sup>17, MTKY92, YE18, ZZL<sup>+</sup>15, CW02]. **General-Purpose** [AFF<sup>+</sup>19, YE18, CW02]. **generalization** [CL03]. **Generation** [BC14, SLW<sup>+</sup>20, ZGF<sup>+</sup>20, AL13, CC05, RBV09]. **genomic** [Wil05]. **Genre** [YHYO01]. **Geographic** [HY20]. **Geographical** [LZG<sup>+</sup>18]. **Geolocation** [CL18, CL19]. **geometrical** [CHS99]. **geometry** [HZSL13]. **GeoMF** [LZG<sup>+</sup>18]. **Geoparsing**

[MK16a, MKZPK18]. **Georeferencing** [VST<sup>+</sup>14]. **Geosemantics** [MK16a]. **Geospatial** [TGS16]. **Geotagging** [MKZPK18]. **Gerard** [Ano96b]. **Get** [Jac91]. **Getting** [CR92]. **Global** [CH96, WNS<sup>+</sup>17, CRNZ<sup>+</sup>03]. **GMRES** [WW10]. **good** [GMR09]. **Google** [WW10]. **Gould** [Gru92]. **GPS** [WZC<sup>+</sup>17]. **Grained** [CL18, CL19]. **Gram** [PV19]. **Grammar** [BBT92]. **Grammar-Defined** [BBT92]. **Grammars** [BK90, RS93]. **Grams** [Coh97, SHN17]. **granularity** [YLS<sup>+</sup>11]. **Graph** [APCC15, PL94, QHLY20, WZW<sup>+</sup>19, YHS<sup>+</sup>12, HHC<sup>+</sup>10, LWSA10, MC10b, PH07]. **Graph-Based** [APCC15]. **graph-walk-based** [MC10b]. **Graphical** [VL90, CDF01]. **GRAS** [PMPJ11]. **Greedy** [LCL<sup>+</sup>17]. **Greene** [Gru92]. **Grounding** [MK16a]. **Group** [ASV91, OOSC93, TkWW99]. **Groups** [LM90, CSJS10]. **Groupwork** [OOSC93]. **Grudin** [Wie92]. **Guest** [LH94, MS93]. **Guided** [LCX<sup>+</sup>19]. **GVoS** [JTL<sup>+</sup>17].

**HAL** [YWYL08]. **Hand** [SZ93]. **handheld** [BKGM<sup>+</sup>02]. **Handling** [Mye90, PV19, SM95, Owe02]. **Happy** [Mar94]. **Harp** [LL99]. **Harvesting** [SMN<sup>+</sup>16]. **Hash** [FCDH91]. **Hashing** [CJN20, Coh97, ZHC<sup>+</sup>13]. **HDM** [GPS93]. **heavily** [LHSC11]. **Help** [CE89, Bod04]. **Heterogeneous** [EMS19, HCC<sup>+</sup>16, PYC<sup>+</sup>19, SSY<sup>+</sup>17, TLKW16, ATW00, CGMP99, Leh06]. **hidden** [GIS03, IG08, JZ06]. **hidden-web** [IG08, GIS03]. **Hierarchical** [CS94, ZZD<sup>+</sup>20, BFF<sup>+</sup>03, GGMW03]. **Hierarchies** [BRS92, LM90]. **Hierarchy** [Yan15]. **High** [BS12, DC92, FC91, LJHL17, OS96, RL94, WZW<sup>+</sup>19, ZK20, HZSL13]. **High-Level** [DC92, OS96]. **High-Order** [LJHL17, WZW<sup>+</sup>19, HZSL13]. **High-performance** [BS12].

**High-Precision** [RL94]. **High-recall** [ZK20]. **highly** [KM13, MWYL01]. **Hilbert** [CCVR17]. **Historical** [TP05, FPSO06]. **HMM** [CCC09]. **HMM-based** [CCC09]. **hoc** [CGM05, KL09]. **Home** [Ols89, UCH03]. **Human** [All91, BHH<sup>+</sup>16, Jac91, NFZ19, SSY<sup>+</sup>17, SZ93, Wil98, ZZZ<sup>+</sup>16, GKL<sup>+</sup>07]. **Human-Computer** [Jac91, SZ93]. **HYB** [BC11]. **Hybrid** [AK18]. **Hyper** [HCY<sup>+</sup>20, HO07, SM99]. **Hyper-Network** [HCY<sup>+</sup>20]. **hyper-object** [SM99]. **hyper-parameters** [HO07]. **Hyperdocuments** [SFR98]. **Hyperform** [WL97]. **Hypergraph** [WS90]. **Hypergraph-based** [WS90]. **hyperlinks** [KL10, LS02]. **Hypermedia** [Bul95, HLNS98, LZ96, MC94, SLHS93, UY89, WL97, ATW00, BHMW07, dOTM01]. **Hypertext** [CE89, GPS93, KL91, Rad92, STSM95, SF89, Tom89, WR98]. **Hypertext-Based** [CE89]. **Hypertexts** [BRS92].

**identification** [AC08, PTKJ07, SSCT09]. **Identify** [PHK12]. **Identifying** [BRS92, MJH15, SMGM11]. **identity** [AC08]. **identity-level** [AC08]. **IDF** [SHN17, WLWK08]. **Image** [CLZ<sup>+</sup>14, GR95, NWZC12, SLZ<sup>+</sup>19, VB98, WZL<sup>+</sup>19, CZJ07, EKK99, EKK00, HJZL09, KKS<sup>+</sup>08, TMT06, ZCD06, ZRZ02]. **Images** [CCZ<sup>+</sup>19, GR96, dODMS20]. **Impact** [BACF17, EJ03, SV99, TkWW99]. **Impacts** [JYM13]. **imperfect** [Owe02]. **Implementation** [CW94, KEL95, TGL<sup>+</sup>97, WW94]. **Implementing** [DC92]. **Implicit** [DYL<sup>+</sup>20, LZLM19, NSVB18, FKM<sup>+</sup>05, JGP<sup>+</sup>07, WRJV05]. **Imprecise** [Mor90]. **Improve** [HL17, HCC<sup>+</sup>16, FKM<sup>+</sup>05, LLC03]. **Improved** [BBMN<sup>+</sup>08, CCVR17, CPL15, FMSS14, CDH<sup>+</sup>09]. **Improvement** [GS91].

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[CRG02, DYL<sup>+</sup>20, ES13, HCC<sup>+</sup>17, MZLK11, MC10b, RBCT14, XC00, PPGK04].

**in-memory** [TS10]. **Incomplete** [KC95].

**Inconsistencies** [Coo95]. **Incorporating** [ASST05, MZLK11, MBST17, WZC<sup>+</sup>17].

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[ADCU08, Can93, SM99, PSPBY10, TM10].

**indefinite** [WMZ10]. **independent**

[TFS<sup>+</sup>12, UCH03]. **Index**

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**Index-Based** [BC14]. **Indexes**

[PV17, BS12, FBN<sup>+</sup>12, WZB04]. **Indexing**

[FB91, HCC14, MZ96, STSM95, SMGM11, WXL13, ZNL<sup>+</sup>17, CM10, EKK00, HSS<sup>+</sup>09, KO98, QZXP06, TKD09, TMT06]. **Indices**

[PR16]. **Induced** [NCHW15, KL10].

**Inductive** [FP94]. **Industry** [HE91]. **Infer**

[TLKW16]. **Inference** [Cum14, HGBY16, LHH<sup>+</sup>19, TC91, WY95, ZZZ<sup>+</sup>16, TL03].

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[GZW<sup>+</sup>18, LRZ<sup>+</sup>17]. **Influence** [GRSD<sup>+</sup>16, LLBS18, NGMD17, VFA17, WLFT18].

**Influencing** [ACC18]. **Inform** [TBCW20].

**Information** [AM89, APCC15, All89, Ano94a, APJL20, ACC18, BVKS08, BK90, CE89, Can93, CCC<sup>+</sup>12, CWL<sup>+</sup>20, CHBS15, Coo95, CV98, Cro89b, CPL15, EMG11, FTZ11, FMSS14, FCDH91, FAZC12, FP94, FR97, JMSV92, JVA<sup>+</sup>15, JSHS96, Koi95, KC95, KC92, Kwo90, Kwo95, LCJ<sup>+</sup>16, LZM<sup>+</sup>19, LZ96, MZLK11, MMST17, MKF91, MH89, Mor90, MMLP97, MBJK90, Na15, OS96, OG94, PBJ<sup>+</sup>16, PR04, PSL16, QHLY20, RRS95, RL94, RN96, RP98, Row96, Ruh94, RS97, SL95, SM95, THT12, TKD09, TL14, VdRK18, VSS17, WW94, WY95, YTD13, ZHY14, ZK20, dR19, ASST05, AV02, BCD<sup>+</sup>08, BBMN<sup>+</sup>08, BDS04, CML00, CRNZ<sup>+</sup>03, CdMRB01, Car12, CGMP99, Coh00, CGM02, FG04, GBMS99, HT99, HO07, HZSL13, KMdRS06, KKS<sup>+</sup>08, KNS04, KO98, KL09, LBS08,

LA08, MR10, MC10a, Mel08, MC10b, Owe02, PMPJ11, PPGK04, PH07].

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[PGD07, PSDB99, SS08, TLJ<sup>+</sup>07, Wil05, WSBC01, XC00, YLS<sup>+</sup>11, ZL04].

**information-theoretic** [CdMRB01, MR10].

**Informative** [HCC<sup>+</sup>16]. **Inhibition** [AC19].

**initiative** [KKS<sup>+</sup>08]. **Innovation**

[WBP<sup>+</sup>16]. **Input**

[CMR91, KMKO92, Mye90]. **Insights**

[GTW<sup>+</sup>18]. **Instability** [LMZ20].

**Integrated** [BA18]. **Integrating**

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**Integration** [Bul95, FR97, HE91, IKG93, Coh00, GBMS99]. **Intelligent** [HZG20, MMLP97, SSGC89, GBMS99, Owe02].

**Intent** [RPE<sup>+</sup>18, SYX<sup>+</sup>17, LWSA10]. **Inter**

[HE91, KKB10]. **inter-document** [KKB10].

**Inter-Organization** [HE91]. **inter-passage**

[KKB10]. **Interaction** [All91, Jac91, JVA<sup>+</sup>15, MLK<sup>+</sup>18, SZ93, CC03].

**Interactions** [HYH15, GKL<sup>+</sup>07].

**Interactive** [HM90, LMW<sup>+</sup>14, RPE<sup>+</sup>18, WBB<sup>+</sup>90, MLDGH04, ZFL<sup>+</sup>07, CL06].

**interchange** [GBMS99]. **Interdependence** [HE91]. **Interest**

[AC18, AK18, LJHL17, MPS07, YCZ<sup>+</sup>16].

**Interest-based** [MPS07]. **Interests**

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[CS94, DC92, KN93, SE91]. **Interleaved**

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**Intermediary** [SSGC89]. **Internet**

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**invariants** [PH07]. **Inverted** [KNCLO17, MZ96, TM20, ADCU08, BB10, CM10].

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[Fuh99, GP00, JK02]. **Isometric** [CCVR17]. **Issue** [BKWZ15, Cro89a, Kli94, PBJ<sup>+</sup>16, SL95, WLS<sup>+</sup>17, BYFM06, LdJKR12]. **Issues** [LL89, BSST03, MPHS03]. **Item** [DK04, WQL<sup>+</sup>19, XHW<sup>+</sup>19, YCS<sup>+</sup>14, ZLL<sup>+</sup>20]. **Item-based** [DK04, XHW<sup>+</sup>19]. **Items** [CWZ<sup>+</sup>20, HCC<sup>+</sup>17]. **Itemsets** [BCFG15, CGB19]. **Iterative** [ZWMH19]. **iVIBRATE** [CL06].

**January** [Mar07]. **Job** [QZX<sup>+</sup>20]. **Join** [BF98]. **joins** [Coh00]. **Joint** [BLWJ15, CCCD19, LZG<sup>+</sup>18, LLBS18, NLF<sup>+</sup>20, YCZ<sup>+</sup>16, PTS13]. **Jointly** [CHN<sup>+</sup>17, MLZ<sup>+</sup>20, OSV19, YSZ<sup>+</sup>17]. **Judge** [ZZH<sup>+</sup>18]. **Judgments** [GTW<sup>+</sup>18, Wil98]. **Judicious** [ZNL<sup>+</sup>17]. **June** [Mar08b].

**Kabiria** [CFP95]. **Keeping** [AARC20, BCD<sup>+</sup>08]. **keyblock** [ZRZ02]. **keyblock-based** [ZRZ02]. **keyphrase** [WX10]. **keys** [HZW02]. **Keyword** [ZGCC18]. **Kinematics** [CV98]. **KNET** [CGB<sup>+</sup>15]. **Knowledge** [ACM<sup>+</sup>02, BWS<sup>+</sup>17, CFP95, CZX<sup>+</sup>19, CGB<sup>+</sup>15, HQZ17, HLC<sup>+</sup>20, MBJK90, Ruh94, SSGC89, SSY<sup>+</sup>17, TSNS19, Tuz95, WZW<sup>+</sup>19, Wil98, Won94, ZWMH19, ZH17, DDH<sup>+</sup>09, WX10, XC05, YHYO01]. **Knowledge-Based** [CFP95, SSGC89, Tuz95, Won94]. **Korean** [ANW17].

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**Locality** [dMdSsdA<sup>+</sup>08]. **Locality-Based** [dMdSsdA<sup>+</sup>08]. **Localization** [CTH<sup>+</sup>13]. **Locating** [ZK20]. **Location** [CS16, LZG<sup>+</sup>18, MKZPK18, WLFT18, WHFG92, YE18]. **Location-Aware** [CS16, WLFT18]. **Log** [JTS16]. **Logic** [Tuz95]. **Logical** [BSST03, ISL95]. **Logical/Physical** [ISL95]. **Logs** [LHG<sup>+</sup>12, B JL<sup>+</sup>07, GNN<sup>+</sup>10, LOP<sup>+</sup>13, WNZ02]. **Long** [GCN<sup>+</sup>19, ZLF<sup>+</sup>17]. **Look** [Jac91]. **Low** [LJQY19]. **Low-rank** [LJQY19].

**Machine** [LPY94, TL14]. **Machine-Readable** [LPY94]. **Machines** [LPLH19]. **Magnitudes** [MMST17]. **Mail** [RP98]. **Make** [CR92]. **Making** [EGL<sup>+</sup>97, OG94, Won94, BDS04, WLWK08]. **Management** [AM89, HEA90, LAL<sup>+</sup>17, ZHZ<sup>+</sup>19, BBMN<sup>+</sup>08, BVKS08, BJS99, DEL<sup>+</sup>00, Mar08a, MC10b]. **managing** [HDPM08]. **Manipulation** [HSH90, PL94]. **manuscript** [Mar08a]. **Mapping** [YC94]. **Market** [LCJ<sup>+</sup>16, SC09, WMJ05]. **market-based** [WMJ05]. **Markov** [JZ06, YGZ15]. **Massive** [PGW<sup>+</sup>17, PV19, CC03]. **Match** [SW90, VB98]. **Matching** [AARC20, MKF91, MJH15, MH89, ZLF<sup>+</sup>17, CKC07, LCH07]. **matrices** [GCT99]. **Matrix** [CZZ<sup>+</sup>20, FMSS14, LZG<sup>+</sup>18, LJQY19, SZS17, KO98]. **maximal** [GWLC06]. **Maximization** [GRSD<sup>+</sup>16, VFA17, WLFT18]. **maximizing** [CL03]. **Maximum** [CZZ<sup>+</sup>17, GP00, KT05]. **May** [Mar07, Mar08b]. **Me** [YHY<sup>+</sup>17]. **Meal** [YHY<sup>+</sup>17]. **meaningful** [ZFL<sup>+</sup>07]. **means** [BGQT07]. **measure** [WMZ10]. **Measurement** [BA18, GR12, MBST17, MZ08]. **Measures** [FFM17, Fer17, RJB89, FKM<sup>+</sup>05, KL06]. **Measuring** [LXLZ16, TL03, AV02]. **mechanical** [HDPM08]. **Mechanism** [HCY<sup>+</sup>20, BJS99]. **Media** [VST<sup>+</sup>14, LW20, LBC<sup>+</sup>19, MK16a, MKZPK18, PBJ<sup>+</sup>16, WZC<sup>+</sup>17, CDR10, GC92]. **mediated** [LWA08]. **Medical** [AZK12, Luz12, WH09]. **Medium** [ACC18, Mar94]. **meetings** [Luz12]. **Meets** [ZLW16]. **MEGA** [CL03]. **Memoriam** [Ano96b]. **Memory** [Ack98, AC19, NCZG14, NCHW15, ZHZ<sup>+</sup>19, EBR08, TS10]. **Memory-Augmented** [ZHZ<sup>+</sup>19]. **Mental** [TBCW20]. **merge** [SC03]. **merging** [SZ09]. **merit** [GWLC06]. **merits** [Mar08a]. **Message** [KM97]. **Meta** [BHH<sup>+</sup>16, SS08]. **Meta-Framework** [BHH<sup>+</sup>16]. **metadata** [RBV09]. **Metasearch** [DH97, MWYL01]. **Method** [EMS19, Koi95, LGQL19, SZ93, YC94, ZZD<sup>+</sup>20, FSC07, MWYL01, PRP05, PH07, QZXP06, SC03]. **Methodologies** [SLZ<sup>+</sup>19]. **methodology** [FCD02, SNS<sup>+</sup>05]. **Methods** [APCC15, AK18, CSZD15, DLA15, GCC12, HT99, HWD13, MC94, CS99, SS08, TFS<sup>+</sup>12, ZL04, dMdSsdA<sup>+</sup>08]. **Metric** [CCVR17, ES98, ARSZ03]. **Metrics** [BRS92, Pal15]. **MFoM** [GWLC06]. **Microblog** [ZNL<sup>+</sup>17, ZHC<sup>+</sup>20]. **Microblogging** [MCF<sup>+</sup>17]. **Minimal** [FCDH91]. **Minimizing** [OSV19]. **Minimum** [Yan15]. **Mining** [AARC20, HL17, HZSL13, HHC<sup>+</sup>10, KLHK13, WLS<sup>+</sup>17, YHS<sup>+</sup>12, ZH17, LCH07, LCL04, WZZ04]. **Misidentified** [Coo95]. **Misinformation** [ZAL<sup>+</sup>16]. **Mixed** [KKS<sup>+</sup>08]. **Mixed-initiative** [KKS<sup>+</sup>08]. **MMALFM** [CCZ<sup>+</sup>19]. **Mneme** [Mos90]. **Mobile** [AK18, BWS<sup>+</sup>17, DCT<sup>+</sup>17, Guy18, HYH15, HL17, LAL<sup>+</sup>17, USN<sup>+</sup>17, WLS<sup>+</sup>17, WLG<sup>+</sup>17, WDG17, YSZ<sup>+</sup>17, YZW<sup>+</sup>17, ZML<sup>+</sup>19]. **Mobility** [SSY<sup>+</sup>17]. **modal** [CJN20]. **mode** [HJZL09]. **Model** [AZBC20, CZZ<sup>+</sup>17, CH96, CDM15, CPL15, FP00, GPS93, KMKO92, LCX<sup>+</sup>19, LXW<sup>+</sup>17, MO12, MMLP97, Mye90, NB97, PL94, RN96, SFR98, TBC96, Tom89, TC91, WS90, YGZ15, ZWMH19, ZGF<sup>+</sup>20, ZZZ<sup>+</sup>16, ZML<sup>+</sup>19, AF07, BFF<sup>+</sup>03, GFWK04, LLPT10, PZMRN05, RR98, SS08, TKD09,

XHY09, YLS<sup>+11</sup>, dOTM01].  
**Model-Assisted** [CH96]. **Model-Based** [TBC96]. **Model-driven** [FP00]. **Modeling** [BHH<sup>+16</sup>, BLWJ15, BKR97, CHN<sup>+17</sup>, Coo95, DCT<sup>+17</sup>, DHY<sup>+19</sup>, GCH<sup>+19</sup>, Gul96, GCN<sup>+19</sup>, ISL95, LDW<sup>+17</sup>, LZG<sup>+18</sup>, LLBS18, LZLM19, RPE<sup>+18</sup>, SLHS93, SG14, WXLC13, WY95, XC13, YGZ15, YSZ<sup>+17</sup>, YE18, YCZ<sup>+16</sup>, ZHY14, ZH17, BBD11, PGD07, RSD<sup>+13</sup>]. **Modelling** [ZXZL20]. **Models** [CWZ<sup>+20</sup>, Cum14, DL16, FTZ11, QWZ<sup>+15</sup>, TBCW20, AV02, Bod04, CKC07, GP00, Hof04, JZ06, KSNM10, KL09, KL10, LA08, MSOH13, RZCG<sup>+10</sup>, WdVR08, WRJV05, ZL04]. **modes** [IH07]. **modular** [TMT06]. **Monitoring** [CTH<sup>+13</sup>]. **Monitors** [GH96]. **Monte** [LCL<sup>+17</sup>]. **Morphological** [CMR91, CGB<sup>+15</sup>]. **Motion** [DG95]. **Mouse** [APJL20]. **Movements** [Jac91]. **Movie** [KEL95]. **MR** [SGLS93]. **MUADDIB** [RSG09]. **Multi** [GC92, LGQL19, LPLH19, QFZ<sup>+19</sup>, SCG<sup>+19</sup>, ZWRL19, ZZD<sup>+20</sup>, HL10]. **Multi-annotator** [ZWRL19]. **Multi-Channel** [LPLH19]. **multi-document** [HL10]. **Multi-Field** [QFZ<sup>+19</sup>]. **Multi-Label** [ZZD<sup>+20</sup>]. **Multi-media** [GC92]. **Multi-Objective** [SCG<sup>+19</sup>]. **Multi-View-Based** [LGQL19]. **Multidimensional** [GH96, ASST05, QZXP06]. **multidisciplinary** [Luz12]. **Multidocument** [MLDGH04, YW15]. **Multilevel** [MMLP97]. **Multilingual** [BCFG15, CGB19, JTS16, KMKO92, KSNM10]. **Multimedia** [CJN20, RRS95, DDH<sup>+09</sup>, MR10, ZHC<sup>+13</sup>]. **Multimodal** [MYHL11, TQH15]. **Multiple** [Car12, CH96, FC17, FFM17, LPY94, MC14a, MK94, NGMD17, SMN<sup>+16</sup>, Wil98, ACS08, CRG02, GWR99, MSOH13]. **Multiuser** [DC92]. **multivariate** [LA08]. **Music** [CS16, MO12, PH07, SPKW11, SSCT09]. **MWI** [BCFG15]. **MWI-Sum** [BCFG15]. **N** [SC19]. **Name** [All89]. **Named** [LCH07, PTS13]. **Names** [SMGM11]. **Natural** [AAL<sup>+20</sup>, GR96, ES98, FBN<sup>+12</sup>, Owe02]. **Natural-Language** [GR96, ES98]. **Navigation** [AKFA15, BBMN<sup>+08</sup>, MS01]. **Near** [CTH<sup>+13</sup>, JTL<sup>+17</sup>, NGMD17, HHC<sup>+10</sup>, LHSC11]. **Near-Duplicate** [CTH<sup>+13</sup>, JTL<sup>+17</sup>, HHC<sup>+10</sup>, LHSC11]. **Near-Optimal** [NGMD17]. **nearest** [KZP10]. **Need** [YTD13, LWA08]. **needs** [KMdRS06]. **Negative** [Mar94, WZZ04]. **Negotiation** [CW94, LWA08]. **neighbor** [KZP10]. **neighborhood** [WX10]. **Nested** [PL94]. **Nested-Graph** [PL94]. **Net** [SF89]. **Nets** [OS96]. **Network** [HCY<sup>+20</sup>, Kwo95, LW20, MAL16, QZX<sup>+20</sup>, SLW<sup>+20</sup>, YSZ<sup>+17</sup>, FCD02, LLPT10, XC05]. **network-based** [FCD02]. **Network=based** [TC91]. **networked** [Fuh99, PSDB99]. **Networks** [DCT<sup>+17</sup>, FC17, GRSD<sup>+16</sup>, HGBY16, HE91, HQZ17, LLBS18, MLZ<sup>+20</sup>, QHLY20, QFZ<sup>+19</sup>, RCR<sup>+18</sup>, SMN<sup>+16</sup>, TLKW16, UY89, VFA17, YSZ<sup>+17</sup>, ZAL<sup>+16</sup>, ZTM<sup>+17</sup>, ZGCC18, CGM05, KNS04, RBV09]. **Neural** [CCCD19, CZZ<sup>+20</sup>, DHY<sup>+19</sup>, HQZ17, QZX<sup>+20</sup>, QHLY20, QFZ<sup>+19</sup>, RCR<sup>+18</sup>, SLW<sup>+20</sup>, VdRK18, YSZ<sup>+17</sup>]. **News** [HLL<sup>+17</sup>, LW20, LXLZ16, LMZ20, MK16a, ZLF<sup>+17</sup>, LSOS06, SC09, LSOS06]. **Next** [LHH<sup>+19</sup>, ZLL<sup>+20</sup>]. **Next-Item** [ZLL<sup>+20</sup>]. **Nodes** [MLZ<sup>+20</sup>, NB97]. **Noise** [ZWRL19]. **Noise-aware** [ZWRL19]. **Noisy** [GTW<sup>+18</sup>]. **Non** [DLN<sup>+16</sup>, BM02, QZXP06]. **non-affiliated** [BM02]. **Non-Oblivious** [DLN<sup>+16</sup>]. **non-ordered** [QZXP06]. **Nonmatching** [Dun97]. **nonordered** [KZP10]. **Nonparametric** [YCZ<sup>+15</sup>]. **Nonuniform** [HCY<sup>+20</sup>]. **nonverbal** [Luz12]. **Normalization** [Na15, HO07]. **normalized** [KT05]. **Note** [Gru92]. **novel**

[MS01, PRP05, PH07, SSCT09]. **number** [KFS10]. **Nutrient** [YHY<sup>+</sup>17]. **Nutrient-Based** [YHY<sup>+</sup>17].

**Object** [AM89, GSR96, JSHS96, KBGW91, MH89, Mos90, Sci89, SÖ90, SM99].

**Object-Oriented** [AM89, GSR96, JSHS96, KBGW91, SÖ90].

**Objective** [IC16, SCG<sup>+</sup>19]. **Objects** [PL94, Gla04, GL05]. **Oblivious** [DLN<sup>+</sup>16]. **obtained** [PTKJ07]. **Occurrences** [BKR97]. **OCR** [DM07, TBC96]. **October** [Cal12]. **OED** [BBT92]. **Office** [CFP95, GZC89, PBF<sup>+</sup>89]. **Offline** [GZW<sup>+</sup>18, TSNS19]. **Once** [NGMD17]. **One** [PYC<sup>+</sup>19, IH07, WTS<sup>+</sup>08]. **One-Class** [PYC<sup>+</sup>19]. **one-size** [IH07]. **Online** [CP13, CL07, GZW<sup>+</sup>18, MCF<sup>+</sup>17, MCL<sup>+</sup>12, TSNS19, ZAL<sup>+</sup>16, ZXZL20, ZZH<sup>+</sup>18, CC03].

**Ontological** [MSR04]. **Open** [HZG20, PYF<sup>+</sup>92, BHMW07, MPHS03].

**Open-domain** [HZG20, MPHS03].

**operators** [EJ03, GCT99]. **Opinion** [FAZC12, GCC12, ACS08]. **Opinions** [NSK<sup>+</sup>20]. **Opportunities** [MJH15].

**Optical** [FC91]. **Optimal** [FC91, NGMD17]. **Optimality** [Row96].

**Optimizing** [JMD20]. **Optimum** [Fuh89].

**Oracle** [NWZC12]. **Order** [FCDH91, LJHL17, WZW<sup>+</sup>19, HZSL13].

**ordered** [QZXP06]. **Organization** [HE91].

**Organizational** [Ack98, BB93, KL00].

**Organizations** [CZ93, OG94]. **Organizing** [HDPM08]. **Orientation** [UY89, TL03].

**Oriented** [AM89, GSR96, HGBY16, HSH90, HWN<sup>+</sup>19, JSHS96, KL91, KBGW91, SÖ90, WHL<sup>+</sup>16, ZHZ<sup>+</sup>19, KL06]. **our** [BVKS08].

**out-of-vocabulary** [WKF<sup>+</sup>12]. **Outcome** [MLK<sup>+</sup>18]. **Outdoor** [dODMS20].

**OutdoorSent** [dODMS20]. **Output** [KMKO92]. **Oval** [MLF95]. **Overview** [BKWZ15, PBJ<sup>+</sup>16, THT12].

**Packages** [Ruh94]. **Page** [LGRK18, BKGM<sup>+</sup>02, UCH03]. **PageRank** [BSV09, KL10, WTS<sup>+</sup>08, WW10]. **Pages** [ANW17]. **pair** [BS12]. **Palmtop** [FZC93]. **Paper** [LCPD19, ZZD<sup>+</sup>20].

**Paper-Reviewer** [ZZD<sup>+</sup>20]. **paradigm** [CDH<sup>+</sup>09]. **paradox** [KM13]. **Parallelism** [MKF91]. **Parallelization** [PGW<sup>+</sup>17].

**Parallelized** [YHS<sup>+</sup>12]. **parameters** [Bod04, HO07]. **Parser** [MH89].

**Parsimonious** [YE18]. **parsing** [CHS99].

**Partially** [LM90]. **Participant** [LLBS18].

**Partitioned** [CZ93, LL89, LR96].

**Partitioning** [ZRT91, QZXP06]. **Parts** [RK19]. **Passage** [TM19, KZSD99, KKB10].

**passages** [JZ06]. **Patent** [MC14a]. **patient** [Luz12]. **Pattern** [LHH<sup>+</sup>19, MKF91, VB98, CKC07].

**Patterns** [CHBS15, RN96, IM05]. **Peer** [CGM02, THT12, CGM05, KNS04].

**Peer-to-Peer** [THT12, CGM02, CGM05, KNS04]. **people** [Tee08]. **Perceptual** [AC19]. **Perfect** [FCDH91]. **Performance** [ABW93, BMCM19, Cum14, FKS19, GH96, LL89, MPHS03, NWZC12, RJB89, SKC<sup>+</sup>12, SKC16, TM20, BS12, CML00, FP006, KFS10, PF03]. **Permission** [WLG<sup>+</sup>17].

**Perseus** [MC94]. **persistence** [PPGK04].

**Persistent** [Mos90]. **Person** [QZX<sup>+</sup>20].

**Person-Job** [QZX<sup>+</sup>20]. **Personal** [GZW<sup>+</sup>18, BCD<sup>+</sup>08, BBMN<sup>+</sup>08, BVKS08, HDPM08, MKR04, MC10b, SS08].

**Personalised** [LCPD19]. **Personalized** [AC18, GCN<sup>+</sup>19, LJHL17, LZLM19, YHY<sup>+</sup>17, MPS07, XHY09]. **personally** [ZFL<sup>+</sup>07]. **perspective** [HDPM08, PVGM11]. **Perspectives** [Kli94, NFZ19]. **pervasive** [ACM<sup>+</sup>02]. **Petri** [OS96, SF89]. **Philosophy** [DC10]. **Phone** [Res93]. **Phone-Based** [Res93]. **phrase** [WZB04]. **Physical** [ISL95, WNS<sup>+</sup>17, YTD13, BSST03]. **PIC** [GCT99]. **PicASHOW** [LS02]. **Pictorial** [MTKY92, LS02]. **Piggyback** [CFC<sup>+</sup>19].

**Placement** [FC91]. **places** [ZFL<sup>+</sup>07]. **Placing** [FGM<sup>+</sup>02]. **Platform** [CHN<sup>+</sup>17]. **Plus** [SS93]. **PocketLens** [MKR04]. **POI** [LHH<sup>+</sup>19, QLNY19, ZLW16]. **Point** [AC18, LJHL17, YCZ<sup>+</sup>16]. **Point-of-Interest** [LJHL17, YCZ<sup>+</sup>16]. **Points** [AK18]. **Points-of-Interest** [AK18]. **Pointwise** [IC16]. **POIs** [HY20]. **Pólya** [CPL15]. **Polynomial** [Fuh89]. **popular** [BM02]. **popularities** [AOU12]. **Popularity** [MCF<sup>+</sup>17]. **portals** [FSC07]. **position** [KFS10]. **Positive** [LPLH19, WZZ04]. **posterior** [WKF<sup>+</sup>12]. **Potential** [LXL16, PHK12]. **Power** [PSL16, SW94]. **Practical** [Non13, CC05]. **praise** [TL03]. **Pre** [AARC20]. **Pre-Filtering** [AARC20]. **Precision** [PGD07, RJB89, RL94, MZ08]. **Predicate** [CGMP99]. **Predict** [NSVB18]. **Predicting** [LCJ<sup>+</sup>16, SKC<sup>+</sup>12]. **Prediction** [CP13, Cum14, FHW<sup>+</sup>19, MCF<sup>+</sup>17, MAL16, NWZC12, QFZ<sup>+</sup>19, SKC16, SMN<sup>+</sup>16, SYX<sup>+</sup>17, TM20, YZW<sup>+</sup>17, ZM14, RSD<sup>+</sup>13, SC09, WdVR08]. **Preference** [CJZ<sup>+</sup>16, GCN<sup>+</sup>19, LZLM19, WZW<sup>+</sup>19, Won94, BBMN<sup>+</sup>08]. **Preference-Based** [Won94]. **Preferences** [DL16, LAL<sup>+</sup>17]. **Prefetching** [WDG17, FPSO06]. **Preparing** [Leh06]. **Presentation** [LGRK18, BDS04]. **Preservation** [GR12]. **preserve** [CGM02]. **Preserving** [FCDH91]. **preview** [PSDB99]. **Price** [APJL20, CJZ<sup>+</sup>16]. **Price-per-attention** [APJL20]. **Principle** [Fuh89, DWLW09]. **Principles** [GC92, Lin07]. **Priors** [HCC<sup>+</sup>16]. **Private** [KBGW91]. **Privilege** [OSV19]. **Probabilistic** [AV02, BB10, Coo95, DL16, FB91, FP94, FR97, KSNM10, Kwo90, Kwo95, MHZ16, MO12, WY95, ZHY14, ZZZ<sup>+</sup>16, GCT99, GP00, YWYL08]. **Probability** [CV98, FC91, Fuh89, DWLW09]. **Probe** [WZC<sup>+</sup>17]. **Problem** [FLMM91, HCZ04, WTS<sup>+</sup>08, WW10]. **Problems** [ZZH<sup>+</sup>18]. **Process** [BHH<sup>+</sup>16, KL91, OOSC93, RN96, YGZ15, KL00, RR98]. **Process-Oriented** [KL91]. **Processes** [LBC<sup>+</sup>19, SM95, KL00]. **Processing** [AAL<sup>+</sup>20, Can93, KM97, SÖ90, ZLF<sup>+</sup>17, BS12]. **Product** [AZBC20, GCN<sup>+</sup>19, QFZ<sup>+</sup>19, ZJT16]. **Product-Based** [QFZ<sup>+</sup>19]. **Professionals** [Ols89]. **Proficiency** [HLC<sup>+</sup>20]. **Profile** [AKFA15, FC17]. **Profile-Based** [AKFA15]. **profiles** [CCC09, JD07]. **profiling** [MSR04, SNS<sup>+</sup>05]. **Program** [JVA<sup>+</sup>15]. **Programming** [BR96]. **Project** [EGL<sup>+</sup>97, MC94]. **promotes** [KKS<sup>+</sup>08]. **Propagating** [MK16a]. **Propagation** [WBP<sup>+</sup>16, ZM14]. **Properties** [SFR98, DEL<sup>+</sup>00]. **Prospects** [Ols89]. **Protocol** [CW94]. **prototype** [RR98]. **prototypical** [CSJS10]. **PROXHY** [KL91]. **Proximal** [NB97]. **Proximity** [AARC20, CL19, GCC12, ARSZ03]. **Proximity-Based** [GCC12]. **proxy** [HHWL01]. **proxy-based** [HHWL01]. **PRUM** [PGD07]. **pruned** [BS12]. **pruning** [AOU12, BB10, MOT11, dMdSsdA<sup>+</sup>08]. **Pseudo** [DLA15, MHZ16]. **Pseudo-Relevance** [DLA15]. **psychiatric** [YWYL08]. **Psychometric** [AAL<sup>+</sup>20]. **Public** [NSK<sup>+</sup>20, ZGN<sup>+</sup>17, LL99]. **publications** [BM12]. **pure** [HZSL13]. **Purpose** [AFF<sup>+</sup>19, WLG<sup>+</sup>17, YE18, CW02]. **QProber** [GIS03]. **Qualitative** [BDS04, MC14b]. **Quality** [HCC<sup>+</sup>17]. **Quantitative** [MC14b, ZGN<sup>+</sup>17]. **Queries** [CFC<sup>+</sup>19, Guy18, SÖ90, ZLF<sup>+</sup>17, ZGCC18, BGQT07, BJL<sup>+</sup>07, BS12, CGMP99, CDF01, JD07, LCL04, Owe02]. **Query** [ABB<sup>+</sup>15, BBD11, BMMC19, BLWJ15, CRD16, CC01, CH96, Cum14, GS91, JTS16, MC14a, MK94, NB97, PPPR13, SW94, SPS<sup>+</sup>06, SKC<sup>+</sup>12, SKC16, SÖ90, TM20, UCH03, WNZ02, YGZ15, AOU12, BJL<sup>+</sup>07, Bod04, CdMRB01, CL03, DM07, EJ03, FPSO06, FG04, GNN<sup>+</sup>10, GWR99, GCT99,

JGP<sup>+07</sup>, KMdRS06, LWSA10, LL99, LOP<sup>+13</sup>, MSOH13, PSDB99, TFS<sup>+12</sup>, TKD09, XC13, YWYL08]. **Query-Based** [PPPR13, CC01]. **query-by-example** [TFS<sup>+12</sup>]. **query-dependent** [MSOH13]. **Query-Drift** [SKC<sup>+12</sup>]. **Query-independent** [UCH03]. **querying** [MS01, WZB04]. **Question** [CCC<sup>+12</sup>, HWN<sup>+19</sup>, MAL16, NLF<sup>+20</sup>, PHK12, TM19, ZWMH19, ZK20, CTM12, CKC07, KSNM10, KEW01, Lin07, MPHS03]. **Question-Answer** [CCC<sup>+12</sup>]. **Question-Answering** [TM19, CTM12, KSNM10]. **Question-based** [ZK20]. **Question-Oriented** [HWN<sup>+19</sup>]. **Question-Topic** [NLF<sup>+20</sup>]. **Questions** [AA16, NZW<sup>+14</sup>, Pal15]. **Quote** [TWLX18]. **QuoteRec** [TWLX18].

**Radically** [MLF95]. **Random** [IC16, LCL<sup>+17</sup>]. **Random-Forest-Based** [IC16]. **Randomly** [FC91]. **randomness** [AV02]. **Rank** [DMUN19, IC16, MZ08, PYC<sup>+19</sup>, SCG<sup>+19</sup>, BM02, DWLW09, LJQY19]. **Rank-biased** [MZ08]. **Ranked** [HCC14]. **Ranking** [CBZ11, DLN<sup>+16</sup>, FHW<sup>+19</sup>, Fuh89, LR96, SMGM11, WHL<sup>+16</sup>, CRG02, CC00, CDZ08, DWLW09, EJ03, KZSD99, KSNM10, PZMRN05]. **Ranking-Oriented** [WHL<sup>+16</sup>]. **rankings** [WMZ10]. **Rapidly** [WBB<sup>+90</sup>]. **Rate** [ANW17]. **Rating** [YZW<sup>+17</sup>, ZXZL20, WdVR08]. **Ratings** [CHN<sup>+17</sup>, CDR10]. **Raw** [GZW<sup>+18</sup>]. **Re** [SBM<sup>+17</sup>]. **Re-Finding** [SBM<sup>+17</sup>]. **Readable** [LPY94]. **Reader** [LMZ20]. **Reading** [BHH<sup>+16</sup>]. **Real** [SYX<sup>+17</sup>, YCZ<sup>+16</sup>, ZLW16, AL13, HSS<sup>+09</sup>]. **Real-Time** [SYX<sup>+17</sup>, YCZ<sup>+16</sup>, AL13, HSS<sup>+09</sup>]. **Real-World** [ZLW16]. **Reality** [FZC93, SGLS93]. **realizations** [DC10]. **Reappraisal** [BB93]. **Recall** [RJB89, Web13, PGD07, Tee08, ZK20]. **Recency** [MCL<sup>+12</sup>]. **recognition** [PTS13]. **recognize** [Tee08]. **Recommend** [NZW<sup>+14</sup>]. **Recommendation** [AZ12, AC18, BKWZ15, CHN<sup>+17</sup>, CJZ<sup>+16</sup>, CZX<sup>+19</sup>, CZZ<sup>+20</sup>, CS16, CCZ<sup>+19</sup>, FMSS14, GCH<sup>+19</sup>, HCC<sup>+16</sup>, LJHL17, LHH<sup>+19</sup>, LZG<sup>+18</sup>, LLBS18, LZLM19, LJQY19, LPLH19, LCJ<sup>+19</sup>, LMZ20, MYHL11, PVGM11, QLNY19, QHLY20, SC19, SZS17, TWLX18, WQL<sup>+19</sup>, XHW<sup>+19</sup>, YZW<sup>+17</sup>, YCZ<sup>+16</sup>, YCZ<sup>+15</sup>, ZLL<sup>+20</sup>, ZLW16, ZZD<sup>+20</sup>, DK04, IH07]. **Recommendations** [GXTL14, HL17, HCC<sup>+17</sup>, LCPD19]. **Recommended** [HY20]. **Recommender** [CCCD19, DYL<sup>+20</sup>, MZLK11, WZW<sup>+19</sup>, YHY<sup>+17</sup>, YCS<sup>+14</sup>, ASST05, HKTR04, Kon04, MSR04, MKR04, RSG09, WMJ05]. **Recommending** [CWZ<sup>+20</sup>]. **Recovery** [DG95]. **Recruitment** [QZX<sup>+20</sup>]. **Recursive** [AZK12, Coh97]. **redesign** [KL00]. **reduce** [PSPBY10]. **Reducing** [GKL<sup>+07</sup>]. **reduction** [GMR09]. **redundancy** [Lin07, SSS11]. **redundancy-based** [Lin07]. **Redundant** [Row96]. **Referees** [Ano95]. **Reference** [SKC16]. **refinding** [BCD<sup>+08</sup>, EBR08]. **Refining** [MCL<sup>+12</sup>]. **Reformulation** [BLWJ15, GS91, XC13]. **reformulations** [JGP<sup>+07</sup>]. **Region** [ARSZ03]. **Regression** [DLN<sup>+16</sup>]. **Regularized** [WXLC13]. **Regulation** [WBP<sup>+16</sup>]. **Related** [JTL<sup>+17</sup>]. **Relation** [AZBC20]. **Relational** [FHW<sup>+19</sup>, FR97, BJS99]. **Relations** [RCR<sup>+18</sup>, ES98, MC10a]. **Relationship** [ZJT16]. **Relevance** [Bod04, DLA15, Dun97, MMST17, MC14a, MYHL11, MHZ16, RK19, RBCT14, Wil98, EJ03, PTL08, WdVR08, WLWK08, ZCD06]. **Relevant** [ZK20, JZ06, KFS10]. **remote** [HHWL01]. **Repeatable** [JBCF07]. **Repetition** [SE91]. **Replicates** [VSS17]. **reporter** [ZKG08]. **reporter-based** [ZKG08]. **reporters** [ZKG08]. **Repository**

[CTH<sup>+</sup>13, YHYO01]. **Representation** [HSH90, PL94, QLNY19, RS93, TSNS19, WQL<sup>+</sup>19, ZZD<sup>+</sup>20, Coh00, KL00].

**Representations** [MLZ<sup>+</sup>20, Ruh94, TL14, ZHC<sup>+</sup>20].

**Representative** [SZS17].

**Representative-Based** [SZS17].

**Representing** [HSH93, MGBK90].

**reputation** [ZKG08]. **Requests** [ACC18].

**Reranking** [LCPD19, LZM<sup>+</sup>19, TM19, HHC<sup>+</sup>10, KKB10, KL10, MC10b]. **Research** [Cro89b]. **Resource** [MC14b, AAGY01].

**Response** [BACF17, QFZ<sup>+</sup>19, Wie92].

**Responsible** [WBP<sup>+</sup>16]. **Responsiveness** [OSV19]. **Result** [LYS<sup>+</sup>17, LZM<sup>+</sup>19, WDG17, SZ09]. **Results** [LGRK18, MC94, MCL<sup>+</sup>12, BM12, EJ03, FPSO06, HHC<sup>+</sup>10, KKB10, SC03, Tee08].

**Retrieval** [ABB<sup>+</sup>15, CE89, CCC<sup>+</sup>12, CFP95, CJN20, CR95, Coo95, CDM15, CV98, CPL15, DLA15, DMUN19, EMG11, FTZ11, FKS19, FCDH91, Fuh89, FP94, FR97, GC92, GCC12, GR95, GR96, HCC14, JYM13, KBD89, KC92, Kwo90, Kwo95, LZ96, MMST17, MKF91, MH89, MO12, MZ96, Na15, PSL16, RJB89, RRS95, Row96, SW90, SL95, TBC96, THT12, TL14, TC91, VHJC11, VdRK18, VSS17, WY95, YC94, ZNL<sup>+</sup>17, ZHY14, ZK20, ADCU08, AV02, BYFM06, CML00, CRG02, Car12, CSLN10, CC00, Cro06, DM07, EKK99, FG04, GMR09, HO07, HJZL09, HZSL13, HCZ04, KL06, KNS04, KO98, KL09, LBS08, LHSC11, LA08, MR10, MLDGH04, Mel08, MZ08, PMPJ11, PMD01, PRP05, PH07, PGD07, PTL08, SV99, TLJ<sup>+</sup>07, TKD09, Wil05, WSBC01, XC00, YLS<sup>+</sup>11, YWYL08, ZL04, ZCD06, ZRZ02, Cro89b].

**Retrieved** [FC91, KFS10]. **reuse** [Tee08].

**Review** [GCH<sup>+</sup>19, OSV19, Mar08a].

**Review-Aware** [GCH<sup>+</sup>19]. **Reviewer** [ZZD<sup>+</sup>20, Mar08a]. **Reviewers** [Cal12, dR19, Mar06, Mar07, Mar08b, ACM03].

**Reviews** [CCZ<sup>+</sup>19, ZJT16, ZK20]. **revision** [LBS08]. **Revisited** [MNW98, FGM<sup>+</sup>02].

**rewriting** [CGMP99]. **Rich** [Ruh94]. **Risk** [SCG<sup>+</sup>19]. **Risk-Sensitive** [SCG<sup>+</sup>19].

**Road** [ZGCC18]. **Robust** [CJN20, PPPR13, SZ09, EKK99, GWLC06].

**Role** [FLMM91, Koi93, Ruh94]. **Roles** [GSR96]. **ROM** [KBD89]. **Routing** [Pal15, PSPBY10]. **RST** [AA16].

**RST-Based** [AA16]. **Rules** [ADW94, PTKJ07, WZZ04]. **Rumors** [MK16a]. **Rumour** [LBC<sup>+</sup>19].

**Safe** [JMD20]. **SAGE** [SNS<sup>+</sup>05]. **SALSA** [LM01]. **Salton** [Ano96b]. **sample** [SZ09].

**sample-based** [SZ09]. **Sampling** [CZZ<sup>+</sup>20, CC01]. **Satisfaction** [WZL<sup>+</sup>19].

**scalability** [KM13]. **Scalable** [LZG<sup>+</sup>18, MWYL01]. **Scale** [CTH<sup>+</sup>13, NGMD17, NLF<sup>+</sup>20, SC19, VFA17, WXLC13, ZNL<sup>+</sup>17, ZHC<sup>+</sup>20, CJRY12, YKHW06].

**Scaling** [KEW01]. **Scenario** [CR92].

**scenarios** [GFWK04]. **Schema** [AARC20, RR98]. **Scheme** [APJL20, LM90, Man97, CW02].

**schemes** [PS05]. **Scholars** [Ruh94]. **Science** [Kli94, NFZ19]. **scientific** [BM12]. **Score** [Cum14, SZ09]. **scraps** [BVKS08].

**Screenshots** [USN<sup>+</sup>17]. **SEA** [CDH<sup>+</sup>09].

**Search** [AZBC20, AC16, AC19, BACF17, BMMC19, BKWZ15, CWL<sup>+</sup>20, CSZD15, CHBS15, CCVR17, CLZ<sup>+</sup>14, DH97, GS91, GCN<sup>+</sup>19, Guy18, HYH15, JTS16, KC15, LGRK18, LYS<sup>+</sup>17, LHG<sup>+</sup>12, LCL<sup>+</sup>17, LZM<sup>+</sup>19, LMW<sup>+</sup>14, MLK<sup>+</sup>18, MBST17, MCL<sup>+</sup>12, MK16b, NWZC12, NFZ19, RBCT14, RPE<sup>+</sup>18, SLZ<sup>+</sup>19, SSGC89, TBCW20, USN<sup>+</sup>17, WLY<sup>+</sup>14, WLS<sup>+</sup>17, WH15, WDG17, WZL<sup>+</sup>19, YGZ15, YCZ<sup>+</sup>15, ZTM<sup>+</sup>17, ZML<sup>+</sup>19, AOU12, ARSZ03, ACM<sup>+</sup>02, AL13, BBD11, BC13, BBMN<sup>+</sup>08, BM12, CZJ07, CJRY12, CDZ08, CGM05, EJ03, FPSO06, FGM<sup>+</sup>02, FKM<sup>+</sup>05, HSS<sup>+</sup>09, HHC<sup>+</sup>10, IH07, JBCF07, JGP<sup>+</sup>07, KM13, KKB10, Leh06, LS02, LWA08, LOP<sup>+</sup>13,

MPS07, PSPBY10, SC03, Tee08, TS10, WH09, XHY09, ZHC<sup>+13</sup>, dMdSsdA<sup>+08</sup>. **Searcher** [TBCW20, WRJV05]. **searches** [GKL<sup>+07</sup>]. **Searching** [Man97, ZNL<sup>+17</sup>, KZP10, LdJKR12, LLC03, SNZBY00, MC06]. **Secondary** [MNZ19]. **Seed** [LCX<sup>+19</sup>]. **Seed-Guided** [LCX<sup>+19</sup>]. **Segment** [CDH<sup>+09</sup>]. **Segment-enrich-annotate** [CDH<sup>+09</sup>]. **segments** [CC05]. **Selecting** [DH97]. **Selection** [HWN<sup>+19</sup>, MC14b, PHK12, SCG<sup>+19</sup>, ACS08, CC03, Fuh99, HT99, IG08, PF03]. **Selective** [KC15, LGRK18]. **Selectivity** [BF98]. **Self** [BF98, MZ96, CGM05, FBN<sup>+12</sup>, PR09]. **self-correlation** [PR09]. **self-indexes** [FBN<sup>+12</sup>]. **Self-Indexing** [MZ96]. **Self-Spatial** [BF98]. **self-supervising** [CGM05]. **Semantic** [CGB19, EMG11, LPY94, LXLZ16, SLHS93, TG10, TM19, WXL13, ZHC<sup>+20</sup>, dODMS20, FCD02, Hof04, KO98, MR10, PR09, TL03, YLS<sup>+11</sup>]. **semantic-multimedia** [MR10]. **Semantics** [SF89, WR98]. **Semiconductor** [HE91]. **semidiscrete** [KO98]. **Semisupervised** [HJZL09, SC03]. **Sense** [OG94]. **Sensed** [CLZ<sup>+14</sup>]. **Sensing** [PGW<sup>+17</sup>]. **Sensitive** [GC92, SCG<sup>+19</sup>, CS99, LBS08]. **Sensors** [FC17]. **Sentence** [RCR<sup>+18</sup>]. **Sentiment** [ACS08, BHH<sup>+16</sup>, HQZ17, ZH17, dODMS20]. **Sentimental** [FAZC12]. **September** [Cal12]. **sequence** [KT05]. **Sequences** [HCC14, Zob06]. **Sequencing** [CR95]. **Sequential** [RN96]. **server** [HT99]. **service** [DDH<sup>+09</sup>, FSC07]. **service-based** [DDH<sup>+09</sup>]. **ServiceFinder** [FSC07]. **services** [JBCF07]. **Session** [RBCT14, YGZ15, QHLY20]. **Session-based** [QHLY20]. **Sessions** [SE91]. **Set** [PZMRN05, CM10, GMR09]. **Set-based** [PZMRN05]. **setting** [HO07]. **Shallow** [TM19]. **Shards** [FKS19]. **Shared** [IKG93, KBGW91, LM90, ZH17]. **sharing** [BCD<sup>+08</sup>, SS08]. **Shell** [VFA17]. **Shifts** [HE91]. **Short** [GCN<sup>+19</sup>, LDW<sup>+17</sup>, LRZ<sup>+17</sup>, LYS<sup>+17</sup>, ZLF<sup>+17</sup>]. **Short-Term** [GCN<sup>+19</sup>]. **Shortening** [BBT92]. **Shortest** [CC00]. **Shortest-substring** [CC00]. **Shots** [BA18]. **Sibyl** [CTM12]. **Side** [FMSS14]. **SIGIR** [Cro89b]. **Signal** [CDM15]. **Signature** [BA18, CZ93, LL89, LR96, ZRT91, CHS99]. **Signature-Based** [BA18]. **signatures** [PPGK04, Zob06]. **SIMD** [ZZL<sup>+15</sup>]. **SIMD-Based** [ZZL<sup>+15</sup>]. **similarities** [KKB10]. **Similarity** [BA18, CWZ<sup>+20</sup>, GR95, MO12, MK16b, ZLL<sup>+20</sup>, ZTM<sup>+17</sup>, AC08, ARSZ03, Coh00, EKK99, GGMW03, MC10b, SPKW11, WMZ10]. **Simple** [OOSC93, PCD92]. **Simulation** [SGLS93, VHJC11]. **Simulation-Based** [VHJC11]. **simulations** [WRJV05]. **singer** [SSCT09]. **Single** [Kwo90, WX10]. **Site** [AKFA15, IM05]. **Sites** [AZK12]. **size** [IH07]. **Sizes** [FKS19]. **Sketches** [MNZ19]. **skewed** [SV99]. **skipping** [ADCU08]. **Small** [MC14b]. **Small-Document** [MC14b]. **SMAPH** [CFC<sup>+19</sup>]. **smart** [BSST03]. **smoothing** [ZL04]. **Snippet** [BC14]. **Social** [CP13, CLZ<sup>+14</sup>, DCT<sup>+17</sup>, FC17, FMSS14, HGBY16, Kli94, VST<sup>+14</sup>, LLBS18, LW20, LBC<sup>+19</sup>, MZLK11, Mar94, MJH15, MK16a, MKZPK18, MAL16, NGMD17, NZW<sup>+14</sup>, PBJ<sup>+16</sup>, QWZ<sup>+15</sup>, RN96, SMN<sup>+16</sup>, TLKW16, WZC<sup>+17</sup>, WLFT18, YSZ<sup>+17</sup>, YTD13, ZAL<sup>+16</sup>, ZZZ<sup>+16</sup>, ZHC<sup>+20</sup>, CDR10, KL00, LLPT10]. **Social-Sensed** [CLZ<sup>+14</sup>]. **societies** [GFWK04]. **Society** [WW94]. **Soft** [CKC07, TQH15]. **Software** [Koi93, MR92, Tuz95, ATW00]. **Solutions** [NGMD17]. **Solving** [FLMM91, WTS<sup>+08</sup>]. **Some** [Coo95]. **Sorting** [NCHW15, Non13]. **Sound** [GTW<sup>+18</sup>, PTL08]. **Soundness** [HWD13]. **Sources** [VST<sup>+14</sup>, LZM<sup>+19</sup>, MC14a]. **Space** [CMR91, IKG93, MHZ16, QZXP06, SPKW11]. **space-partitioning-based**

[QZXP06]. **Spaces** [VdRK18, ARSZ03, GFWK04, KZP10, QZXP06]. **spam** [CL07, ZKG08]. **Sparse** [WZC<sup>+</sup>17, ZHC<sup>+</sup>13]. **sparsity** [HCZ04]. **Spatial** [BF98, GR95, Koi93, YCS<sup>+</sup>14, ZGCC18, ES98, EKK99]. **spatio** [PMD01, TP05, LLPT10]. **spatio-temporal** [PMD01, TP05, LLPT10]. **Spatiotemporal** [MK16a, QLNy19]. **Special** [BKWZ15, Cro89a, Kli94, LdJKR12, PBJ<sup>+</sup>16, SL95, WLS<sup>+</sup>17, BYFM06]. **Specialization** [Sci89]. **Specific** [Sav12, VL90, CC03, DEL<sup>+</sup>00, YLS<sup>+</sup>11]. **Specification** [HM90, JSHS96, OS96]. **Specifications** [Tuz95]. **Spectrum** [NGMD17]. **Speech** [CW94, KM97, LdJKR12]. **Speed** [AC19]. **Spidering** [FAZC12]. **Spoken** [Guy18, CSLN10, CTM12, TFS<sup>+</sup>12, WKF<sup>+</sup>12]. **Spreadsheet** [ISL95]. **SSD** [WLY<sup>+</sup>14]. **SSD-Based** [WLY<sup>+</sup>14]. **Stability** [AZ12]. **Stage** [Na15]. **Stance** [LBC<sup>+</sup>19]. **Standards** [Gru92]. **Start** [HCC<sup>+</sup>16, SZS17]. **statechart** [dOTM01]. **statechart-based** [dOTM01]. **Static** [AOU12, BB10, GL06]. **Statistical** [CSLN10, TL14, Car12]. **statistics** [CFGM02]. **status** [TkWW99]. **Stemming** [PPR13, XC98, PMPJ11]. **Stepped** [VFA17]. **STEvent** [LLPT10]. **Stochastic** [ABB<sup>+</sup>15, LM01]. **Stock** [FHW<sup>+</sup>19, LCJ<sup>+</sup>16, SC09]. **Storage** [GC92]. **Store** [Mos90]. **Storing** [KBD89]. **Storm** [JTL<sup>+</sup>17]. **Strategy** [WW94]. **Stream** [CTH<sup>+</sup>13, ZLF<sup>+</sup>17]. **Streams** [GFWK04, LRZ<sup>+</sup>17, LYS<sup>+</sup>17, WLFT18]. **Strength** [ZZZ<sup>+</sup>16]. **string** [HZW02]. **stripper** [MMP<sup>+</sup>07]. **Structural** [BRS92, JYM13, KL10]. **Structure** [COR13, LZM<sup>+</sup>19, MH89, NB97, SF89, GGMW03, HZW02, LM01, Luz12]. **Structured** [BB93, GZC89, WR98, BDS04, Cro06, LL99, PGD07]. **Structures** [TGL<sup>+</sup>97, TM19, BHMW07, GFWK04]. **Structuring** [HSH93]. **Students** [HLC<sup>+</sup>20]. **studies** [MC10b, WH09]. **Study** [Ack98, CV98, FKS19, VHJC11, WW94, WLY<sup>+</sup>14, ZL04]. **Studying** [KM13]. **stylometric** [AC08]. **Subspace** [PR16]. **substrate** [SM99]. **substring** [CC00]. **Substrings** [NCZG14]. **Substructure** [YW15]. **Substructure-Based** [YW15]. **Suffix** [NCZG14, MMP<sup>+</sup>07, Non13]. **Suffixes** [NCHW15]. **Suggesting** [AK18]. **suggestions** [GNN<sup>+</sup>10]. **SUIT** [PCD92]. **Sum** [RK19, BCFG15]. **summaries** [BGQT07]. **Summarisation** [AKFA15]. **Summarization** [CGB19, MSMO18, RCR<sup>+</sup>18, YW15, BKGM<sup>+</sup>02, HL10, MLDGH04, WX10]. **Summarizer** [BCFG15]. **Summarizing** [BM12]. **Summary** [MC06]. **SuperBook** [ERG<sup>+</sup>89]. **supervised** [CL07]. **supervising** [CGM05]. **Support** [ASV91, KM97, MK16a, TkWW99, TMT06]. **Supporting** [Bie92, Bul95, HYH15, KBGW91, RSG09]. **surface** [KL00]. **surrogates** [KKS<sup>+</sup>08]. **SVM** [HJZL09]. **SWIM** [VFA17]. **Swipe** [NSVB18]. **Synchronization** [RRS95]. **Synopsis** [TM20]. **Syntactic** [HQZ17, MH89, TM19]. **Syntactic/Semantic** [TM19]. **Synthesizing** [MC14a]. **System** [CE89, CFP95, CH96, CR95, DMUN19, JTL<sup>+</sup>17, KEL95, KBGW91, LCJ<sup>+</sup>19, MMLP97, OS96, PBF<sup>+</sup>89, RJB89, SSGC89, WHFG92, WL97, YHY<sup>+</sup>17, YCS<sup>+</sup>14, CGMP99, CTM12, CC03, FP00, GL06, GIS03, HSS<sup>+</sup>09, IH07, KFS10, KNS04, LBS08, LSOS06, LL99, MKR04, MPHS03, RR98, RSG09, SC09, TkWW99, TMT06, ZKG08]. **Systems** [ASV91, CP13, CCD19, DYL<sup>+</sup>20, FN96, FR97, GSR96, GH96, HZG20, JMSV92, JSHS96, KM97, KBD89, LZ96, MZLK11, MJH15, Mor90, MBJK90, RN96, SC19, SÖ90, Tom89, TM19, WW94, WZW<sup>+</sup>19, Won94, ZGN<sup>+</sup>17, ZHZ<sup>+</sup>19,

ZXZL20, ZZH<sup>+18</sup>, ASST05, BJS99, BFF<sup>+03</sup>, Car12, DEL<sup>+00</sup>, HKTR04, IH07, Kon04, Mar08a, MSR04, PVGM11, PR04, PSDB99, SS08, WMJ05, All89, dR19]. **systems-based** [Car12].

**Tables** [CS94, BM12]. **Tablets** [NSVB18]. **Tactics** [SSGC89]. **TAE** [SS93]. **Tag** [ZHC<sup>+20</sup>]. **Tagging** [CP13, NLF<sup>+20</sup>, SSS11]. **Tags** [MO12, NZW<sup>+14</sup>, CDR10]. **Tail** [HCC<sup>+17</sup>]. **Tailorable** [MLF95]. **Talent** [QZX<sup>+20</sup>]. **Tank** [ABW93]. **Target** [ACC18]. **Targeted** [ZGN<sup>+17</sup>, CZJ07]. **TASC** [TQH15]. **Task** [ABW93, CR92, CWL<sup>+20</sup>, JVA<sup>+15</sup>, ZHZ<sup>+19</sup>, CDR10]. **Task-Artifact** [CR92]. **Task-Based** [JVA<sup>+15</sup>]. **task-dependent** [CDR10]. **Task-Oriented** [ZHZ<sup>+19</sup>]. **Tasks** [HYH15, SC19, LOP<sup>+13</sup>]. **Taxonomy** [CC05, YHYO01]. **team** [Luz12]. **Techniques** [Jac91, RRS95, SW90, CDZ08, HCZ04, JK02]. **Technological** [OG94]. **Technology** [MR92, OG94, RP98, ZJT16, ZK20]. **Technology-assisted** [ZK20]. **Tell** [NSVB18]. **Telos** [MJBK90]. **Templar** [Tuz95]. **Temporal** [CL19, FHW<sup>+19</sup>, JD07, MSMO18, Tuz95, PMD01, TP05, YWYL08, LLPT10]. **Temporality** [JYM13]. **Tendency** [SMN<sup>+16</sup>]. **Tensor** [LCJ<sup>+16</sup>, LJHL17, LCJ<sup>+19</sup>]. **Tensor-Based** [LCJ<sup>+16</sup>, LCJ<sup>+19</sup>]. **Term** [BLWJ15, GCN<sup>+19</sup>, ZHY14, AOU12, BS12, CRG02, CZJ07, HO07, PR09, TFS<sup>+12</sup>, WKF<sup>+12</sup>, WLWK08]. **term-ranking** [CRG02]. **Terms** [Kwo90, BBD11]. **Test** [CW94]. **testing** [Car12, HHWL01]. **Text** [ADW94, ES13, EMS19, HWN<sup>+19</sup>, KMKO92, KBD89, LYS<sup>+17</sup>, LPY94, Man97, MZ96, RS93, RL94, STSM95, TBC96, YC94, ZLF<sup>+17</sup>, BC13, BFN10, BS12, CC01, CZJ07, CC05, CS99, FBN<sup>+12</sup>, GWLC06, IG08, KKS<sup>+08</sup>, Leh06, LCL04, MC10a, MRYGM01, RZCG<sup>+10</sup>, SC09, SNZBY00, TS10]. **text-based** [CZJ07]. **Textbook** [Rad92]. **Texts** [CHN<sup>+17</sup>, LDW<sup>+17</sup>, LRZ<sup>+17</sup>]. **Textstream** [PGW<sup>+17</sup>]. **Textual** [APCC15, KC15, MAL16, SC09]. **Texture** [VB98]. **TF** [WLWK08]. **TF-IDF** [WLWK08]. **Their** [LAL<sup>+17</sup>, WLS<sup>+17</sup>]. **Them** [ZAL<sup>+16</sup>]. **themes** [HL10]. **theoretic** [CdMRB01, Fuh99, MR10]. **Theoretical** [MC14b, WW10]. **Theory** [BK90, ISL95, JVA<sup>+15</sup>, KM97, Kwo90, ZRZ02]. **Three** [CS94]. **threshold** [CCC09]. **Ties** [TLKW16]. **Time** [GRSD<sup>+16</sup>, LJHL17, LXW<sup>+17</sup>, MK16b, SYX<sup>+17</sup>, ZLW16, ZGCC18, ZML<sup>+19</sup>, AL13, HSS<sup>+09</sup>, Non13, YCZ<sup>+16</sup>]. **Time-Aware** [LJHL17, LXW<sup>+17</sup>, ZGCC18]. **TISoN** [HGBY16]. **TODOS** [PBF<sup>+89</sup>]. **TOIS** [All91, Ano94b, Cal12, Mar06, Mar07, Mar08b, ACM03]. **too** [GL05]. **Tool** [CWL<sup>+20</sup>, MLF95, PBF<sup>+89</sup>, WBB<sup>+90</sup>]. **Toolkit** [SGLS93, PCD92]. **Tools** [Res93, BVKS08]. **Top** [CWZ<sup>+20</sup>, LPLH19, SC19, XHW<sup>+19</sup>, ZTM<sup>+17</sup>, ZLF<sup>+17</sup>, DK04]. **Top-** [SC19, ZTM<sup>+17</sup>, ZLF<sup>+17</sup>, CWZ<sup>+20</sup>, LPLH19, XHW<sup>+19</sup>, DK04]. **Topic** [BLWJ15, JTS16, LDW<sup>+17</sup>, LCX<sup>+19</sup>, MHZ16, MCF<sup>+17</sup>, NLF<sup>+20</sup>, SG14, WXLC13, GMR09, HL10, RZCG<sup>+10</sup>]. **Topical** [ACC18, AAGY01]. **Topics** [HLL<sup>+17</sup>, LLBS18, LHG<sup>+12</sup>, ZZH<sup>+18</sup>, BM02, GMR09]. **TopPRF** [MHZ16]. **Touch** [HYH15]. **Tour** [GXTL14]. **Trace** [SFR98]. **Trace-Based** [SFR98]. **Tracking** [HLC<sup>+20</sup>, LHG<sup>+12</sup>]. **tractable** [GCT99]. **trading** [CGM02]. **Traffic** [WZC<sup>+17</sup>]. **Training** [ES13, ZWMH19]. **Trajectories** [TGS16, YSZ<sup>+17</sup>]. **Trajectory** [ZZZ<sup>+16</sup>]. **Transactions** [All89, dR19]. **Transcripts** [SE91]. **Transfer** [EMS19, PTS13, PYC<sup>+19</sup>, TLKW16]. **transform** [PRP05]. **Transformation** [TQH15, PTKJ07].

**Transformation-Aware** [TQH15]. **Transient** [WS90]. **transitive** [LCL04]. **translating** [CGMP99]. **Translation** [MTKY92, QLN19, TL14, YHS<sup>+</sup>12, LCH07, LCL04, PTKJ07]. **Translation-Based** [QLNY19]. **translations** [LCH07]. **Transparent** [ZZD<sup>+</sup>20]. **Transportable** [SS93]. **Transportation** [ZGN<sup>+</sup>17]. **Travel** [GXTL14]. **Traveling** [ZLW16]. **Treaps** [KNCLO17]. **TRECVID** [AOK14]. **treelike** [MS01]. **Trees** [DLN<sup>+</sup>16, TGS16, CBZ11]. **Trending** [MCF<sup>+</sup>17]. **Trials** [Res93]. **tries** [HZW02]. **Trip** [ZLW16]. **TROLL** [JSHS96]. **Trust** [AZK12, FMSS14, HGBY16, MK16a, PBJ<sup>+</sup>16, ZM14]. **Trust-Oriented** [HGBY16]. **Trusting** [ZKG08]. **Trustworthy** [Gla04, GL05]. **tunable** [BS12]. **Tuning** [PSPBY10]. **Tweet** [CL18, FC17, AL13]. **Tweets** [CL19, JYM13]. **Twitter** [NSK<sup>+</sup>20, YCZ<sup>+</sup>15]. **Two** [Na15]. **Two-Stage** [Na15]. **Type** [LM90]. **Typed** [Guy18]. **Typed-in** [Guy18]. **Types** [CWL<sup>+</sup>20].

**UAN** [HSH90]. **Ubiquitous** [HSH93]. **Ukkonen** [BR96]. **Uncertainty** [LXLZ16, Mor90, ZLW16]. **underlying** [Lin07]. **Understanding** [BACF17, HYH15, NFZ19, RBCT14, WLK<sup>+</sup>17, ZJT16, ZXZL20]. **Unexplored** [CJZ<sup>+</sup>16]. **Unidraw** [VL90]. **Unified** [BK90, WdVR08]. **Unifying** [WNS<sup>+</sup>17]. **Universal** [USN<sup>+</sup>17]. **unlabeled** [BJL<sup>+</sup>07, ZCD06]. **unseen** [LCH07]. **Unsupervised** [APCC15, CJN20, VdRK18, YE18]. **Upper** [MOT11]. **Upper-bound** [MOT11]. **Urban** [WZC<sup>+</sup>17, dODMS20]. **Urn** [CPL15]. **usability** [HHWL01]. **Usage** [VHJC11, FPSO06]. **Usage-Based** [VHJC11]. **Use** [CW94, CWL<sup>+</sup>20, Jac91, LM90, WLK<sup>+</sup>17, ARSZ03, LLC03]. **Useful** [BRS92]. **User** [ACC18, BACF17, CJZ<sup>+</sup>16, CL18, CHBS15, DC92, DCT<sup>+</sup>17, HSH90, HCC<sup>+</sup>16, HM90, LSOS06, LCPD19, LRZ<sup>+</sup>17, LAL<sup>+</sup>17, MR92, MLK<sup>+</sup>18, MYHL11, MBST17, MAL16, MCL<sup>+</sup>12, NSVB18, Pal15, PCD92, QFZ<sup>+</sup>19, SE91, SS93, WZW<sup>+</sup>19, Wie92, WQL<sup>+</sup>19, WZL<sup>+</sup>19, XHYY09, YE18, YCZ<sup>+</sup>16, CZJ07, CC03, DEL<sup>+</sup>00, KFS10, MSR04, PGD07, WNZ02]. **User-Item** [WQL<sup>+</sup>19]. **User-Oriented** [HSH90]. **user-specific** [DEL<sup>+</sup>00]. **Users** [HCC<sup>+</sup>17, LPY94, YCZ<sup>+</sup>15, ZHC<sup>+</sup>20]. **Using** [AZK12, APCC15, APJL20, BF98, BMMC19, CE89, CGB<sup>+</sup>15, DH97, EMG11, FKS19, HL10, VST<sup>+</sup>14, LCPD19, NSVB18, NCZG14, RS93, Row96, SKC16, TSNS19, TM20, Tuz95, VSS17, XC98, ZD<sup>+</sup>20, dODMS20, ASST05, ADCU08, BJL<sup>+</sup>07, BM02, BKGM<sup>+</sup>02, CML00, CCC09, Coh00, JZ06, KL10, LPLH19, PRP05, PH07, RBV09, SC09, SZ09, WNZ02, WRJV05, XC13, ZCD06, Zob06]. **utility** [CSJS10]. **Utilizing** [KKB10].

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