

# A Bibliography of Publications about Bitcoin and Digital Cash Systems

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## Title word cross-reference

**1** [BH15]. **150** [Woo14]. **16th** [Ker12]. **'17** [ACM17c]. **17th** [Sad13]. **18-Month** [De18]. **19** [ACKJ22, CTM22a, HSJ<sup>+</sup>21, WKD22, ZKU<sup>+</sup>23].

**\$1.2M** [McM13]. **\$10** [Pop17a].  $100\times$  [CEN14]. **\$145** [Cim19]. **\$190** [McK19]. **\$1m** [Sou13]. **\$2** [Goo18]. **\$28.5** [Gre13]. **\$3.3** [Cim18a]. **\$37** [Lee13]. **\$400** [Nak18]. **\$400M** [Gal18]. **\$530** [YWW<sup>+</sup>18, YWS<sup>+</sup>18]. **\$62m** [Nic17]. **\$735** [Os18b].  $+$  [ZY21].  $\delta$  [LL17b, LL17c]. *PCS* [KLR<sup>+</sup>17a]. *N* [ZGR17]. *n/2* [XHST20]. *t* [PCP20].

**2.0** [AMLH18, SI16, Six17b, SALY17, Uli16]. **2014** [Uni14]. **2019** [TODM19]. **20th** [GP17b]. **256** [BBDN21, FA21].

**3.0** [DM20]. **34th** [OF15]. **3rd** [ACM17d].

**4.0** [EHA22, GSF<sup>+</sup>20, MAAAW<sup>+</sup>22].

**5.0** [GRM22]. **500** [SS19]. **5G** [ICGB21, KGA<sup>+</sup>22, LM20, NPDS20, Ser21, SJ21, WHY<sup>+</sup>21, XCZ<sup>+</sup>21, ZGR<sup>+</sup>22]. **5G-enabled** [ICGB21].

**\* [SKNM21].**

**-Bitcoin-** [BS17a]. **-privacy** [LL17b, LL17c]. **/ACM** [TODM19].

'83 [CRS83]. **8th** [Jue04].

**ABE** [GLY<sup>+21</sup>, HLF<sup>+21</sup>, SJB22]. **Ability** [SGF<sup>+17</sup>]. **abnormal** [HYWY22, LTB<sup>+22</sup>]. **Abstract** [BLMR14, DNSY14, Hil14, Hul17]. **abstracted** [YML<sup>+22</sup>]. **absurd** [Fai19]. **Abu** [ACM17a, ACM17b, ACM17d]. **Abuse** [VBC<sup>+17</sup>]. **Academic** [LHZ17, NC17b]. **Accelerated** [SPS<sup>+21</sup>]. **Accelerating** [GADO17, SZ13, Yan21]. **acceleration** [Dev14]. **Acceptance** [Hut17]. **Access** [DMR17b, DMR19b, HHK18, ISM17, OEO16, OEO17, TSY<sup>+21</sup>, ARL20, AAC<sup>+19a</sup>, AAC<sup>+19b</sup>, AGK22b, CMJ21, Cim19, DSN17, DHH<sup>+22</sup>, GGJ22, Gir18, LGCY22, LHH<sup>+18</sup>, LQZ<sup>+20</sup>, PDJ22, RGB20, SI16, SJB22, SJSY21, ZLH<sup>+20</sup>, dAdSM<sup>+22</sup>]. **Account** [CLJ<sup>+21</sup>, ZWQ<sup>+16</sup>]. **Accountability** [GP17a, HM16, KAR<sup>+15</sup>, NSNF17, CLT<sup>+20</sup>, CCH21]. **Accountable** [BNM<sup>+14</sup>, GGJ22, VR15, vdHEM<sup>+17</sup>, HLF<sup>+21</sup>]. **Accounting** [Bys19]. **Accounts** [CLJ<sup>+21</sup>, Dre17k]. **Accreditation** [BK22]. **Accumulator** [SALY17]. **Accumulator-Based** [SALY17]. **acéphale** [TFG17]. **Achieving** [GAdFGMA21, GLY<sup>+21</sup>, GWF<sup>+21</sup>]. **ACIDRain** [WB17]. **ACM** [ACM17a, ACM17b, ACM17d, TODM19, MFR<sup>+21</sup>]. **ACNS** [IKY05]. **Acquire** [RS14]. **Across** [BGPW16, GCL16, WXH21, AAC<sup>+19a</sup>, GDKJ22, Tre22, ZAE20]. **act** [Pec15]. **active** [Goo18, HZT<sup>+22</sup>]. **Activities** [ME17, WPC<sup>+22</sup>, NBP<sup>+21</sup>]. **Activity** [BLMR14, CTM19, KFBI22, LTC<sup>+19</sup>, RRM18, Smi18, YNS16, IFD<sup>+19</sup>]. **Activity-Based** [YNS16]. **Actors** [DWS21]. **Ad** [CGFH16, KT18, LMH16, RLS<sup>+21</sup>, NAR<sup>+22b</sup>]. **Ad-Hoc** [RLS<sup>+21</sup>, CGFH16, KT18, LMH16, NAR<sup>+22b</sup>]. **Adaptable** [LX17]. **Adaptive** [XWY<sup>+21</sup>, AAGX<sup>+22</sup>, RZJ20]. **Added** [WLSZ17]. **Adding** [DGHK17, Dre17z]. **Address**

[EPY17, FPKH17, FPD<sup>+21</sup>, HM16, NH17, WLY17, WTW<sup>+23</sup>, CAS21, Goo18, SPZ<sup>+20</sup>]. **Addresses** [Cha81, GCL16, FBGMPS23]. **Addressing** [DNP17]. **Adhocracies** [Uli16]. **adjacency** [LX21]. **Adjusting** [KJ17, KJ18]. **admin** [Cim19]. **administration** [AR15]. **adopting** [AZR<sup>+20</sup>]. **Adoption** [AA20, BBBB15, Böh13, Fug19, Gou19, Mei18, PZZ<sup>+20</sup>, SVL17, Str18, KVP21, MAAN19, WCX16]. **advanced** [CAMS20, GLTS22]. **advancement** [PC21]. **advances** [AKT21, MKY<sup>+21</sup>, CRS83, OF15]. **Advancing** [BLBS17]. **advantage** [PR16]. **adversarial** [ZSGB<sup>+22</sup>]. **adversaries** [KDF13]. **Adversary** [RKTV22, XHST20]. **Adversary-resistant** [RKTV22]. **advice** [Far18b]. **aerial** [LGL<sup>+22</sup>]. **Affect** [Mic14]. **affected** [FB17a]. **affine** [CS15]. **Affinities** [KD16]. **Afford** [BBH<sup>+13</sup>]. **Affordances** [Vel16]. **After** [KKS<sup>+17d</sup>, KKS<sup>+17c</sup>, LL18, McK19, YWW<sup>+18</sup>, YWS<sup>+18</sup>, YCP<sup>+21</sup>, Abe18, Cim19, K.13]. **again** [Cim19]. **Against** [ABL<sup>+18a</sup>, HYP<sup>+22</sup>, JLG<sup>+14</sup>, ZP17b, Bee16, Boi18, EGB18, FTS<sup>+20</sup>, MLYL20, SGM20, YSLH17]. **Age** [Tay13, Fin17b, VC15a]. **Agenda** [GK14, CRdK16]. **Agent** [CTM19, LUBS18, PSY21, SJ21, Sko19]. **Agent-Based** [LUBS18]. **Agile** [IPL<sup>+18</sup>]. **aging** [BBDN21]. **agree** [PCM<sup>+21</sup>]. **Agreement** [SL20, WHW22, BZK<sup>+21</sup>, NAR22a, NAR<sup>+22b</sup>, XLL<sup>+21</sup>]. **Agri** [CMT<sup>+21</sup>]. **Agri-Food** [CMT<sup>+21</sup>]. **agricultural** [RWG21]. **AI** [BT18a, BKS19, DT18, KGTK20, Liu18, MSA<sup>+22</sup>, TNJJ22]. **aided** [AC19, BKV22, Sko19, SZM22]. **aim** [Sal18]. **Air** [Ro13]. **Aircraft** [Ale18a, WLN<sup>+21</sup>]. **Aktuelle** [Six17a]. **Algorand** [CM19]. **Algorithm** [DLL97, DCY<sup>+22</sup>, MGS22, Pop16a, SYB14, Ste17, XCW<sup>+22</sup>, Che18, DLL00, DXW21, FWP21, HZLH19, ML20, XHP<sup>+21</sup>, XWZ21, XLZ20, XBX<sup>+22</sup>, ZWH<sup>+20</sup>].

**Algorithm-Based** [MGS22]. **Algorithmic** [BT18a, Coh20, LN15, Lus18, Roi18, GS15a]. **Algorithms** [Bik16, DRS22, Gou19, LWL+22b, XCW+22, vM18, FCH21, Fin17b]. **Alle** [GH17]. **Alleged** [Gre13]. **alliance** [LYZ+21]. **Allocating** [BERHE19]. **Allocation** [HYP+22, JWNS19, RKTV22, BKV22, BSF22, QL22, YZC22, ZZW+21, ZGR+22, ZLS+22]. **Almost** [Coe08, IM16]. **along** [Mei18]. **Also** [RS21a]. **Alternative** [Bhe17a, BLNN17b, But13a, GCD16, Gri11, Hill14, Kel15, KH17]. **Am** [AABM17, XGS+20]. **amalgamation** [KGTK20]. **Ambient** [FAC22]. **Among** [Dre17g, MPJ+13, CK16, HS19a, LGK+22, MPJ+16, SWY+21, YZC22]. **Amortizable** [Bac02b]. **Amortizing** [KB16]. **Amounts** [AK14]. **Amplifying** [ABF+16]. **Análisis** [RSR17]. **Analysing** [Web21, YCP+21]. **Analysis** [ALGK19, AS14, Ano21a, AC17, BRS17, BP17a, BSB19, BP14, Bri21, CLZ+20, Chr13, Cor19, DNP17, EKK+17, FNP17, Gao17, GS20b, GS20a, GHJ21, GZ18, Gos17, HQ15, HBJB14, JLG+14, JCG17, JLLK23, KM20, KFBI22, KKM14, KKS+17a, KFTS17, KKS+17b, LJG15, Leo20, LBS+15, LKL+14, LZZ21, LPS20b, LSH13, MMR16, Mah18, MKS+19, MC13, Nav17, NAH16, NWGF20b, OO19, Ort16, PSS17, Pop16a, RT20, RH11b, RH11a, RH13, RSR17, RS13, Ros11, SLS20, SIDV14, SL18, SS19, Suk19, Swe16, TDW+22, TSL+17, TOM17, Tre21, VTM14, WCY19, WLW22, WPC+22, Wey19, ZWLS18, ZZ16, ZDL17a, dBHC17, AABE20, ASB+21, ALMLS16, BCCS20, Cap15, CA21, DMR17a, DMR18, FRF+19, GKL15, GC08, GHG+21, JB21, KAK21, KSA22, Li14a, Li14b, LZDA16, LTBY20, LHL21, LWZ+21b, MYSZ19, MM17, MSMH21]. **analysis** [NPB+21, NAH15, NWGF20a, SC21, wScCcS21, SGK21, Üniv21, WdLY+19, YS20, YS21, MLM16, ZDL17b]. **analytic** [WLW+19]. **Analytical** [KK17a, KT18, KK17b]. **Analytics** [BLPB17, BS17a, Moh19, TSHI22, VRK21, VMMA17, XAZY17, XAZY18, DNZ+19, UHK+21]. **Analyze** [CTM19]. **Analyzing** [DWC+17, FSW14, GDP+17, GGS19, GGS20, KLM17, LSO+15, LF16, Liv20, OAS+21, dSR21, ZP17a, GKJ+20]. **anchored** [NNGV19]. **Ancient** [Ber17]. **andere** [Six17e]. **Andrew** [Ano16c, SM-16]. **Android** [Chi13, Duc13, Seg18]. **Announcement** [SPB17]. **Announces** [Men19]. **Annual** [OF15]. **Anomaly** [Bog17, KPJ22, MGE20, WLZ20]. **Anonymity** [BLSD17, BNM+14, HJ15, JMM14, KL18a, KKM14, OKH13, RH11b, RH11a, RH13, SMD14, VFV17a, VFV17b, VFV17c, WLY17, AAGA19, BSK+20, DKJG19, MB17b, ZSGB+22]. **Anonymization** [WBK+17, MB17b, XWY+21]. **Anonymizing** [DS15, WLS+16]. **Anonymous** [BSCG+14, BK17c, CLJ+21, Chr13, GCH+22, GM17, HBG16, Ibr17, MGGR13, ML14, Muf16, SCG+14, WCX21, LLC+20, LCZL21, MBK+21, MY11, SJX+20, ZLL+19a, ZMH+17, ZMH+18]. **answer** [Pec12]. **Answers** [Pav18]. **Anti** [Alz19, Bra13, AB20, AHC+21]. **Anti-BIUFF** [AHC+21]. **Anti-Counterfeiting** [Alz19, AB20]. **Anti-Theft** [Bra13]. **Anwendung** [WLS17]. **Anwendungsfall** [FRSU17]. **anything** [Nor17a]. **apologizes** [Gal18]. **App** [BCM16, MCS+21]. **apparent** [Osb18a]. **Appetite** [Pop18a]. **Applicability** [Scr18, Älv18]. **Application** [Bik16, But13b, CDD17, DXR+17, GGN16, HG15, HHO+21, IM21, Jas18, KTCI21, Kue18, KPJ22, OOF+17, Son18, Swe16, Zam19, AAE19, Ano21c, DSM+17, GL16, IFD+19, KTA+20, Sar21, WMD+21, XWZ21, ZTSS20, ACW17, WLS17]. **Application-Specific** [Son18]. **Applications** [ACA+19, Ant21, Big20,

BLNN17a, BLNN17b, CM16, CGT<sup>+</sup>21, FAC22, GH05, HSS<sup>+</sup>20, HLC<sup>+</sup>17a, Kat16, LLH<sup>+</sup>20, MGM<sup>+</sup>17, McC18, NVWF14, OF15, Pan18, PRS22, SG19, SHL<sup>+</sup>20, SC20, VSE21, VMMA17, WDLS17, WB17, ZMKR22, Zha19, ZDW21, Ano21b, BTS<sup>+</sup>21, BLB<sup>+</sup>21, CK16, CXLC18, CXC<sup>+</sup>20, DMH18b, DM20, ES16, GKL15, HAZ21, JYTW21, KAP20, KSLC21, LTW<sup>+</sup>21, MPSW19, MBF<sup>+</sup>20, MCLH19, MFE<sup>+</sup>20, Pil16, TPE20, TVK<sup>+</sup>20, TLS<sup>+</sup>21, VD21, WDL<sup>+</sup>18, WMHL21, XLL<sup>+</sup>19, ZWH<sup>+</sup>20, ZWC21, ZZ16, dORM<sup>+</sup>20, HYL21]. **Applied** [KT22, Wu19, IKY05]. **Apply** [Int14]. **applying** [NML19]. **Approach** [CXS<sup>+</sup>17, DH17, EZR<sup>+</sup>22, GMH21, GWF<sup>+</sup>21, HZ21, HRF17, JSKV16, KK17a, LWZ<sup>+</sup>21a, Liu19, LSH13, MZWX21, Mis17, MMT16b, NSNF17, Nia19, Not19, PRS22, RAH<sup>+</sup>15, RFM<sup>+</sup>18, SCYP17, SOA17, XWL<sup>+</sup>19, Yan21, AAGX<sup>+</sup>22, Bar17, BS20, CLS19b, CLS20, CBST22, DMR19b, DTK20, FOA17, GLW<sup>+</sup>20, HLF<sup>+</sup>21, HVM<sup>+</sup>18, LCSR21, LLC<sup>+</sup>20, LDM<sup>+</sup>21, LZZ<sup>+</sup>20, MAM22, MFE<sup>+</sup>20, URC20]. **Approaches** [DPN<sup>+</sup>22, EBD<sup>+</sup>20, SPZ<sup>+</sup>20, AMME21, JO13]. **Appropriation** [KD16]. **Approval** [AH12]. **Approver** [Hal21]. **Approximate** [DDX17, VDK16]. **Approximation** [ZY21]. **April** [ACM17a, ACM17b, ACM17d, JRB<sup>+</sup>17, OF15, Sad13, Uni14]. **AR/VR** [Per20]. **Architectural** [AS14, WLL<sup>+</sup>13]. **Architecture** [AMGBK22, AS14, CCH<sup>+</sup>20, GANT21, LLH<sup>+</sup>20, LST<sup>+</sup>17, PPR<sup>+</sup>20, RBL<sup>+</sup>17, SRP20, SNKG20, VDG19, WXH21, Wer18, ZGY<sup>+</sup>21, Ano21b, Ano21d, CSKP21, ESP22, GDA<sup>+</sup>21, HSGY20, KAP20, LML<sup>+</sup>19, PGS<sup>+</sup>21, PSY21, PK22, RKP19, STN22, SJB21, YLM21]. **Architectures** [BLB<sup>+</sup>21, FS16, dSR21]. **Archival** [LS17]. **Area** [BL22, HCB<sup>+</sup>22, LZZ<sup>+</sup>20]. **Areas** [CGFH16]. **Argentina** [McL13]. **arithmetic** [TML<sup>+</sup>22]. **Arms** [Mat14, Pec13]. **arrest** [Ano18i]. **Art** [DPS<sup>+</sup>21, Swe16, Zei16, GGDK20, NPDS20, SCP<sup>+</sup>20]. **Artificial** [LZC<sup>+</sup>17, SG19, SRP20, Che18, DAT21, DXW21, DNZ<sup>+</sup>19, GS20b]. **Arvind** [Ano16c, SM-16]. **AS-level** [FSW14]. **Asia** [ACM17a, ACM17a]. **ASIC** [KZVT17, MKGT16a, MKGT16b, TVK<sup>+</sup>20]. **ASICs** [Bon14b]. **Aspects** [Dre17v, Eva14, Sch98]. **Assessing** [LX20, MSA<sup>+</sup>22, SBL19, YCMM20]. **Assessment** [Ano18g, BBH18, Mai18, CPSGAA20, Gof19, GKA<sup>+</sup>21]. **Asset** [BW17, GZH<sup>+</sup>14, KMOD17, YF22, Fan22, LTW<sup>+</sup>21, PBHM21, WMD<sup>+</sup>21, Wij16]. **Asset-Based** [KMOD17]. **Assets** [COE<sup>+</sup>20a, JYKA19, NCS17, WLW22, WSZN18, CAMS20, MKL<sup>+</sup>22, Nor17c, WHJ17, WHJ20]. **Assignments** [HYP<sup>+</sup>22]. **Assistance** [LR22]. **Assistant** [NTRK22]. **Assisted** [DNY17, FAC22, SJ21, ARL20, MISS22, MLTT20, XLL<sup>+</sup>21, ZSL21]. **Associated** [Van14b]. **Assurance** [LN17, HS20]. **Asymmetric** [BK17b, SKG22]. **Asymptotic** [GFLS21]. **Asynchronous** [FZG<sup>+</sup>22, PSS17]. **Atomic** [MPSP17, ZAE20]. **Atomically** [MCHM17, MHM17]. **Attack** [AMEF21, BS16, BRS17, EHA22, Kam17, Ker18b, KKS<sup>+</sup>17b, RS21b, So19, SPB17, SOA<sup>+</sup>21, TSL<sup>+</sup>17, WWZ<sup>+</sup>22, ZL19, Bee16, HS20, PR16, SSV22, WLS22, WdLY<sup>+</sup>19]. **Attacked** [Sou13]. **Attacker** [Goo18, Osb18a]. **Attackers** [Kan18]. **Attacking** [ZSGB<sup>+</sup>22]. **Attacks** [ABL<sup>+</sup>18a, AMGBK22, AZV17, ABC17, AV22, CGGN17, CPNX20, GZ18, GAK17, JLG<sup>+</sup>14, Ker18a, KKS<sup>+</sup>17d, KKS<sup>+</sup>17c, LJG15, MSH17, SCN<sup>+</sup>22, SRB20, SGDT19, VTM14, WB17, WLLH21, Ano18e, Ano18k, CEW15, CSC16, FTS<sup>+</sup>20, Fir18, Ker18b, KKS<sup>+</sup>17a, KKT<sup>+</sup>22, MLYL20, NAH15, QHW<sup>+</sup>20, SKNM21, SGM20, Xu16, XGS<sup>+</sup>20, YTLD19, ZLL<sup>+</sup>18]. **Attention** [HZ21, HSB17d, HSB18h]. **attorney**

[Far18b]. **Attribute** [SZM22, AGK22b, GGJ22, XWY+21].

**Attribute-based** [SZM22, AGK22b, GGJ22]. **Attributes** [CDD17, NTKS17]. **AttriChain** [SJX+20].

**Auction** [JWNS19, NT21, QL22, BKV22, CLXW22, MXW22, SZdLZ22, ZLS+22].

**auction-based** [BKV22]. **auctioneer** [DB16]. **Auctions** [Dim19, DB16]. **Audio** [NPG+22]. **Audit** [Bon16b, RSGA+21, SS17b, ASM19, ZBF22].

**Auditable** [AGK22b, Bac02b, CMM+22, SBHD17, DMR19b, HSX+21, PMP19, Yue20].

**Auditing** [CCH+20, ECdO17, YMHY21, FBL+20, HAZ21, HZY+19, LKP+21, XCZ+22].

**auditor** [CFM+22]. **AUGChain** [PCC22].

**augmented** [Pou20]. **August** [CRS83].

**außerhalb** [WLS17]. **Auswirkungen** [Blo18]. **Authenticated** [MSCH15, ZCC+16, Yue20].

**authenticating** [PL20]. **Authentication** [CCC19, DGP17, GADO17, GPPB+21, IK17, JLX+19, Kri19, Kue18, LN17, LLW17, ML15, XJY17, CHL19, EFFM21, FA21, HHBS18, HZ20, LCZL21, LHH+18, ML17, NML19, PCC22, PHH+20, SI16, VD21, WLC+22a, XZL+22, XLL+21]. **authorities** [YYN+20]. **Authority** [LN15, Lus18, Gon17]. **authorization** [MHL20, WLC+22a, YWX+22].

**Authorized** [LWL+22a]. **Authorizing** [Dre17a]. **Automata** [ADM14b, DCK17].

**Automated** [Bik16, EMEHR17, GDP+17, Nar19, NPS+17, YW18, HFP+22, KBTT20, MISS22, ML20, PdWWS16]. **Automatic** [CK16, EPY17, Ler14b, LTBY20, ADZ23, HS19b]. **Automation** [BT18a, CCH+20, NNGV19]. **Automotive** [FS16, SDK+17, Ano21e]. **Autonocoin** [Abr16]. **Autonomous** [DAAY22, HYLY19, KUBS22, NST+17, NOT15, Shi19, YMHY21, DMSCA20, KGA+22]. **Autoregressive** [HG15]. **Availability** [ASB+21, LST+17, LDH17, JO13, MOM22, ZLX+17]. **available** [RST11]. **Average** [Smi18, LX21]. **Avoid** [KKS+17d, KKS+17c]. **Avoidance** [Hea13, SFMC21]. **AWAP** [XWY+21].

**aware** [BK22, PK21, RDDB19, SSSJ19]. **Awareness** [SOA17].

**B** [DRS22, DHH+22]. **B-DAC** [DHH+22]. **B-IoV** [DRS22]. **B2C** [Blo18, Blo18]. **B2H** [GRM22]. **B3** [Mor17f, Mor17g]. **B4SDC** [LDY+22]. **B5G** [WQGX22]. **B5G-driven** [WQGX22]. **BA** [SZM22]. **BA-RMKABSE** [SZM22]. **BACI** [AAC+19b]. **back** [Fai19, Gra20, Sha17]. **Backbone** [GKL17, Ler14b, GKL15]. **Backed** [WB17, GMS17]. **Background** [Du21, HSB18a, HSB18c, HSB18d, HSB18b, SBA21]. **Backpage** [PHD+17]. **Backward** [ZP17b]. **Backward-Compatible** [ZP17b]. **Badger** [MXC+16]. **BAFL** [FZG+22]. **Bakery** [CMT+21]. **Balanced** [WXH21]. **Balances** [AK14]. **Balancing** [LWL+22b]. **Balloons** [BDOZ11, BDOZ12]. **bang** [Kel15]. **Bank** [CMS21, LLHW20, LP18c, LP18d, RRD17, Nis16b, Son14]. **Banken** [KFR17, KFR18, Möl13]. **Banking** [CPM17, Doz18, Eya17, MDAP16, MAP16, PP16, Sch14a, GL16, Ito18, LGCY22, WMD+20]. **banknotes** [Nis16a]. **banks** [KFR17, Möl13]. **bans** [K.13]. **BARA** [BKV22]. **Barbados** [BBMS14, CSN14, CMR+16, GP17b].

**Barbara** [CRS83]. **Based** [ARBK17, AVA21, Als23, ABL18b, AAD+21, BL22, BK17b, BMSS17, BK17c, Bri21, BLNN17b, CR17, CXS+17, CGLR19, CTM19, CMT+21, CTM22b, DFKU20, DMR17b, DCY+22, DHES16, Eti19, FZG+22, GPPB+21, GSF+20, Gya21, HS16c, HLC+17a, HTCW17, HTCW18, HLC17c, HYP+22, HM19, HP19, HRF17, IGRS16, JCHSR16, JL17, Kad18, KFN+17, KK20a, KXSS21, KMOD17, KKS14, KET+17,

KUEE17, KUEE18, KLL<sup>+15</sup>, Ksh20, Ksh21, LMWL17, LUBS18, LLW17, LWY<sup>+19</sup>, Lin21, LZC<sup>+17</sup>, LLP<sup>+20b</sup>, LLL<sup>+21b</sup>, LGGB<sup>+21</sup>, LX17, LSH13, LZZ<sup>+22</sup>, ME17, MGS22, Mer88, Muf16, Nar19, NPG<sup>+22</sup>, OEO16, OEO17, PPR<sup>+20</sup>, PTPR17, PTPR18, PYC21, RC19, RSGA<sup>+21</sup>, RBB19, RBL<sup>+17</sup>, RBS17, SNM17, SBRS16, Ses18, SW21, SY22, Shi19, SNKG20, SL20, SCZ<sup>+21</sup>, SGDT19, SALY17, Van14b, Vas17, WMG<sup>+21</sup>, WL21, WHW22, WLSZ17, Wör16, WDS21, XAZY17, XSC<sup>+17</sup>, XAZY18].

**Based** [XWL<sup>+19</sup>, XNC21, YNS16, YPFY21, Yan21, YW18, YMHY21, ZWW<sup>+17</sup>, ZzH21, ZY21, ZG15, ZGY<sup>+21</sup>, ACKJ22, AKA<sup>+22</sup>, AHSZ21, AB17, ABB<sup>+19</sup>, AAJ21, ASK<sup>+21</sup>, AAC<sup>+19a</sup>, AAC<sup>+19b</sup>, AHH20, AZDF22, Ano21e, AAGA19, AGK22b, ANMM22, BYR<sup>+20</sup>, BAS<sup>+22</sup>, BK22, BKV22, BJ20, BAJ20, BLS17, BPT<sup>+22</sup>, BTS<sup>+21</sup>, Bhe17c, BSF22, BS20, CLT<sup>+20</sup>, CA21, CSKP21, CJA<sup>+19</sup>, CAA<sup>+22</sup>, CJW17, CLC<sup>+19</sup>, CLS19a, CXWY21, CFM<sup>+22</sup>, CLXW22, CLS<sup>+19c</sup>, CLH<sup>+20</sup>, Coe08, CHL19, CMM<sup>+22</sup>, DFKP13, DMSCA20, DSPSNAHJ20, DDPS22, DMR19b, Dim20, DSC21, DAV20, ESP22, ES16, FOA17, FSY<sup>+19</sup>, FWP21, FLL<sup>+22</sup>, FY19, FYZ<sup>+21</sup>, FA21, GS20a, GWL20, GLC<sup>+22</sup>, GRU22, GLF20, GGJ22, GAdFGMA21, GCH<sup>+22</sup>, GKA<sup>+21</sup>, GLY<sup>+21</sup>, HHBS18, HCB<sup>+22</sup>, HSC21, HSGY20, HFP<sup>+22</sup>, HLF<sup>+21</sup>, HYL21, HYLY19, HAZ21, HLP<sup>+21</sup>, HZT<sup>+22</sup>, HCW<sup>+18</sup>, HLC19, HZY<sup>+19</sup>, HZX<sup>+20</sup>, HZ20, HSX<sup>+21</sup>, HS19b, Hul17, IFD<sup>+19</sup>, JMK17].

**based** [JB21, JLX<sup>+19</sup>, JGL<sup>+20</sup>, JAK19, KBTT20, KOM<sup>+20</sup>, KOS<sup>+21</sup>, KOM<sup>+22</sup>, KGA<sup>+22</sup>, KRK21, KMAJ21, KAP20, KAK20, KKK<sup>+21</sup>, KAK21, KUE17, KGS<sup>+19</sup>, KK21, Kra15, Kra16a, KKM19, KBS<sup>+21</sup>, KSLC21, KTM<sup>+21</sup>, LDWS17, LCSR21, LL16, LL17a, LM20, LLH21, LCL<sup>+22</sup>, LCB<sup>+20</sup>, LMH16, LLCF21, Lev17, LTMW19, LHL20, LWQ<sup>+21</sup>, LCZL21, LLCH21, LWA21, LZY22, LGL<sup>+22</sup>, LST<sup>+17</sup>, LWZ<sup>+21a</sup>, LGCY22, LHH<sup>+18</sup>, LHZ<sup>+21</sup>, LT17, LDM<sup>+21</sup>, Liu18, LHO<sup>+20</sup>, LLZY20, LZZ<sup>+20</sup>, LHL21, LLL<sup>+21a</sup>, LX21, LWCX21, LSZ<sup>+21</sup>, LYZ<sup>+21</sup>, LQZ<sup>+20</sup>, MHL20, MXW22, MKY<sup>+21</sup>, MZA<sup>+20</sup>, MBK<sup>+21</sup>, MISS22, Mea19, MTR<sup>+21</sup>, MAM22, MLYL20, MLTT20, MNB<sup>+17</sup>, MÖ22, MGN<sup>+22</sup>, MyPLK22, ML20, NAR<sup>+22b</sup>, NSNF17, NT21, ÖY17, PHRH21, PCC22, PGS<sup>+21</sup>, PSY21, PK22, PMP19, QHNL21, RGB20, RRF22, RKP19, RLQ<sup>+21</sup>, RLS<sup>+21</sup>, RS21b, RSH22, RSJP19, SGM20, SPB<sup>+22</sup>, SCE21, Sar21, SBA21, SBHD17, SAS<sup>+21</sup>, SMM<sup>+20</sup>, SJB21, SWG21, SJB22].

**based** [SWY<sup>+21</sup>, SLG<sup>+21</sup>, SSL<sup>+19</sup>, SK18, SV19, SSSJ19, SZM22, Sub18, SYZ16, SYCC21, TADS20, TGC<sup>+21</sup>, TPE20, TKBK22, TLS<sup>+21</sup>, TMTB19, URC19, VBST21, VMMA17, WGC19, WMD<sup>+20</sup>, WHA<sup>+20</sup>, WCX21, WCZ21, WWZ<sup>+21</sup>, WHY<sup>+21</sup>, WLL21, WLS22, WLC<sup>+22a</sup>, WWZ<sup>+20</sup>, WMHL21, XHP<sup>+21</sup>, XWZ21, XLZ20, XWW17, XZL<sup>+22</sup>, XJB<sup>+17</sup>, XLL<sup>+19</sup>, XCZ<sup>+21</sup>, XLL<sup>+21</sup>, XZZ21, XCZ<sup>+22</sup>, YKJK21, YCX18, YZL<sup>+19</sup>, YL20a, YLM21, YWX<sup>+22</sup>, YL20b, YLN<sup>+19</sup>, YZL22, YLZ<sup>+20b</sup>, ZCJ<sup>+21</sup>, ZWH18, ZSM22, ZW15, ZWS<sup>+20</sup>, ZTSS20, ZWH<sup>+20</sup>, ZLH<sup>+20</sup>, ZNX<sup>+21</sup>, ZYL22, ZZB<sup>+22</sup>, ZGR<sup>+22</sup>, ZLT<sup>+19</sup>, ZWX<sup>+19a</sup>, ZWX<sup>+19b</sup>, ZSL21, ZWY<sup>+21</sup>, ZDL17a, ZDL17b, ZWGC19, ZGZ21, ZLW19, ZTJ<sup>+21</sup>, dAdSM<sup>+22</sup>, dORM<sup>+20</sup>].

**Basic** [Gar17, Lei16, Ber13].

**Basics** [Dre17b, BP17b].

**Basis** [HQ15, LLHW20, Six17e, Spr13, RBM17].

**BASM** [Hal21].

**batch** [HYLY19, RLS<sup>+21</sup>].

**Batching** [SS12, SS13].

**Batters** [Chi13].

**Bayesian** [Alz19, DH17, JL17, JSKV16, PCP20, SZ14, SZdLZ22].

**BC** [DKJ19].

**BCC'17** [ACM17b].

**BCDN** [AC19].

**BCEdge** [ZSL21].

**BCON** [AAC<sup>+19a</sup>].

**Be** [AP20, Kan18, KKS<sup>+17d</sup>, KKS<sup>+17c</sup>, Bon14b, CAMS20, CEN14, EHA22, Fai17, PW17a].

**beast** [Fail17]. **beat** [Pec16]. **become** [CRdK16, Nor17b]. **bee** [DXW21]. **Beef** [RBB19]. **before** [Far18a, Uni14]. **befuddled** [Bar14]. **beginner** [BDP17a, Pro13, Pro14]. **Beginners** [Ale18b, KRL17]. **Behavior** [HLC<sup>+</sup>17b, LHL21, LGGB<sup>+</sup>21, AZR<sup>+</sup>20, KOM<sup>+</sup>22, HWW<sup>+</sup>20]. **Behavioral** [ESLB20]. **behaviours** [DMR17a]. **Behind** [KD20, LZDA16, Gei16, TT16, TTC16]. **Behold** [DMH18a]. **being** [Far18a, Lew15]. **Belief** [Abr16, NVE<sup>+</sup>21]. **Bell** [BW17]. **Benchmarks** [vM18]. **Beneath** [ZWW<sup>+</sup>17]. **Benefit** [FS16, HB14]. **Benefits** [HJHBG22, Uni14]. **Bespoke** [Tay13]. **Best** [Hal21, Rao14, WK19, CJA<sup>+</sup>19]. **Best-coins** [Rao14]. **bet** [Ito18]. **Betfunding** [JCHSR16]. **Betrayal** [Mez19]. **Better** [BBSU12, Spo17, WM18, Lew15]. **Between** [Chi18, HJHBG22, LJG15, Nar19, Nis16b, BSKR21, FA21, GTMP14, HZ21, JYKA19, JJ21, KLDS20, KCS<sup>+</sup>14, SKG22, WLW22]. **Beware** [MC13]. **Beyond** [Bec18, BdL13, GCD16, HS16b, HS16a, Øln16, Tro15a, TS16, Uli16, Ano21b, BGPW16, Bre17, BT18b, CV18, Ext15, NPDS20, Und16, ZGR<sup>+</sup>22]. **BFT** [FWP21, MXC<sup>+</sup>16, Sal22, Vuk16]. **BGP** [XWW17]. **BGPCoin** [XWW17]. **bi** [CTGJ22]. **bi-directional** [CTGJ22]. **bias** [Cra17]. **bibliometric** [FRF<sup>+</sup>19, GHG<sup>+</sup>21]. **bid** [CLXW22, QL22]. **bid-rigging** [QL22]. **bidding** [CLXW22, LLJ21, SCE21]. **Bidirectional** [ZFW24]. **bifolded** [JB21]. **Big** [CSZ<sup>+</sup>21, CGLR19, Dre17q, Ito18, Liu16, Pav18, TSCT18, Wol18, XWL<sup>+</sup>19, Cha85, CLS19a, DPN<sup>+</sup>22, ESP22, HLP<sup>+</sup>21, Kel15, Lee15, LP17b, LP17c, LP18b, Tun18, UHK<sup>+</sup>21]. **BigFoot** [Sal22]. **Billionaires** [Mez19]. **billions** [Gei16]. **BIM** [CTM22b]. **Binance** [Ano19a]. **Binary** [KJ17, KJ18]. **Biomedical** [MGDEK17, MGDEK18]. **Biometric** [PPR<sup>+</sup>20, Sar21]. **biometric-based** [Sar21]. **Biometrics** [KFN<sup>+</sup>17, BILN21]. **BIPS** [Sou13]. **Birthday** [BK17b, Lar13]. **bis** [MG16]. **Biscotti** [SFYB21]. **BiSign** [AAGA19]. **Bit** [Sza08]. **BitAnalysis** [SXYL23]. **BitBeat** [Vig15]. **BITCOIN** [BCJR15, CSN14, CMR<sup>+</sup>16, JRB<sup>+</sup>17, ADQH22, ALGK19, AGK22a, Als23, Ano18a, AZR<sup>+</sup>20, Ape14, Ara21, AW18, AAPZ19, AKWW19, AV22, ARL19, BM20, BLZ20, BLMZ20, BLMZ22, BCV19, Bec14, BSKR21, BDF<sup>+</sup>22, BGN<sup>+</sup>22, BdL13, BW14, BS17a, BBMS14, BSF22, BERHE19, CAS21, CLS19b, CLS20, Cim18a, CTM22a, Coh20, CELR18, CMS21, DWS21, DSW14, DSBPS<sup>+</sup>18, DMR19a, Dir19, Dus14, EHA22, EZR<sup>+</sup>22, Ext15, ES18, FGHM17, FPD<sup>+</sup>21, FS20, GMH21, GTMP14, GHJ21, GHJ22, GBE<sup>+</sup>18, GZ18, GB22, GKKT16, GGS19, GB21, GGKR21, GAF18, GLG19, Gya21, HS20, HSS<sup>+</sup>20, HZ21, Han13, HJHBG22, HSY<sup>+</sup>21, Ibr17, IST19, IM21, JYKA19, JW18, JSKV16, JLLK23, KM20, KL18a, KYLA22, KKJG<sup>+</sup>16, Kol22, KK21, Koo18, KL18b, KO22, Ksh22, KPJ22, KT18, KKS<sup>+</sup>17d, LS21, LL18]. **Bitcoin** [LS20, LUBS18, Leo20, LLC<sup>+</sup>20, LLWH21, LPS<sup>+</sup>20a, LLYL19, LLL<sup>+</sup>21a, LLL<sup>+</sup>21b, LZZ21, LPS20b, LX20, LZZ<sup>+</sup>22, MG16, MF19, MGS22, MPC<sup>+</sup>23, Mez19, MAAAW<sup>+</sup>22, MB17b, NSB19, NTRK22, NBP<sup>+</sup>21, NVWF14, OFA22, OTS<sup>+</sup>21, PCHD19, PASA22, PMMP19, Per22, PPW<sup>+</sup>15, RS21a, RRF22, RSV15, RC19, RH11b, SCN<sup>+</sup>22, SG21, SKG22, Sat18, Sem22, wScCeS21, SY22, SMB22, Six17f, So19, SA20, SGK21, SS20, SS19, SYH22a, SYH22b, SXYL23, TDW<sup>+</sup>22, TNJJ22, TB17, TSHI22, US23, VLAF21, VFV17a, WDLL19, WWQ<sup>+</sup>18, WGL19, WCY19, WYZ<sup>+</sup>20, WLW22, WPC<sup>+</sup>22, WTW<sup>+</sup>23, WKD22, WA15a, WKEM20, WPXZ20, YF22, YCP<sup>+</sup>21, ZLMR19, ZWLS18, ZL19, ZzH21, ZLL<sup>+</sup>18, ZZS<sup>+</sup>20, ZKU<sup>+</sup>23, ZSGB<sup>+</sup>22, ADZ23, AAGA19, Bre17, Cal21, CA21, Cha14, Cra17, DTK20, FBGMPS23, GWL20, GGS20, Gon17, Hol18, IKC21,

JFG18, MYSZ19, NPB<sup>+</sup>21, RSR17, Sal18].  
**bitcoin** [WHJ20, WQHX20, WdLY<sup>+</sup>19, XWZ21, XWY<sup>+</sup>21, RT20, ADMM13, Aro12, CSG<sup>+</sup>18, CRdK16, ABL<sup>+</sup>18a, AABE20, ALP15, ACM15, Ali15, AMLH15, AMLH18, AS14, AF16, ALMLS16, ALPBT17, And14, AKR<sup>+</sup>13, AK14, ADM14a, ADM14b, ADMM14, ADMM15, ADMM16, AM15, Ano13b, Ano14a, Ano14b, Ano17b, Ano17a, Ano17c, Ano17d, Ano18b, Ano18i, Ano18k, Ano21a, Ant16, Ant15, AZV17, Ast16, AMVA17, ACC<sup>+</sup>17, BDOZ11, BDOZ12, BMTZ17, BS16, BRS17, BDWW14, BSK<sup>+</sup>20, BHMW16, BBSU12, Bar17, BHI<sup>+</sup>14, BH15, Bar14, BP17a, BZ17, BLP17, BBP19, BSB16, BDP<sup>+</sup>15, BBBB15, Bec18, BBH<sup>+</sup>13, Bee16, BS15, Bel18, BSCG<sup>+</sup>14, BK14, BLMR14, Ber15, Ber13, Bik16, BKP14, BP15, BOLL14, BMSS17, Bla18, BP14, Böh13, BCEM15, BB14, BR16, Bon16a, Bon14a, BNM<sup>+</sup>14, Bon14b, BMC<sup>+</sup>15, BC16a, Bra15a]. **Bitcoin** [Bra13, Bra15b, Bra17, BOS15, BC16b, BDW17, BW17, BT18b, Cae15, CV18, CC16, Cap12, Cap15, CKWN16, Car15, Cas12, CK16, CF15, CJW17, CSLD17, Chi13, CP17a, Chu15, CE12, CTM19, CM14, CP17b, CGR18, CBST22, CEN14, CGN14, CEW15, Cou16, CSC16, Cou13, CS15, Cus14a, Cus14b, DBB<sup>+</sup>15, DSM<sup>+</sup>17, DNP17, De18, DW13, DW14, DW15, DGSW15, DSW16, DVRM16, DSPSHJNA18, DSPSNAHJ20, Dev14, DMH18i, DMR17a, DMR18, DS17b, Dim17, Dim19, Dix17, DSN17, DNSY14, DNY17, DPESHJ14, Dru22, DS15, Duc13, EDS15, Ede14, Edw15, EBHBL16, ECA<sup>+</sup>20, ECA<sup>+</sup>21, EPY17, EBSC15, ECHL16, Eva14, ES14a, ES14b, EGSvR15, FOA16, FOA17, Fai17, FTS<sup>+</sup>20, Far18a, Far18b, FNP17, FSW14, FPKH17, Fin17a, Fox17, Fra14, FB17a, FMR<sup>+</sup>16, FMR<sup>+</sup>19, Fri14, FS16, G.17, GHMO17]. **Bitcoin** [GCL16, GKL15, GKL17, GS15a, Gei16, GGN16, GMS17, Ger16, GKČČ14, GČKG14, GRKČ15, Gev16, GK14, Gia15, GCR16, GCR18, Gim16, GAK17, GZH<sup>+</sup>14, GK17, God15, GGK<sup>+</sup>14, Gom16, GDTP17, Gri11, GS15b, HQ15, HS19a, HS16b, HS16a, HWDD17, HLC<sup>+</sup>17a, HC12, Hea13, HBG16, HG15, HBJB14, HJ15, HJPS16, Hil14, Hil15, Hob13, HM18, Hou14a, Hou14b, Hou16, HCW<sup>+</sup>18, HB14, Hur16, Hut17, IM16, JL17, JKKX16, JMM14, JZLL17, JLG<sup>+</sup>14, Joh19, JSK<sup>+</sup>17, K.13, KAČ12, KAR<sup>+</sup>15, KA16, Kar16, Kat17, KBS17, KK17a, Kay17, KRL17, Kel15, Ker14, KCD17, KSCD16, Kha19, Kha15, KH17, KT15, KFBI22, KKS14, KH16, KPW19, KCS<sup>+</sup>14, KKM14, KKS<sup>+</sup>17a, KD16, KL17, KDF13, KJGW17, Kru13, KB14, KMB15, Kün16, KK17b, KKS<sup>+</sup>17b, KKS<sup>+</sup>17c, LB18, LMLA17].  
**Bitcoin** [LJG15, LSZ22, Lee13, Lee15, LW16, LD17, LBS<sup>+</sup>15, Li14a, Li14b, LZDA16, LKL<sup>+</sup>14, LT17, LF16, LZC<sup>+</sup>17, LLZ<sup>+</sup>17, LSH13, LN15, Lus18, Lut17, LSP<sup>+</sup>15, CFvdPS15, MMR16, MG16, ML15, ML17, Mat13, Mat14, MLM15, MLM16, MHH<sup>+</sup>16, MPSW19, MSCH15, MMSH16, MSH17, MO15, Men19, Mic16, Mic14, MGGR13, ML14, MKKS14, MJS<sup>+</sup>14, MKKS15, Mil15, MB17a, MM17, MK15, MSMH21, Möl13, MMT16b, MMT16a, MC13, MCS18, MBB13b, MBB14, MB15, MES16, MBB13a, Mul14a, Mul14c, Mul14b, Mul14e, Mul14d, Mul14f, Mul14g, Mul14h, NC17a, Nak08a, Nak08b, NBF<sup>+</sup>16, NC17b, Nav17, NHM16, NAH15, NAH16, NH17, Nic17, Nis16a, Nis16b, NWGF20b, NWGF20a, OM14, OKH13, Øln16, Ort16, Peo13, Pav18, Pec13, Pec15, Pec16, P16, PS16, PSDSNAHJ19, PCP20, PR16, Pla13, Pop15, Pop16b, Pop17a, Pop17b, Pop18a]. **Bitcoin** [Pop18b, PHD<sup>+</sup>17, Pro13, Pro14, PSHW20, RAH<sup>+</sup>15, RJK<sup>+</sup>17, Ras13, RC17, Rec19, RH11a, RH13, RRM18, Riz16, Ro13, Roi13, RS13, RS14, Ros11, Rot17, RMSK14, RMS17, SBL19, SCYP17, SOA17, SI16, San14b, San14a, SSZ17, SK14, SK15, SK17, SCG<sup>+</sup>14, Sat20, SMD14, Sch13, SBBR17,



SBRS16, SZ14, Sha17, SGF<sup>+</sup>17, Shi16, Sid14, SCAA13, Sir16a, Sir16b, Six17a, Six17b, Six17d, Six17c, Six17h, Six17f, Six17i, Six17j, SLY15, Smi18, SPB17, SZ13, SZ15, SZ17, SZ18, Son14, Son16b, SKG12, SKG13, Sou13, SMZ14, Ste17, Swa15a, SVS18, TFG17, TT16, TTC16, Tay13, Tay17, TD17b, TOM17, Tre22, TS16, Uni14, Und16, Ün21, UJ16, Uri17, Urq17, VR15, VG17, Van14a, VCLK17, Van14b, VGJ15, VTM14, VM15, VBC<sup>+</sup>17, Vas17, Vel16, VTL17, VFV17b]. **Bitcoin** [VFV17c, VC15a, Vig15, VC15b, VDK16, VD17, VX17, VSM<sup>+</sup>19, Vra17, Wad18, WL15, WLY17, WHJ17, WQHX17, WLGL19, WLS<sup>+</sup>16, Wij16, WA15b, WvB14, Wör16, WZQ<sup>+</sup>17, Wu19, YK15, Yeo15, YV17, YSLH17, YTLD19, YSZ<sup>+</sup>19, ZW15, ZP17a, ZP17b, ZWL22, ZG15, ZC16, ZWQ<sup>+</sup>16, ZGGT16, ZDL17a, ZMH<sup>+</sup>17, ZMH<sup>+</sup>18, Zoh15, ZGR17, dBHC17, dre14, Ano16c, SM-16]. **Bitcoin-Based** [Van14b, Vas17, HCW<sup>+</sup>18]. **Bitcoin-Exchange** [MC13]. **Bitcoin-Handbuch** [MG16]. **Bitcoin-Like** [KL18a, SG21, VGJ15]. **bitcoin-mining** [Hol18]. **Bitcoin-Netzwerks** [Six17h]. **Bitcoin-NG** [EGSvR15, NWGF20b, NWGF20a]. **Bitcoin-Ökosphäre** [Six17a]. **Bitcoin-refunded** [BSF22]. **Bitcoin-Related** [KCD17]. **Bitcoin-Systems** [Six17i, Six17j]. **Bitcoin/US** [ZKU<sup>+</sup>23]. **Bitcoin/USD** [HG15]. **Bitcoinages** [Ano15]. **BitcoinHeist** [ALGK19]. **Bitcoins** [BSB19, DL17, Rao14, ZDL17b, ALB21, AF16, AFMdM14, BDE<sup>+</sup>13, Brü17, Cap15, ES16, Gre13, Hol15, MY11, McL13, McM13, MPJ<sup>+</sup>13, MPJ<sup>+</sup>16, RKS15, Six17e, ZGH<sup>+</sup>15]. **BitConduite** [KFBI22]. **BitConeView** [BDP<sup>+</sup>15]. **BitExTract** [YSZ<sup>+</sup>19]. **BitFlow** [HGDD20]. **BitIodine** [SMZ14]. **bitstrings** [HS97]. **Bitter** [BBSU12]. **bivariate** [PCP20]. **BIX** [Muf16]. **Blackchain** [vdHEM<sup>+</sup>17]. **blacklist** [WLS22]. **blamed** [Ano18k]. **Blind** [Cha83, BTS<sup>+</sup>21, WZQ<sup>+</sup>17]. **Blindcoin** [VR15]. **Blinded** [VR15]. **Blindly** [HBG16]. **Block** [BS16, BRS17, BM20, CKWN16, Dim19, HS19a, MAAAW<sup>+</sup>22, NSB19, OAB<sup>+</sup>17, PZZ<sup>+</sup>20, SPB17, TSL<sup>+</sup>17, YLZ20a, ZP17a, CZX<sup>+</sup>21, GS20b, GK17, GPM18, HS20, Ler14a, PB17, WdLY<sup>+</sup>19, ZWL22]. **block-chains** [Ler14a]. **Block-Withholding** [SPB17]. **BlockA** [CHL19]. **BlockAudit** [ASM19]. **BLOCKBENCH** [DWC<sup>+</sup>17]. **Blockchain** [ACM17b, AK17, ADQH22, ATZ<sup>+</sup>21, ABR17, AKP17, AKP18, ASSK21, ACA<sup>+</sup>19, AMGBK22, AP20, AMEF21, ALGK19, AGK22a, ACW17, AH19, AS18, AIM19, ARBK17, AAJ21, AA20, ASK<sup>+</sup>21, ARL20, Ale18a, Ale18b, AvM18, AAC<sup>+</sup>19b, Ali19, AAAO20, AVA21, Alz19, AAAKJ22, Ami21, ABL18b, Ano18c, Ano19c, Ano21b, Ano21e, AGT<sup>+</sup>22, AAD<sup>+</sup>21, ARK20, ATD17, AMVA17, AHWB20, ACC<sup>+</sup>17, AC17, ARL19, Bai19, Ban18, Ban19, BK22, BABD17, BGM20, BT18a, BLPB17, BART17, Bec18, Bee18, BVGC22, Bel18, BBGP19, BR17, BAJ20, BD19, BDP17a, Ber17, BLS17, BKS19, BSV17, BK17a, BK18, BPT<sup>+</sup>22, BTS<sup>+</sup>21, Bhe17a, Big20, BL22, BSLM20, Blo18, BCM16, BSF22, BS20, BAR21, BKM<sup>+</sup>17, BATB20, BC16a, BO17, BLKD20, Bri21, Brü17, BFS17, BFS18, BLNN17a, BLNN17b, But19, Cae15, CSZ<sup>+</sup>21, Cal22]. **Blockchain** [CDD17, CIL<sup>+</sup>21, CCH<sup>+</sup>20, CLT<sup>+</sup>20, CS20, CCMN17, CG16, CSKP21, CR17, CBWF17, CJA<sup>+</sup>19, CAA<sup>+</sup>22, CJW17, CXS<sup>+</sup>17, CQLL18, CLC<sup>+</sup>19, CGLR19, CXC<sup>+</sup>20, CMR<sup>+</sup>21, CTNS21, CFM<sup>+</sup>22, CLXW22, CLJ<sup>+</sup>21, Chi18, CGC21, CGT<sup>+</sup>21, Cob17, COE<sup>+</sup>20a, CPM17, CMT<sup>+</sup>21, CTM21, CTM22b, CCA<sup>+</sup>20, Coe20b, CMM<sup>+</sup>22, Cor19, CPMM21, CXW<sup>+</sup>21, CDS<sup>+</sup>19, Dan17a, DAAY22, DNP17, DFKU20, DW18,

DMSCA20, DTM20, DCZ<sup>+21</sup>, DDPS22, DMH18b, DMH18c, DMH18d, DMH18h, DMH18k, DMR17b, Di 17, DNZ<sup>+19</sup>, DT18, DSC21, DPS<sup>+21</sup>, Doz18, Dre17b, Dre17m, Dre17p, Dre17x, DF17b, Du21, DXR<sup>+17</sup>, DP18, DF17a, DAV20, ET17, EHA22, ESP22, ESLB20, EZ17, EZ18, Esc18, Eti19, EGSvR15, Eya17, EN19, Fai17, FNP17, FYZ<sup>+21</sup>, FZG<sup>+22</sup>, FAC22, FBHS19, Fot17, FRSU17, FS20, Fug19, GPPB<sup>+21</sup>, Gao17, Gar17, GANAHHJ17, GBPDW17, GBSAS17].

**Blockchain**

[GDA<sup>+21</sup>, GSF<sup>+20</sup>, GLD<sup>+18</sup>, Gen17, Ger16, GR17, GCD16, God15, GCH<sup>+22</sup>, GSWV20, Gos17, Gou19, GWF<sup>+21</sup>, GL16, Hal18, Hal21, bAHRAK17, bAHRAK18, HL16, HSJ<sup>+21</sup>, HM20, HSY<sup>+21</sup>, HFP<sup>+22</sup>, HBG16, HHK18, HJPS16, HSB17b, HSB17a, HSB17c, HSB17d, HSB18d, HSB18f, HSB18e, HSB18g, HSB18h, HSB18i, HWCL17, HP17, HP18, HH22, HV20, HTCW17, HTCW18, HAZ21, HLC17c, HLC19, HWW<sup>+20</sup>, HHO<sup>+21</sup>, HSX<sup>+21</sup>, HW16, HS19b, Hul17, Hur16, HM19, HP19, HWJ22, HRF17, IPSP17, IGRS16, IK19, JB17a, JB17b, JB18a, JB18b, JMK17, JYTW21, JL17, Jas18, JJFC22, JBK<sup>+19</sup>, JCG<sup>+22</sup>, JGL<sup>+20</sup>, JBH<sup>+22</sup>, JWNS19, Joh18, JJ21, Kab17, KDS<sup>+20</sup>, KBTT20, Kad18, KFN<sup>+17</sup>, KGA<sup>+22</sup>, Kan20, KTCI21, KT22, KPP<sup>+20</sup>, Kar16, KC18, KRK21, KK17a, KG17, KAP20, KAS<sup>+22</sup>, KTA<sup>+20</sup>, KKKT16, KJ17, KJ18, KK20a, KXSS21, KLZ<sup>+21</sup>, Kla19].

**Blockchain** [KET<sup>+17</sup>, KUEE17, KUEE18, Koe17, KVP21, KAKC20, Kön20, KFR18, Kri19, Ksh17a, Ksh17b, Ksh18a, KV18, Ksh20, Ksh21, Kue18, KVL19, KFTS17, KGTK20, Kuz19b, KK17b, LLH<sup>+20</sup>, Las17, Lau17, LCSR21, LL16, LL17a, LMWL17, LM20, LLHW20, LQYG19, LMH16, LN17, LMR17, LLW17, LZY<sup>+17</sup>, LABK17, LWY<sup>+19</sup>, LWQ<sup>+21</sup>, LWL<sup>+21</sup>, LFZ<sup>+21</sup>, LST<sup>+17</sup>, LK17, LGCY22, Lim18, LSM17, LHZ<sup>+21</sup>, LP17b, LPW17a, LP17c, LP18a,

LPW18, LP18b, Liu16, Liu19, LHO<sup>+20</sup>, LLP<sup>+20b</sup>, LZZ21, LDY<sup>+22</sup>, LTB<sup>+22</sup>, LWL<sup>+22b</sup>, LPS20b, LGGB<sup>+21</sup>, LX17, LX20, LSZ<sup>+21</sup>, Lus18, Luu17, MHL20, MZLW20, MXW22, MMR16, Mah18, Mai18, MKY<sup>+21</sup>, Mal18, ME17, MHH<sup>+16</sup>, MSC15, MCLH19, MCS<sup>+21</sup>, MZWX21, Mer19, MCJ17, MHWK16, MKL<sup>+22</sup>, MK15, Mis17, MMR<sup>+21</sup>, Moh19, MFR<sup>+21</sup>, MRR<sup>+20</sup>, Mor17a, Mor17b, Mor17f, Mor17d, Mor17c, Mor17e, Mor17i, MZ19, MG17, MGDEK17].

**Blockchain**

[MGDEK18, NRP<sup>+20</sup>, NNGV19, Nar19, NPG<sup>+22</sup>, NGS<sup>+19</sup>, NSNF17, NPDS20, NT21, Nia19, àNOE17, NGHS17, NML19, NYZ<sup>+20</sup>, NCS17, Not19, OO19, OOF<sup>+17</sup>, OA17, Øln16, ØJ17, OEO16, OEO17, ÖY17, PPR<sup>+20</sup>, PK19, PDJ22, Pan18, PSS17, PS17, PTPR17, PTPR18, PGS<sup>+21</sup>, PZZ<sup>+20</sup>, Pec17a, PL16, PS16, Per17, PB17, PP16, PYC21, Pil16, PRS22, PS18, PK22, PPMT17, Pou20, PRO<sup>+18</sup>, PSGM22, QFLM17, QUG<sup>+23</sup>, RGB20, Raj18, Raz19, RSGA<sup>+21</sup>, RC16, ROH16, RKT19, RFM<sup>+18</sup>, RBB19, Rim18, RS17, RBL<sup>+17</sup>, dSR21, RE18, Rou18, RS21b, RDL<sup>+20</sup>, RKY<sup>+20</sup>, SPJ<sup>+17</sup>, SNM17, SD16a, SDT17, SLS20, SPB<sup>+22</sup>, STG<sup>+20</sup>, SBA21, Sch19a, Sch19b, Scr18, SS17a, SRB20, Ses18, SG19, SBHD17, SAS<sup>+21</sup>, SYK17, SJB20, SJB21, SJB22, SJ21, SD16b, SFYB21, SW21, SJZG19, SWY<sup>+21</sup>, Shi19, Shu17].

**Blockchain** [Shu19, SW17, SFMC21, SL18, SV19, SRP20, SNKG20, SPZ<sup>+20</sup>, SC20, SL20, Smo18, Son18, SCZ<sup>+21</sup>, SJSY21, SGDT19, SZJ17, Str18, SSSJ19, SZM22, Suk19, SYZ16, SALY17, SXZ<sup>+21</sup>, Sup16, SS17b, Sve17, Swa16, SVS18, Swe16, Tac17, TADS20, Tam19, TSY<sup>+21</sup>, TPE20, TT16, TTC16, TT19, TNM17, THF17, TS20, TODM19, TSL<sup>+17</sup>, THFI21, Tre21, TBY17, TMTB19, Und16, VBST21, Via16, VSE21, VMMA17, VFS<sup>+19</sup>, Vuk16, Wad18, WHI<sup>+21</sup>, Wal18, WDLS17, WLXC17, WXH21, WCL17, WMD<sup>+20</sup>, WLZ20,

WCX21, WMG<sup>+21</sup>, WLN<sup>+21</sup>, WZ21, WL21, WLS22, WHW22, WXR<sup>+16</sup>, WWZ<sup>+20</sup>, WLC<sup>+22b</sup>, Wer18, Wey19, WLS17, WLSZ17, WA15a, WA15b, WM18, WK19, Wu17, WDS21, WPG<sup>+22</sup>, XJY17, XLZ20, XWW17, XCW<sup>+22</sup>, XJB<sup>+17</sup>, XAZY17, XLM<sup>+17</sup>, XZK<sup>+17</sup>, XCG<sup>+17</sup>, XSC<sup>+17</sup>, XAZY18, XRS<sup>+19</sup>, XWL<sup>+19</sup>, XZY<sup>+21</sup>, YMRS18, YKJK21, YPFY21, YCX18, YYN<sup>+20</sup>, Yan21, Yew18, YW18, YLZ20a].

**Blockchain** [YMHY21, YWJ<sup>+16</sup>, YLZ<sup>+20b</sup>, ZLMR19, Zam19, ZMKR22, Zei16, Zha19, ZXL19, ZY21, ZYL22, ZLT<sup>+19</sup>, ZDW21, ZDP<sup>+22</sup>, ZWY<sup>+21</sup>, ZGGT16, ZGY<sup>+21</sup>, ZLW19, ZHZ<sup>+22</sup>, dKW17, dORM<sup>+20</sup>, vM18, AHSZ21, AAGX<sup>+22</sup>, AC19, AMME21, ABB<sup>+19</sup>, AKT21, AHH20, ASB<sup>+21</sup>, Älv18, AB20, AZDF22, AAE19, AC21, And18, AHC<sup>+21</sup>, Ano16a, Ano21c, Ano21d, Ant20, AGK22b, ANMM22, BYR<sup>+20</sup>, BAS<sup>+22</sup>, BTF<sup>+21</sup>, BAK22, BKV22, Bar16, BVCH22, BJ20, BILN21, BP17b, Boi18, Bre17, BLB<sup>+21</sup>, BZK<sup>+21</sup>, BF20, CZ16, CG20, CSG<sup>+20</sup>, CCG21, CXLC18, Che18, CLS19a, CW20, CXWY21, CGHC21, CWCC21, CZX<sup>+21</sup>, CLS<sup>+19c</sup>, CTGJ22, CLH<sup>+20</sup>, CMJ21, CCH21, CPSGAA20, DCB<sup>+21</sup>, DSM<sup>+17</sup>, DAT21, DPN<sup>+22</sup>, DXW21, DAGK20, DCK21, DMR19b, DKJ19, DLK<sup>+21</sup>, DTK20, DGP20, DHH<sup>+22</sup>, EFFM21, EA<sub>v</sub>M20, FSY<sup>+19</sup>, FBL<sup>+20</sup>, FWP21, Fan22, FLL<sup>+22</sup>, FY19, FHZ<sup>+19</sup>, FZC<sup>+20</sup>, FCH21, FD20b, FRF<sup>+19</sup>].

**blockchain**

[FA21, GS20a, GLC<sup>+22</sup>, GLF20, GLO<sup>+22</sup>, GGJ22, GGDK20, GRM22, GAdFGMA21, Gir18, GKKT16, GK17, Gof19, Gon17, GKA<sup>+21</sup>, Gra20, GH17, GLW<sup>+20</sup>, GLY<sup>+21</sup>, GHG<sup>+21</sup>, GRHS20, GDKJ22, HHBS18, HCB<sup>+22</sup>, HSC21, HSGY20, HYWY22, HLF<sup>+21</sup>, HGDD20, HYL21, How20, HYLY19, HLP<sup>+21</sup>, HLC<sup>+17b</sup>, HZY<sup>+19</sup>, HZX<sup>+20</sup>, HZL<sup>+20</sup>, HZ20, HTLY21, ICGB21, IFD<sup>+19</sup>, JCG<sup>+21</sup>, JB21, JJ22, JLX<sup>+19</sup>,

JLX21, JZLL17, JAK19, KOM<sup>+20</sup>, KOS<sup>+21</sup>, KOM<sup>+22</sup>, KA16, KMAJ21, KS18, KAK20, KKK<sup>+21</sup>, KAK21, KSA22, KRDO17, KW20, KUE17, KGS<sup>+19</sup>, KK20b, KOJ<sup>+20</sup>, Kra15, Kra16a, KKM19, KBS<sup>+21</sup>, KSLC21, KTM<sup>+21</sup>, KKT<sup>+22</sup>, Kuz19a, LLP20a, LLH21, LCL<sup>+22</sup>, LCB<sup>+20</sup>, LLCF21, Lev17, LFX<sup>+20</sup>, LHL20, LJC<sup>+20</sup>, LLWH21, LCZL21, LLCH21, LYW<sup>+21</sup>, LLJ21, LWA21, LZD21, LZY22, LDLS22, LGL<sup>+22</sup>, LWZ<sup>+21a</sup>, LHH<sup>+18</sup>, Liu18, LML<sup>+19</sup>, LTBY20, LZZ<sup>+20</sup>, LHL21, LX21, LKP<sup>+21</sup>, LPGBD<sup>+19</sup>, LXL<sup>+19</sup>, LTW<sup>+21</sup>, LWCX21, LYZ<sup>+21</sup>, LQZ<sup>+20</sup>, MZA<sup>+20</sup>, MRG18].

**blockchain**

[MBK<sup>+21</sup>, MISS22, Mea19, MAM22, MOM22, MDN<sup>+18</sup>, MLYL20, MLTT20, MNB<sup>+17</sup>, MFE<sup>+20</sup>, MGE20, MKS<sup>+19</sup>, MGN<sup>+22</sup>, MyPLK22, NAR22a, NAR<sup>+22b</sup>, NPB<sup>+21</sup>, NVE<sup>+21</sup>, NQ20, Nor17a, Nor17b, Nor17c, OHJ20, Olu21, OdVP20, PHRH21, PCC22, PL20, PR21, PHH<sup>+20</sup>, Pec16, PM17, PW17a, Per20, PW17b, PBHM21, PSY21, PCM<sup>+21</sup>, PC21, PSHW20, PMP19, QHNL21, QL22, QNM<sup>+19</sup>, RS21a, RIMP22, RWG21, RLQ<sup>+21</sup>, RLS<sup>+21</sup>, RSR17, RSGSHGCG21, Rot17, RDDDB19, RCD<sup>+19</sup>, RSH22, RSJP19, SGM20, SI19, SG21, Sal18, Sal22, SC21, SCE21, Sar21, Sei20, STN22, SMM<sup>+20</sup>, SJX<sup>+20</sup>, SWG21, Sha18, SHL<sup>+20</sup>, SLG<sup>+21</sup>, SZdLZ22, SSL<sup>+19</sup>, SK18, SCP<sup>+20</sup>, SMHK21, SRA<sup>+22</sup>, SSV22, Sko19, Sto20, Sub18, SYCC21, TGC<sup>+21</sup>, TYY<sup>+19</sup>, TKBK22, TDS<sup>+22a</sup>, TDS<sup>+22b</sup>, TBB21, TLS<sup>+21</sup>, URC19, URC20, UHK<sup>+21</sup>, VDVC21, VD21, VG20, Wal19, WQGX22, WCX16, WDL<sup>+18</sup>, WHA<sup>+20</sup>, WLC<sup>+20</sup>, WSC<sup>+20</sup>]. **blockchain** [WMD<sup>+21</sup>, WCZ21, WWZ<sup>+21</sup>, WHY<sup>+21</sup>, WLL21, WGL<sup>+21</sup>, WLC<sup>+22a</sup>, Wat17, WWML21, WMHL21, XZL<sup>+22</sup>, XLL<sup>+19</sup>, XHST20, XCZ<sup>+21</sup>, XLL<sup>+21</sup>, XZZ21, XZXP21, XBX<sup>+22</sup>, YZL<sup>+19</sup>, YCMM20, YL20a, YLM21, YYDC21, YWX<sup>+22</sup>, YPDC20, YSD<sup>+20</sup>, YL20b, YLN<sup>+19</sup>, YS20,

YS21, YP21, YZL22, Yue20, ZCJ+21, ZSM22, ZW17, ZWS+20, ZWX20a, ZTSS20, ZWH+20, ZLH+20, ZZW+21, ZDM+21, ZNX+21, ZZB+22, ZGR+22, ZLS+22, ZBF22, ZFW24, ZFY16, ZFY17, ZWX+20b, ZWC21, ZWX+19a, ZWX+19b, ZLJW20, ZSLY20, ZZ16, ZWGC19, ZGZ21, dAdSM+22, dS17a, AKA+22, CHL19, DKJ17, ACKJ22, AAC+19a, Ano16b, BP17b, BLMQ19, DRS22, DM20, Dim20, Dix17, DKJG19, ELFCFL20, GH17, KFR17, LP20, LP17a, LPW17b, MAAN19, MBF+20, McC18, PK21, RKP19, Ser21, Sto17, Swa15b, Uli16, VDG19, YNS16, ZSL21, SKNM21].

**blockchain-adaptive** [AAGX+22].

**Blockchain-aided**

[SZM22, AC19, BKV22, Sko19].

**Blockchain-as-a-Service** [Yew18].

**Blockchain-assisted** [ARL20].

**Blockchain-Based** [AVA21, ABL18b, BL22, Bri21, CGLR19, CMT+21, DFKU20, FZG+22, GSF+20, HM19, HRF17, KET+17, KUEE17, KUEE18, Ksh20, Ksh21, LWY+19, LLP+20b, LX17, NPG+22, RSGA+21, RBB19, RBL+17, Ses18, SW21, Shi19, SL20, SGDT19, WMG+21, WLSZ17, XAZY17, XAZY18, XWL+19, YW18, YMHY21, ZY21, ZGY+21, ASK+21, BK22, BAJ20, BLSD17, BPT+22, CLT+20, CJA+19, CAA+22, CJW17, CFM+22, CLXW22, DMSCA20, DDPS22, DSC21, ESP22, HFP+22, HAZ21, HLC19, HSX+21, HS19b, JMK17, JGL+20, KBTT20, KGA+22, KRK21, LL16, LL17a, LM20, LMH16, LWQ+21, LST+17, LGCY22, LHZ+21, LHO+20, LSZ+21, MHL20, NSNF17, NT21, ÖY17, RGB20, RS21b, SPB+22, SBHD17, SAS+21, SJB21, SJB22, SWY+21, SSSJ19, SYZ16, TPE20, TMTB19, VBST21, VMMA17, WMD+20, WCX21, WLS22, XWW17, XJB+17, YKJK21, YCX18, YLZ+20b, ZYL22, ZWY+21, ZLW19, AHSZ21, AHH20, AZDF22].

**blockchain-based** [BYR+20, BAS+22, CXWY21, FSY+19, FWP21, FLL+22,

GLC+22, GAdFGMA21, HHBS18, HCB+22, HLF+21, HYLY19, HLP+21, HZX+20, IFD+19, JLX+19, KOM+20, KOS+21, KOM+22, KKK+21, KAK21, KUE17, Kra15, Kra16a, LLH21, LLCF21, Lev17, LLCH21, LWA21, LGL+22, LHH+18, LQZ+20, MZA+20, Mea19, MNB+17, MGN+22, MyPLK22, PHRH21, PCC22, QHNL21, RSH22, RSJP19, Sar21, SMM+20, SLG+21, Sub18, TLS+21, WHA+20, WHY+21, WLL21, WLC+22a, WMHL21, XZL+22, XLL+19, XCZ+21, XLL+21, XZZ21, YZL+19, YLM21, YWX+22, YL20b, ZCJ+21, ZSM22, ZWGC19, dAdSM+22, ACKJ22, Dim20, RKP19, ZSL21].

**Blockchain-Driven**

[HSB17b, HSB17a, HSB17d, HSB18f, HSB18e, HSB18h, TDS+22a].

**Blockchain-Empowered**

[HWCL17, CSKP21, LWL+21, TSY+21].

**Blockchain-Enabled**

[AAAO20, DCZ+21, Du21, KV18, Las17, LQYG19, LN17, MZLW20, BKM+17, CMR+21, CGC21, FYZ+21, Hal21, HH22, LTB+22, MXW22, NML19, QUG+23, SRP20, GDKJ22, KKT+22, MRG18, MLTT20, MFE+20, PCM+21, WQGX22, YPDC20, ZWX20a, ZZW+21, ZGR+22, ZBF22].

**blockchain-enhanced** [HZL+20].

**Blockchain-IoT** [CTNS21, ANMM22].

**Blockchain-LI** [YNS16].

**Blockchain-native** [MKL+22].

**Blockchain-Ökosysteme** [Sto17].

**Blockchain-oriented**

[IPSP17, PPMT17, ICGB21].

**Blockchain-Powered**

[QFLM17, AMME21].

**Blockchain-supported** [BAR21].

**Blockchain-Technologie** [DF17b, DF17a, HP17, HP18, TNM17, BP17b].

**BlockchainDB** [EHBA+19]. **Blockchained** [AJA+22, Lei16, LTMW19]. **Blockchains** [ADA17, AV22, BNMH17, BLBS17, BDP17b, BS17b, BS18, Bog17, BTvdH20, Bys19,

CZQ<sup>+21</sup>, CDZ<sup>+20</sup>, CDE<sup>+16</sup>, DdFP18, DL17, DCY<sup>+22</sup>, DWC<sup>+17</sup>, EMEHR17, EBD<sup>+20</sup>, EN17, GvRS17, GKW<sup>+16</sup>, Gos17, GG17, HS16c, HM16, Her17, Her19, HYP<sup>+22</sup>, KD20, LSFk17, LR22, LGK<sup>+22</sup>, LDH17, LNZ<sup>+16</sup>, MDAP16, MAP16, MBC17a, MWV<sup>+18</sup>, MPC<sup>+23</sup>, Moh17, NMH16, O’C17, Pec17b, PdWWS16, QXC<sup>+21</sup>, RV21, RKTv22, RM19, RBS17, Six17e, Spo17, SDK<sup>+17</sup>, Vuk17, Web21, Yer17, ZZJ17, van20, Ano18a, BAPS22, BHMB21, BANT20, CV18, Cro18, EHBA<sup>+19</sup>, FD20a, GRU22, HZLH19, LLZY20, LLL<sup>+21c</sup>, MTR<sup>+21</sup>, MÖ22, NAK<sup>+22</sup>, Nor17c, SKA<sup>+20</sup>, Vra17, WSL<sup>+19</sup>, WM19, WZW<sup>+20</sup>, WLLH21, XHP<sup>+21</sup>, Xu16, XCZ<sup>+22</sup>, YZC22, ZAE20, PdWWS16, RBM17]. **blockchange** [Gal18]. **blocked** [Tun18]. **blocking** [EAvm20]. **BlockIoTIntelligence** [SRP20]. **BlockNDN** [JZLL17]. **Blocks** [Abr18, DCK17, GRKČ15, JSK<sup>+17</sup>, Swe16, BAPS22, Bra15b, FZC<sup>+20</sup>, WLW<sup>+19</sup>]. **BlockSecIoTNet** [RKP19]. **BlockSim** [AvM18]. **Blocktime** [Swa16]. **Blocktrees** [JCG17]. **Bloom** [GČKG14]. **Bloomberg** [Ro13]. **blossoming** [PM17]. **Blueprint** [Swa15a, Swa15b]. **Blues** [K.13]. **BlueWallet** [BDWW14]. **BIUFF** [AHC<sup>+21</sup>]. **Boards** [CGJ<sup>+17</sup>]. **Body** [HCB<sup>+22</sup>]. **Bolt** [GM17]. **Bonaire** [Ker12]. **Bond** [LS17]. **Bonds** [HJHBG22]. **Bonneau** [Ano16c, SM-16]. **Book** [Ano16c, Lev17, SM-16, Cha14]. **Book-smart** [Lev17]. **Boom** [Pop17a]. **Botcoin** [HDM<sup>+14</sup>]. **bother** [Pal18]. **Botnet** [DH17, Goo18, LLCF21]. **Botnets** [AMLH15, SGDT19, AMLH18]. **bound** [Dry14, Tro15b]. **Boundaries** [MDAP16, MAP16]. **Bounding** [LL17b, LL17c]. **Bounty** [JCHSR16]. **Bounty-Based** [JCHSR16]. **bow** [DMR19a]. **BPKI** [ZSM22]. **BPS** [HZL<sup>+20</sup>]. **Brain** [VBC<sup>+17</sup>]. **Branch** [SK18]. **Breach** [LKL<sup>+14</sup>]. **Breaking** [LP18c, LP18d, NC17a]. **Breaks** [GCR18]. **Breast** [Shu17]. **Bridging** [Dan17a]. **Brief** [SPB17]. **Briefing** [Ano18j]. **Bringing** [Dre17c, FDT17, FMR<sup>+16</sup>, MBB<sup>+15</sup>]. **Brixton** [Hil14]. **Broadcast** [MPSP17]. **Broader** [YWS<sup>+18</sup>]. **broke** [Ste17]. **Broken** [GCR16, GCR18, Rou18]. **brother** [Cha85]. **Browser** [Abr18]. **BSeIn** [LHH<sup>+18</sup>]. **BSI** [JCG<sup>+22</sup>]. **BSRA** [VDG19]. **BTC** [EZR<sup>+22</sup>]. **BTNC** [ZWS<sup>+20</sup>]. **BTSM** [Hal21]. **Bubble** [God15, Kru18, Pop18b, LL18]. **Bubbles** [HHBS18, CF15, GTMP14]. **Bubbling** [WM18]. **bucks** [Tun18]. **Bug** [Chi13, WLXC17]. **Bugs** [Cou16, WZS19]. **Build** [IM16, LSM17, YF22, Per22, RST11]. **Building** [CCH<sup>+20</sup>, CTM22b, DFKP13, How20, Spo17, Swe16, WWZ<sup>+22</sup>, LLL<sup>+21c</sup>]. **Builds** [dCdCM14]. **Bulgaria** [OF15]. **Bullet** [McG18]. **Bulletin** [CGJ<sup>+17</sup>]. **Burn** [PBHM21]. **Burn-to-Claim** [PBHM21]. **Business** [BART17, CWL17, GBPDW17, LSN21, Liu18, ME17, MWV<sup>+18</sup>, Mor17f, WXR<sup>+16</sup>, Ant20, BHMB21, Hal18, LPGBD<sup>+19</sup>, LTW<sup>+21</sup>, PSHW20, RBM17, TT16, TTC16, Uni14, ZW15, ZW17, ZFY16, ZFY17]. **businesses** [CZ16]. **Buy** [ECHL16, GAF18, Ito18, PW17a]. **Buyer** [HWDD17, HSB18a, HSB18b]. **Buyer-Led** [HSB18a, HSB18b]. **Bytecode** [ABBS18]. **Byzantine** [BDF<sup>+22</sup>, BSV17, CV21, Coe20b, Gra20, LSP82, ML14, TYY<sup>+19</sup>, VG20, XZY<sup>+21</sup>]. **C2B** [Blo18]. **C4** [JW16b]. **C5** [JW16a]. **Caching** [SNM17]. **Calculus** [Kam17]. **California** [CRS83]. **Campaign** [Cim18b, Men19, Seg18]. **campaigns** [CGR18]. **Can** [AP20, BBH<sup>+13</sup>, Ber17, CRdK16, CAMS20, EHA22, GP17a, HSB17b, HSB18f, Ksh17a, Ksh17b, MBC17a, Tre22, KFR17, Lew15, Pec17a, SYZ16]. **Cancer** [Shu17]. **Canonical** [Ort16]. **Can’t**

[McK19]. **Capacity** [KJ17, KJ18]. **CAPER** [AAE19]. **Capital** [DMH18l, McL13, PF18]. **Capitalism** [Bhe17b, Bhe17e, DdFP18]. **Capitalizations** [Ano18f]. **Capture** [WXH21]. **Car** [ANMM22]. **Car-sharing** [ANMM22]. **Carbon** [CE12, GB22]. **card** [Per22]. **Care** [BSLM20, Chu15, DMH18c, LP18c, LP18d]. **Careers** [Nor17b, Per20]. **carrier** [LML<sup>+</sup>19]. **Case** [BATB20, CMT<sup>+</sup>21, FRSU17, Fug19, HS16d, HSB18i, KPP<sup>+</sup>20, LX17, LN15, LSP<sup>+</sup>15, RRD17, Str18, WXH21, WKEM20, Yew18, ANMM22, CSLD17, GRU22, HS20, KOJ<sup>+</sup>20, XLL<sup>+</sup>19, YP21]. **Cases** [CDZ<sup>+</sup>20, Nav17, SG19, Raj18]. **Cash** [Ano17a, KL18a, MGGR13, OO91, WvB14, Bac97, Bac01, BB15, HGDD20, Nak08a, Nak08b, Pan96, Pec12, WLS17]. **cash-flow** [HGDD20]. **casino** [Ano21b]. **Casinos** [Mat13, Pia16]. **Categorization** [GDP<sup>+</sup>17]. **Catena** [TD17b]. **Caterpillar** [LPGBD<sup>+</sup>19]. **Causality** [HZ21, Ün21]. **Causality-in-Quantiles** [HZ21]. **CBDCs** [JJ21]. **CBT** [GANAHHJ17]. **CCS'17** [ACM17a]. **CDN** [AC19]. **Cecoin** [QHW<sup>+</sup>20]. **cellular** [WLN<sup>+</sup>21]. **cellular-connected** [WLN<sup>+</sup>21]. **censors** [RS21a]. **Censorship** [RC19]. **Central** [CMS21, Nis16a, Son14]. **centralisation** [LPS<sup>+</sup>20a]. **Centralised** [Lei16]. **centralization** [BS15]. **Centralized** [KAKC20, WSZN18]. **Centrally** [LDH17]. **Centric** [ACC<sup>+</sup>17, Hul17, LQZ<sup>+</sup>20, NAR22a, NAR<sup>+</sup>22b]. **CEO** [Sid14]. **Certificate** [KKM19, XZK<sup>+</sup>17, AHSZ21, CCMN17, LCB<sup>+</sup>20]. **Certificateless** [WHW22]. **Certificates** [LWL<sup>+</sup>22a, Muf16, ACKJ22]. **Certification** [KLR<sup>+</sup>17a, KLR<sup>+</sup>17b, Wey19]. **Certified** [AFMdM14, BDF<sup>+</sup>22]. **CertLedger** [KKM19]. **CFO** [SLS20]. **Chain** [Ape14, BAR21, CTM21, Cou14, HSB17b, HSB17a, HSB17c, HSB17d, HSB18a, HSB18b, HSB18f, HSB18e, HSB18g, HSB18h, HSB18i, Kra16b, Kri19, Ksh21, Nia19, RKT19, WCL17, Wu17, XRS<sup>+</sup>19, XZY<sup>+</sup>21, YPFY21, Che18, DF17b, DAV20, GS20b, How20, JJ22, KOM<sup>+</sup>22, MFE<sup>+</sup>20, NNGV19, PB17, PC21, STN22, SCZ<sup>+</sup>21, SYCC21, XZZ21, XZXP21, FY19]. **Chaining** [ET17]. **Chains** [GKL17, JSK<sup>+</sup>17, KPJ22, WDLL19, Älv18, AHC<sup>+</sup>21, Ler14a, PCM<sup>+</sup>21, SZ13]. **Chaintegrity** [ZWX20a]. **Challenge** [DAAY22, Tzi18, LWA21, MLYL20]. **challenge-based** [LWA21, MLYL20]. **Challenges** [ACM17c, ASSK21, AAKJ22, BGM20, Big20, BMC<sup>+</sup>15, CDZ<sup>+</sup>20, CCA<sup>+</sup>20, DCB<sup>+</sup>21, DPS<sup>+</sup>21, EBD<sup>+</sup>20, HHK18, HJ15, HJPS16, KTCI21, KAKC20, KGTK20, LZD21, MWV<sup>+</sup>18, Mul14a, Nav17, PS16, PPMT17, PSGM22, RDDL17, SK17, Van14b, ZMKR22, ZDW21, ZHZ<sup>+</sup>22, dCdCM14, ACA<sup>+</sup>19, ASK<sup>+</sup>21, AKT21, And18, CWCC21, CXY21, FFL21, GGDK20, HYL21, JCG<sup>+</sup>21, KS18, MKY<sup>+</sup>21, MAAN19, MCLH19, PC21, SPZ<sup>+</sup>20, SJSY21, URC19, VDVC21, ZFW24, ZSLY20]. **challenging** [VC15a, VC15b]. **Chancen** [Ker14, San14a]. **Change** [FWB15, KRL17, KYLA22, Mor17c, Kel15, Pec17b]. **changing** [Pal18, TT16, TTC16]. **Channel** [AGGM16, BDW17, EKK<sup>+</sup>17, MMSK<sup>+</sup>17, RLT17, TWFO20, ZY21, ECA<sup>+</sup>21, ZLL<sup>+</sup>19b]. **Channels** [ABF<sup>+</sup>16, DW15, GM17, Kra16b, NT21]. **Chaos** [LB18]. **character** [MLTT20]. **Characteristics** [KLDS20, WLXC17, WKD22, ZKU<sup>+</sup>23]. **Characterizing** [CLS<sup>+</sup>21, GCL16, IST19, MPJ<sup>+</sup>13, MPJ<sup>+</sup>16]. **charging** [HZLH19, KUE17]. **charity** [SPB<sup>+</sup>22]. **Charles** [G.17]. **chart** [Pec17a]. **CHChain** [TDS<sup>+</sup>22b]. **check** [Pal18]. **checking** [WHY<sup>+</sup>21]. **Checkpointing** [AV22]. **Checks** [YWS<sup>+</sup>18]. **Chemotherapy** [Shu17]. **Cheque** [SV19, KBTT20]. **China** [CSZ<sup>+</sup>21, CP17a, JLX21, K.13, RS21a,

Son14, Sto20, Ün21, ZZ16]. **Chinese** [Son14]. **Choice** [Kan18]. **choices** [KVP21]. **Choosing** [Dre17d, WK19]. **Choreography** [CMM+22]. **Choreography-based** [CMM+22]. **Christ** [BBMS14, CSN14, CMR+16, GP17b]. **Church** [BBMS14, CSN14, CMR+16, GP17b]. **circulation** [MKL+22]. **Cisco** [Ker18a]. **citation** [YS21, YP21]. **Cities** [IPSP17, LHZ+21, Mis17, SNKG20, CGC21, HTLY21, JYTW21, KMAJ21, KTA+20, LYZ+21, MKY+21, MZA+20, MLTT20, Pou20, Sto20, SYZ16, Ser21]. **Citizens** [Chi18]. **City** [De18, CSKP21, CGHC21, KAP20, PGS+21, ZWH+20]. **CitySense** [IPSP17]. **civilizations** [dS17a]. **Claim** [PBHM21]. **Class** [BW17]. **Classification** [ATZ+21, Als23, GMH21, JJFC22, TT19, DCK21, FBGMPS23, GDA+21, SKG12, ZSGB+22]. **clearance** [KBTT20]. **Clearing** [SV19]. **Client** [BC16a, LR22, XCG+17, JLX+19]. **Client-Assistance** [LR22]. **Clients** [BKP14, GČKG14, McK19, VCLK17]. **Clinical** [ACV17, BR17]. **clipboard** [Pal18]. **clipboards** [Bar18]. **clock** [FSY+19]. **cloning** [KOJ+20]. **closed** [LZDA16]. **closing** [MF19]. **Closure** [MCS18]. **Cloud** [BJ20, ECdO17, HS16c, JWNS19, Kue18, LQYG19, LST+17, Mal18, RSV15, RBB19, SJB20, SV16, SL18, SL20, TSL+17, WPG+22, ZHZ+22, ABB+19, AGK22b, CSKP21, DSC21, GGJ22, HZY+19, HZL+20, HSX+21, JO13, KGTK20, MXW22, MRG18, PR21, PK22, RLQ+21, SJB21, SJB22, SZdLZ22, WWZ+20, WLL+13, YCX18, YZL22, YLZ+20b, ZYL22, ZWGC19, ESP22]. **Cloud-Based** [HS16c]. **Cloud/Fog** [JWNS19]. **Clouds** [KZVT17, MKGT16a, MKGT16b, HH22, TVK+20]. **Clustering** [EZ17, EZ18, EPY17, FOA16, NH17, WTW+23, HLC+17b, Sal18, Urq17]. **CMOs** [KPP+20]. **CNN** [CA21]. **CNN-based** [CA21]. **Co** [Blo18, GR17, BBBB15]. **Coalitions** [MKKS14, MKKS15]. **Code** [FB17b, KOJ+20, SCAA13, DW18, Ger16]. **coded** [ZWL22]. **Codes** [LSO+15, Pie20]. **Coding** [RV21]. **Coefficient** [WPXZ20]. **Coercion** [Dim20]. **Coercion-free** [Dim20]. **Coexist** [GP17a]. **Coffee** [ECHL16]. **Cognitive** [SKA+20, Che18]. **Cohort** [LZZ21]. **Coin** [Ale18b, Dir19, IPL+18, KPW19, KJGW17, RMSK14, Goo18, SYH22a, SYH22b, DFKP13, THF17]. **Coinbase** [Far18b, GCD16, KRL17]. **Coincheck** [Gal18, Nak18, WREK18, WSZN18, YWW+18, YWS+18]. **CoinDash** [Os18a]. **CoinDesk** [Sup16, Vig15]. **CoinParty** [ZGH+15]. **Coins** [Ros12, RKS15, Rao14]. **Coinsecure** [Cim18a]. **CoinShuffle** [RMSK14]. **CoinTerra** [BH15, BHI+14]. **Collaboration** [NOT15, XZL+22]. **Collaborations** [Chi18, LSN21]. **Collaborative** [RBL+17, SGDT19, And18, KKK+21, LTMW19, LWA21, MLYL20, MGE20]. **Collapse** [K.13, Sch14b]. **Collateral** [KT15, MB17a]. **collected** [Cha14]. **Collection** [AAD+21, LDY+22, CJW17, ICGB21]. **Collective** [IM16, KPP+20, KKJG+16]. **Collisions** [Lar13]. **Collusion** [YTLD19]. **colony** [DXW21]. **Colored** [Ros12]. **Column** [Wel18]. **Combat** [OOF+17, RAH+15, CW20]. **Combatting** [DN93]. **combination** [HSC21]. **Combinatorial** [GZ18, MXW22]. **Combinatorial-Probabilistic** [GZ18]. **Combining** [Raz19]. **ComboJack** [Bar18, Pal18]. **ComChain** [VG20]. **come** [Ker18b]. **Coming** [Tre22]. **Comments** [Sar21]. **Commerce** [DCZ+21, GWF+21, Pan96, SXZ+21, XLM+17, ZWY+21]. **Commercial** [Ger16]. **Commissioning** [HS16c]. **commit** [EAvM20]. **CommitCoin** [CE12]. **commitment** [CS15, ZAE20].

**Commitments** [CE12]. **committee** [CFM<sup>+</sup>22, LLZY20]. **committee-based** [LLZY20]. **CommLedger** [Moh19]. **Commodity** [BW14]. **Common** [DDX17, PCM<sup>+</sup>21]. **communicate** [SM20]. **Communication** [Alz19, BLSD17, FDT17, FF17, LZZ<sup>+</sup>22, WCL17, vdHEM<sup>+</sup>17, AR15, FA21, HZL<sup>+</sup>20, LCB<sup>+</sup>20, SWG21, VD21, YYDC21]. **Communications** [ACM17a, Bra13, CGC21]. **Communities** [Bel18, WXH21, ACA<sup>+</sup>19]. **Community** [FPD<sup>+</sup>21, Kee16, RRM18, VGJ15, BB14, SWG21, XWY<sup>+</sup>21]. **Compact** [NSB19, SBRS16, SALY17]. **Company** [SLS20]. **Comparative** [SL18, WLW22, DSM<sup>+</sup>17]. **Comparing** [Kön20]. **Comparison** [CTM19, SCAA13, SS19, GDA<sup>+</sup>21, IKC21, Kat17, PASA22]. **Compatibility** [SBBR17, ZGR17]. **Compatible** [ZP17b]. **competition** [HVM<sup>+</sup>18]. **Complaint** [MAAAW<sup>+</sup>22]. **Complete** [Wil13]. **Complex** [FPD<sup>+</sup>21, TDW<sup>+</sup>22, VA15, FD20b, MKL<sup>+</sup>22]. **Complexity** [Bhe17b, ZKU<sup>+</sup>23]. **Compliance** [ECdO17, HV20, PYC21, Lyn14]. **Compliant** [Ban18]. **Components** [SD16a]. **Composable** [BMTZ17, JKKX16]. **compraventa** [HA15]. **Comprehensive** [LGK<sup>+</sup>22, RMS17, SRB20, NBF<sup>+</sup>16]. **Computation** [CGJ<sup>+</sup>17, DCZ<sup>+</sup>21, ET17, EL14, HS20, KB16, KVV16, LSP<sup>+</sup>15, BHH19, XCZ<sup>+</sup>21, ZGR<sup>+</sup>22]. **Computational** [BBDN21, HWCL17, SC20, Li14a, Li14b]. **Computationally** [BLZ20]. **Computations** [ADM14a, ADMM14, KB14, vdHKZ14, ADMM16, Bee16, HCW<sup>+</sup>18]. **Compute** [But13a]. **Computer** [ACM17a, LTKS15, Son16a, Wör16, vO20]. **computers** [Goo18, Hol18]. **Computing** [AAJ21, Bee18, BS20, BATB20, DMH18g, Her17, JWNS19, Kol22, Kue18, LQYG19, LSH13, TMTB19, Wel18, ZHZ<sup>+</sup>22, BKV22, DSC21, EFFM21, FWP21, Fin17b, Her19, HLC19, HS19b, IFD<sup>+</sup>19, KAP20, KGS<sup>+</sup>19, LZD21, LDLS22, LGL<sup>+</sup>22, MGN<sup>+</sup>22, QL22, SLG<sup>+</sup>21, TB17, WQGX22, XCZ<sup>+</sup>21, ZZW<sup>+</sup>21, ZFW24, ZSL21]. **computing-based** [KAP20]. **computing-enabled** [EFFM21]. **concentration** [LP18c, LP18d]. **Concept** [HSB17a, HSB18e, Shu17, SDK<sup>+</sup>17, AC19, wScCcS21]. **Concepts** [KAKC20, BGPW16]. **Conceptual** [PRS22]. **concern** [Ole18]. **concerned** [Far18b]. **concerns** [CXY21]. **Concluding** [Gev16]. **Conclusion** [HSB17b, HSB18f, Mor17g]. **Concurrency** [DGHK17, Kad18, MMSK<sup>+</sup>17, WB17, CZX<sup>+</sup>21]. **Concurrency-Related** [WB17]. **Concurrent** [OR17, RLT17, XZY<sup>+</sup>21]. **Condensed** [JW16a]. **Conditional** [FYZ<sup>+</sup>21]. **conditionally** [LLC<sup>+</sup>20]. **Conditions** [KYLA22, GKJ<sup>+</sup>18]. **Conference** [ACM17a, ACM17c, GP17b, Ker12, OF15, Sad13, IKY05, Jue04]. **Confidence** [MG17]. **Confidential** [CZJ<sup>+</sup>17, NMt16, RMS17]. **Confidentiality** [OR17, ZHC<sup>+</sup>20, FLL<sup>+</sup>22]. **Confidentiality-Preserving** [ZHC<sup>+</sup>20]. **Configuration** [WK19]. **Configurations** [RC16]. **Confirmation** [KK17a, OAS<sup>+</sup>21, ZGGT16, ECA<sup>+</sup>20, GHJ22, GGKR21, Koo18, PSDSNAHJ19, SGK21]. **Conflict** [NOT15, AAC<sup>+</sup>19a]. **Conflict-Resolution** [NOT15]. **Conflicts** [LMLA17]. **Congestion** [KJ17, KJ18, HVM<sup>+</sup>18]. **Congressional** [Dus14]. **CONIKS** [Bon16b, MBB<sup>+</sup>15]. **Connected** [DAAY22, RSJ21, WLN<sup>+</sup>21]. **connection** [ZWS<sup>+</sup>20]. **Connections** [HBJB14]. **Connectivity** [CGFH16]. **conscience** [Osbl8a]. **Consensus** [BLP17, BDF<sup>+</sup>22, CV21, CZQ<sup>+</sup>21, CCA<sup>+</sup>20, Coe20b, Cor19, JBH<sup>+</sup>22, JSK<sup>+</sup>17, Kwo14, LLH<sup>+</sup>20, LFZ<sup>+</sup>21, LPS20b, LTKS15, ML14, MHWK16, PS18, Poe14, QXC<sup>+</sup>21, RZJ20, SYB14, SXZ<sup>+</sup>21,



XCW<sup>+22</sup>, XLM<sup>+17</sup>, XNC21, ZP17a, vM18, ASB<sup>+21</sup>, AB20, Bre17, BF20, FWP21, FZC<sup>+20</sup>, FCH21, Gra20, HWJ22, JB21, KKS<sup>+17a</sup>, Kra15, Kra16a, LZYZ22, LTC<sup>+19</sup>, LX21, LLL<sup>+21c</sup>, Pou20, PCM<sup>+21</sup>, PC21, Sal22, WLC<sup>+20</sup>, WSC<sup>+20</sup>, XHP<sup>+21</sup>, XBX<sup>+22</sup>, YLN<sup>+19</sup>, ZWH<sup>+20</sup>, dORM<sup>+20</sup>. **Consensuses** [AMEF21]. **consent** [KK20b]. **conservation** [How20]. **considerations** [Dus14]. **Considering** [NSB19, YP21]. **Consistency** [DSW14, DSW16, KKJG<sup>+16</sup>, MZWX21, Sal18, Sir16a]. **Consistent** [LPS20b, RST11]. **Consortium** [KPP<sup>+20</sup>, MZWX21, PYC21, WCX21, AC21, CZX<sup>+21</sup>, HZLH19, JB21, KMAJ21, LCZL21, WZW<sup>+20</sup>, XHP<sup>+21</sup>, XCZ<sup>+22</sup>, Yue20, ZTSS20]. **Constant** [BZ17, Coe08]. **Constant-Deposit** [BZ17]. **Constant-Effort** [Coe08]. **constellation** [XZL<sup>+22</sup>]. **Constrained** [HS16c, MMR<sup>+21</sup>, vdHEM<sup>+17</sup>]. **constraints** [KAK20]. **constructing** [Gim16]. **Construction** [Bel18, HJHBG22, LLL<sup>+21b</sup>, CGHC21, LDLS22, LLL<sup>+21a</sup>]. **consumer** [Blo18]. **Consumers** [Ede14]. **Consumption** [Bon14a, Dru22, DLV<sup>+22</sup>, GB21, KSA22]. **Contact** [HSJ<sup>+21</sup>]. **Contained** [Pia16]. **Content** [KT15, MHH<sup>+16</sup>, XJB<sup>+17</sup>]. **Contention** [MPC<sup>+23</sup>]. **Contest** [Dim17]. **Context** [DPS<sup>+21</sup>, EZR<sup>+22</sup>, KLL<sup>+15</sup>, Nia19, KO22]. **Contingent** [CGGN17]. **continue** [Ker18b]. **Continuous** [GMH21, YMHY21, DB16, SJ21]. **Contra** [SKNM21]. **Contra-\*** [SKNM21]. **Contract** [AB17, ABBS18, BCM16, But13b, CS20, CXL<sup>+22</sup>, GLG19, HLC17c, JS20, LP20, Pia16, Pie20, ROH16, Swa16, THF17, XJY17, XSC<sup>+17</sup>, CXY21, FBL<sup>+20</sup>, HLC19, KF19, LCL<sup>+22</sup>, LML<sup>+19</sup>, LTB<sup>+22</sup>, LWZ<sup>+21b</sup>, LWCX21, ML20, NAR22a, NAR<sup>+22b</sup>, SJSY21, VDVC21, WM19, THF17]. **Contract-based** [AB17, ML20]. **contracting** [AAGX<sup>+22</sup>]. **Contracts** [ACM17b, ADM14b, ABC17, BNMH17, BDLF<sup>+16</sup>, BKT17, Blo18, BS17b, BS18, CXG<sup>+18</sup>, CLS<sup>+21</sup>, CXLG22, DGHK17, EMEHR17, Gao17, GLD<sup>+18</sup>, HBG16, IGRS16, JKS16, KPP<sup>+20</sup>, KUEE17, KUEE18, Kün16, LCO<sup>+16</sup>, Mor17j, NMH16, NPS<sup>+17</sup>, PP16, RBL<sup>+17</sup>, SY22, SW17, SC20, VTL17, ZCC<sup>+16</sup>, ZHC<sup>+20</sup>, ZGY<sup>+21</sup>, AHH20, Ano21d, BLMZ20, BLMZ22, BZK<sup>+21</sup>, DAT21, DLV<sup>+22</sup>, GRU22, Gia15, GKJ<sup>+18</sup>, GKJ<sup>+20</sup>, GLTS22, HYL21, KOJ<sup>+20</sup>, Lev17, Liv20, LKP<sup>+21</sup>, MMMV21, OHJ20, PHH<sup>+20</sup>, SPZ<sup>+20</sup>, Tam19, WZS19, WGC19, YML<sup>+22</sup>]. **contractual** [AAGX<sup>+22</sup>]. **contribute** [SYZ16]. **Contributions** [KTCI21]. **Control** [BLBS17, DMR17b, DMR19b, LGGB<sup>+21</sup>, MLD19, McL13, MCJ17, OEO16, OEO17, PRS22, TSY<sup>+21</sup>, YWJ<sup>+16</sup>, AAC<sup>+19b</sup>, AGK22b, CMJ21, DHH<sup>+22</sup>, GGJ22, Ker18b, Kra15, Kra16a, LGCY22, LHH<sup>+18</sup>, LQZ<sup>+20</sup>, PDJ22, RGB20, SJB22, SJSY21, ZLH<sup>+20</sup>, AAC<sup>+19a</sup>]. **controllability** [TDS<sup>+22a</sup>]. **Controllable** [ZWGC19]. **Controlled** [CR17]. **Controlling** [BBDN21]. **Controls** [Smo18]. **Conventional** [Mer88]. **convergence** [FFL21, JCG<sup>+21</sup>]. **convolution** [ZGZ21]. **Convolutional** [FYZ<sup>+21</sup>, WLZ20]. **Cooperative** [LS21, LBS<sup>+15</sup>, WCZ21]. **coordinator** [VB08]. **Copyright** [NPG<sup>+22</sup>, Sha18]. **Core** [Dre17f, KAKC20, BSF22, VCLK17]. **core-based** [BSF22]. **CORFU** [MBD<sup>+12</sup>]. **Corporate** [Yer17]. **corporations** [RS21a]. **Correct** [KB14]. **Correction** [SYH22a]. **correctly** [SAL20]. **Correctness** [CXG<sup>+18</sup>, Sut20]. **Correlation** [ZWLS18, GFLS21, VX17]. **Correlations** [WKD22]. **Correspondence** [FPD<sup>+21</sup>]. **Cost** [Ast16, Bac02b, CPMM21, LDH17, KW20, LML<sup>+19</sup>, SA20]. **cost-effective** [LML<sup>+19</sup>]. **Cost-Functions** [Bac02b]. **cost-saving** [KW20]. **Costs** [CPM17].

**Could** [CEN14, DXR<sup>+</sup>17, NH17, FS16, KH16, LP18c, LP18d, Mea19, RS21a, Tun18].  
**counter** [Bac02a]. **Counterfeit** [GWX<sup>+</sup>21, STG<sup>+</sup>20, AHC<sup>+</sup>21].  
**Counterfeiting** [Alz19, AB20]. **Countering** [Koe17, SKNM21]. **Countermeasures** [AAG17, LKL<sup>+</sup>14, WHI<sup>+</sup>21, WLLH21].  
**Counting** [Fin17a]. **Countries** [Ano18d, Ksh21, OA17, AR15]. **Coup** [MK15]. **Coupling** [ARL20]. **Course** [JW16a, JW16b]. **Covenants** [CP17b, MES16]. **Covert** [LZZ<sup>+</sup>22].  
**COVID** [ACKJ22, CTM22a, HSJ<sup>+</sup>21, WKD22, ZKU<sup>+</sup>23]. **COVID-19** [ACKJ22, CTM22a, HSJ<sup>+</sup>21, ZKU<sup>+</sup>23]. **CP** [SJB22]. **CP-ABE-based** [SJB22].  
**Cracking** [VSM<sup>+</sup>19]. **Crash** [JW16a, JW16b, Edw15, VLAF21]. **Created** [Pav18]. **creates** [Ole18]. **Creation** [BM20, FZC<sup>+</sup>20, VG17]. **creator** [Cha14].  
**Credential** [BK22]. **Credentials** [CDD17, Sar21]. **Credit** [Bys19, Kat16, Per22, ZTSS20]. **credit-card** [Per22]. **Crier** [ZCC<sup>+</sup>16]. **Crime** [Gre22, Far18a, UJ16]. **Crimes** [KCD17].  
**Criminal** [JKS16, Hol18, Tun18]. **Criptoalute** [Cap15]. **Critical** [Mis17, PF18, STG<sup>+</sup>20, CPSGAA20, ZSLY20, dCdCM14]. **Cross** [LWZ<sup>+</sup>21a, OOF<sup>+</sup>17, SMHK21, WCL17, WKD22, ZWLS18, ZzH21, AAE19].  
**cross-application** [AAE19]. **Cross-blockchain** [LWZ<sup>+</sup>21a]. **Cross-Chain** [WCL17]. **Cross-Correlation** [ZWLS18]. **Cross-Correlations** [WKD22].  
**Cross-domain** [SMHK21]. **Cross-Market** [ZzH21]. **Crowd** [BLNN17b, SVL17]. **Crowd-Based** [BLNN17b]. **CrowdBC** [LWY<sup>+</sup>19]. **Crowdfunding** [BO17, JCHSR16, ZZ16]. **Crowdsensing** [KK20a, KOM<sup>+</sup>20, YZL<sup>+</sup>19].  
**Crowdsensing-Based** [KK20a]. **Crowdsourced** [Mue18, HYWY22]. **Crowdsourcing** [LWY<sup>+</sup>19, FY19, KOS<sup>+</sup>21, KOM<sup>+</sup>22, MHL20, SYCC21, TDS<sup>+</sup>22b].  
**Crude** [ZzH21]. **CRYPTO** [CRS83, Ale18b, Ano18e, CXS<sup>+</sup>17, Cou14, CPMM21, DMO<sup>+</sup>19, GCR18, Gom16, Kan18, Ker18a, KN12, Lin15, McK19, US23, WSZN18, YF22, BHI<sup>+</sup>14, Cae15, FCH21, RSW96].  
**Crypto-Asset** [YF22]. **Crypto-currencies** [Ano18e, Cae15, FCH21]. **Crypto-Currency** [DMO<sup>+</sup>19, Ker18a, KN12, CXS<sup>+</sup>17, BHI<sup>+</sup>14].  
**Crypto-Hotwire** [CPMM21]. **cryptoanarchist** [Pec12]. **Cryptoassets** [BT18b]. **cryptocoin** [Tun18]. **CryptoCubic** [Ape14]. **Cryptocurrencies** [ACM17b, AS14, AZV17, BNMH17, BBBB15, BSKR21, BMC<sup>+</sup>15, CR16, Dzi15, GANAHHJ17, GGDK20, GCR18, HQ15, JB17a, JSK<sup>+</sup>17, Ksh18b, Ksh20, MLD19, NMH16, RC16, Tzi18, Zoh17, Ano13a, Ano18a, BEM<sup>+</sup>20, CV18, Cro18, Ext15, FD20a, G.17, GDA<sup>+</sup>21, GPP18, Kug18, PCP20, Rot17, Wea18, ZLL<sup>+</sup>19a, Cap15].  
**Cryptocurrency** [Abr16, Ano16c, Ano17e, Ano18f, Ano18g, Ano18m, Ano19a, BH15, Ber18, BBM<sup>+</sup>18, BHM20, BBH18, CCMN17, Eya17, GWX<sup>+</sup>21, Gre22, Ker18b, KLZ<sup>+</sup>21, Kin13, LHZ17, Leo20, LSS14, LPSP20, Men19, Osb18a, RM19, Roo18, SM-16, SLY15, Smu18, SL17, SALY17, TWFO20, VC15b, WREK18, WKEM20, YNS16, YWW<sup>+</sup>18, YWS<sup>+</sup>18, Abe18, Ano21b, AAGA19, Ant20, Bar18, CCH21, Cim19, DAGK20, DTK20, Gal18, Goo18, HVM<sup>+</sup>18, Ito18, NBF<sup>+</sup>16, Ole18, Osb18b, Pal18, Per22, RS21a, SM20, VC15a, Abr18].  
**Cryptocurrency-Executive** [WREK18]. **Cryptocurrency-stealing** [LSS14]. **Cryptoeconomic** [BSB19]. **cryptoeconomics** [BDP17a]. **Cryptographic** [AHWB20, GADO17, GCR16, GP17a, GG17, HV20, JW16a, JW16b, Muf16, OF15, WSL<sup>+</sup>19]. **Cryptography** [Alz19, CSN14, DH76, Fra14, JRB<sup>+</sup>17, Ker12,

Sad13, BBMS14, BCJR15, CMR<sup>+</sup>16, GP17b, IKY05, Jue04, McC18, WHJ17, WHJ20]. **cryptojacking** [Ker18b]. **CryptoLocker** [LZDA16]. **Cryptology** [CRS83, OF15]. **cryptomining** [Seg18]. **cryptosystems** [Mer80]. **Crystallization** [KL17, KL18b]. **Cuckoo** [Tro14a, Tro15b, Tro14b]. **Cultural** [KD16, SG21]. **Cure** [JZS<sup>+</sup>17]. **Currencies** [Ano18d, Cou14, CMS21, GK14, GM17, Hil14, JW16a, JW16b, Mor17h, Pas15, Spr13, TS16, Ale18b, Ano18e, Cae15, CRdK16, FCH21, HS16a, Kell15, Lau11a, Lyn14, SG21, WLS17]. **Currency** [ACM15, Ali15, Ano12, Ano18j, Ano19b, AHWB20, BBSU12, BBH<sup>+</sup>13, Car15, DMO<sup>+</sup>19, EL14, Eva14, GH05, GKČ14, GZH<sup>+</sup>14, GANT21, Gri11, Int14, Ker18a, KN12, Lau11b, LCL17, LSH13, MY11, MCS18, Mul14b, Nav17, Pav18, Swa15a, VGJ15, VM15, AF16, BHI<sup>+</sup>14, Bra15a, BOS15, CXS<sup>+</sup>17, CRdK16, Dus14, Fan22, FGHM17, FB17a, Hol15, Ker14, Lee15, Pec16, SI19, San14b, San14a, Six17c, Son16b, SKG13, TFG17, TF16, Uri17]. **Current** [ATZ<sup>+</sup>21, ASK<sup>+</sup>21, Cou16, KTCI21, PSGM22, JCG<sup>+</sup>21, Six17a]. **Curse** [HB14, JZS<sup>+</sup>17]. **Curve** [Fit22, US23, WHJ17, WHJ20]. **Curves** [US23]. **Custodianship** [GANT21]. **custody** [WMD<sup>+</sup>21]. **customers** [Abe18]. **cut** [Fai19]. **Cyber** [CGT<sup>+</sup>21, FYZ<sup>+</sup>21, LSZ<sup>+</sup>21, NVE<sup>+</sup>21, RS21b, SIDV14, UJ16, DAT21, HFP<sup>+</sup>22, Sko19]. **Cyber-Physical** [CGT<sup>+</sup>21, LSZ<sup>+</sup>21, NVE<sup>+</sup>21, Sko19]. **Cyber-physical-Social** [FYZ<sup>+</sup>21]. **cyberattack** [BAR21]. **Cyberattacks** [Koe17]. **Cybercrime** [Vas17]. **cybercriminal** [YV17]. **Cybercriminals** [Esc18, Fir18]. **Cyberphysical** [AAAO20, BATB20, BLKD20]. **cybersecure** [Ser21]. **Cybersecurity** [Fug19, Mal18, DSM<sup>+</sup>17, GAdFGMA21, MRG18, SLG<sup>+</sup>21, Gou19]. **Cybertrust** [Ksh18a, Ksh18b]. **Cycle** [SW17, Tro14a, Tro15b]. **cycles** [GTMP14, HDM<sup>+</sup>14, Tro14b]. **Cycling** [JMK17]. **Cyfer** [Gou19].

**D&R** [Li14a, Li14b]. **D2D** [HWCL17, YYDC21, ZSL21]. **D2D-assisted** [ZSL21]. **D5** [OA17]. **DAC** [DHH<sup>+</sup>22]. **dada** [ZWH<sup>+</sup>20]. **DAG** [GPPB<sup>+</sup>21, WLC<sup>+</sup>22a, XHP<sup>+</sup>21, ZWH18]. **DAG-Based** [GPPB<sup>+</sup>21, XHP<sup>+</sup>21, ZWH18]. **Dagger** [But13a]. **DAGsim** [ZWH18]. **Daily** [PMMP19, MF19]. **DAML** [KF19]. **Dance** [Bhe17c]. **Dandelion** [VFV17a, VFV17b, VFV17c]. **DAO** [DMH18e]. **Dark** [BBM<sup>+</sup>18, Gre22, Ano16a]. **Darknet** [KCD17]. **Darkweb** [GDP<sup>+</sup>17]. **Dashcam** [WBK<sup>+</sup>17]. **Dashcams** [WBK<sup>+</sup>17]. **Data** [ALGK19, AGK22a, ACW17, AS18, ARBK17, ADA17, AVA21, ACV17, AAD<sup>+</sup>21, ARK20, Ban18, BBGP19, BKS19, CGLR19, CSN14, DCK17, DMR18, Dre17g, Dre17i, Dre17n, Dre17t, Dre17y, ET17, ECdO17, EG17, EN19, FBHS19, FHS<sup>+</sup>17, Fug19, GPPB<sup>+</sup>21, GWF<sup>+</sup>21, Hul17, ISM17, JRB<sup>+</sup>17, Kan20, KMMW17, Ker12, LCL<sup>+</sup>22, LS17, LL17b, LL17c, LWL<sup>+</sup>21, LST<sup>+</sup>17, LHZ<sup>+</sup>21, Liu16, LZZ21, LDY<sup>+</sup>22, LWL<sup>+</sup>22b, LGGB<sup>+</sup>21, Mai18, MJS<sup>+</sup>14, Mis17, MBC<sup>+</sup>17b, Nar19, NSNF17, PYC21, RRD17, RDL<sup>+</sup>20, Sad13, SDT17, SBHD17, SV16, SLY15, Spo17, SVS18, TD17a, THFI21, TSCT18, VMMA17, WL21, Web21, WLC<sup>+</sup>22b, WvB14, Wör16, XAZY17, XAZY18, XWL<sup>+</sup>19, YW18, YMHY21, YWJ<sup>+</sup>16, ZCC<sup>+</sup>16, ZZS<sup>+</sup>20, AKA<sup>+</sup>22, ABB<sup>+</sup>19, AGK22b, BHH19, BBMS14, BP17b, BCJR15, CA21, CSG<sup>+</sup>20, CLS19a, CXWY21, CSLD17, CTGJ22, CLH<sup>+</sup>20, CMJ21, CMR<sup>+</sup>16, DPN<sup>+</sup>22, DSPSNAHJ20, DCK21]. **data** [ESP22, FBL<sup>+</sup>20, FWP21, FLL<sup>+</sup>22, Far18b, GWL20, GLF20, Gir18, GP17b, GDKJ22, HCB<sup>+</sup>22, HSC21, HYWY22, HLP<sup>+</sup>21, HZY<sup>+</sup>19, HZX<sup>+</sup>20, ICGB21, JJ22, JZLL17, JO13, KGA<sup>+</sup>22, KTM<sup>+</sup>21, Lee15,

LLH21, LFX<sup>+20</sup>, LML<sup>+19</sup>, MHL20, MZA<sup>+20</sup>, MBK<sup>+21</sup>, MyPLK22, Pal18, RWG21, RCD<sup>+19</sup>, SWY<sup>+21</sup>, SM20, SMHK21, SRA<sup>+22</sup>, Six17a, TDS<sup>+22a</sup>, UHK<sup>+21</sup>, WMD<sup>+20</sup>, WLZ20, WHY<sup>+21</sup>, WLL21, WWZ<sup>+20</sup>, XCZ<sup>+22</sup>, YCX18, YZL22, YLZ<sup>+20b</sup>, ZCJ<sup>+21</sup>, ZLH<sup>+20</sup>, ZNX<sup>+21</sup>, ZYL22, ZWGC19, GANAHJ17]. **data-based** [WWZ<sup>+20</sup>]. **Data-Centric** [Hul17]. **Data-driven** [DMR18, LWL<sup>+21</sup>]. **data-level** [CSLD17]. **data-sharing** [HCB<sup>+22</sup>]. **Database** [DHES16, WB17, EHBA<sup>+19</sup>, GLO<sup>+22</sup>, NGS<sup>+19</sup>]. **Database-Backed** [WB17]. **Databases** [AAG17, FYK<sup>+17</sup>, Moh17, BANT20]. **Datacenter** [MKGT16a, MKGT16b, TVK<sup>+20</sup>]. **datastore** [RST11]. **Daten** [Six17a]. **Datenschutz** [PB17]. **datenschutzrechtliche** [BP17b]. **Dating** [CE12]. **David** [Lut17]. **day** [Fir18]. **dBFT** [CCA<sup>+20</sup>]. **DDoS** [FGHM17, JLG<sup>+14</sup>, KKT<sup>+22</sup>, RBL<sup>+17</sup>, RBS17]. **de-anonymization** [XWY<sup>+21</sup>]. **De-Anonymizing** [DS15]. **Dead** [BR16]. **deadlock** [NQ20]. **deal** [ADMM13]. **DealBook** [Ano18j]. **dealing** [K.13]. **Deanonymisation** [BKP14]. **Deanonymizing** [AABE20]. **death** [Cim19]. **Debt** [Bhe17c]. **Debt-based** [Bhe17c]. **DecChain** [BS20]. **Decentralised** [BCM16, Lau11a, Lei16, P16, TLS<sup>+21</sup>]. **Decentralization** [CVM17, EBHBL16, GBE<sup>+18</sup>, WPXZ20, BHMB21, LX21]. **Decentralized** [Ant21, BSCG<sup>+14</sup>, But13b, Cou13, CDE<sup>+16</sup>, DMH18f, DGP17, DGP20, Eva14, FR16, FBL<sup>+20</sup>, FY19, FDT17, FF17, GH05, GKČČ14, GM17, HTCW17, HTCW18, KET<sup>+17</sup>, Kra16b, KMB15, LWY<sup>+19</sup>, MBC<sup>+17b</sup>, Mue18, Mul14b, NOT15, Not19, Pas15, RGB20, RS21b, RMSK14, SCG<sup>+14</sup>, SJX<sup>+20</sup>, SGF<sup>+17</sup>, Shi19, SV16, Sub18, Tam19, TS16, Voi11, YPFY21, ZL19, Zoh17, ZZJ17, AB20, BAJ20, BS20, Bre17, DHH<sup>+22</sup>, GLF20, GPP18, HHBS18, HSGY20, JGL<sup>+20</sup>, JZLL17, KKK<sup>+21</sup>, LFX<sup>+20</sup>, QHW<sup>+20</sup>, RKP19, RSJP19, SJB21, Woo14, WMHL21, XJB<sup>+17</sup>, ZWC21, ZWY<sup>+21</sup>, ZMH<sup>+17</sup>, ZMH<sup>+18</sup>, CGT<sup>+21</sup>]. **Decentralizing** [CTNS21, Hal17]. **decidable** [PLSS17]. **Deciphering** [LZZ21]. **Decision** [Las17, Moh19, PZZ<sup>+20</sup>, DCK21]. **Decisions** [AMGBK22, EGB18, KUEE17, KUEE18, KUE17]. **decoded** [CM14]. **decompilation** [GLTS22]. **Decomposition** [Gya21, PASA22]. **Deconstructing** [Ros03]. **DECOR** [Ler14a]. **Decoupling** [DMO<sup>+19</sup>, IM16]. **DecReg** [àNOE17]. **Deep** [BNMH17, FYZ<sup>+21</sup>, GMH21, GR17, LLL<sup>+21b</sup>, LPSP20, NMH16, WWML21, Fan22, GS20b, LLL<sup>+21a</sup>, NVE<sup>+21</sup>, UJ16, XLZ20, ZZB<sup>+22</sup>]. **Default** [NTKS17]. **Defects** [CXL<sup>+22</sup>]. **Defense** [ZP17b]. **Defenses** [CPNX20]. **Defined** [AK17, HCB<sup>+22</sup>, RS21b, SD16a, YPDC20]. **Defining** [CXL<sup>+22</sup>, Hir17]. **definition** [DMR19b]. **Definitions** [Big20]. **defrauded** [Lew15]. **Degradation** [ABF<sup>+16</sup>]. **degree** [LX21]. **del** [RSR17]. **Delay** [FOA16, SOA17, FOA17, GRM22, GKKT16]. **delay-tolerant** [GRM22]. **Delays** [RFM<sup>+18</sup>]. **Delegatable** [CDD17]. **delegated** [ESP22]. **delegation** [AAC<sup>+19b</sup>]. **deletion** [YCX18]. **Deliver** [GDTP17, BHMB21]. **delivered** [Pal18]. **delivering** [TF16]. **Delivery** [GRKČ15, CAA<sup>+22</sup>, ICGB21, LGL<sup>+22</sup>, WLL21, ZLT<sup>+19</sup>]. **Demand** [KT22, DB16, Per20]. **Demo** [SZJ17, ZZJ17]. **Democracy** [QFLM17, Mea19, Pou20]. **democratic** [KH16]. **Demonstrating** [FF17]. **Demystifying** [Ano20, CDM20, LTKS15]. **Denial** [BAR21, SGDT19, VTM14, Bac02a, Bee16]. **Denial-of-Service** [VTM14]. **Dense** [SYK17]. **Dependability** [BBGP19]. **dependent** [WGL19]. **Depends** [Smo18, RS21a]. **Deploy** [Raz19]. **deployed**

[CXY21]. **Deploying** [GBSAS17]. **Deployment** [ECHL16, FSW14]. **Deposit** [BZ17]. **Deposits** [ADM14a, Ano18l, Bee16, YSLH17, YTLD19]. **Depth** [ZDP+22]. **derivation** [Per09]. **Derivative** [BKT17]. **Design** [AMGBK22, Ali19, AAAKJ22, BK14, BLS17, CLS19a, EGB18, Fot17, KLZ+21, LLHW20, Lin15, LLP+20b, MAQ99, RSGA+21, SK17, TKBK22, Wör16, ZTSS20, GLO+22, MÖ22, NGS+19]. **Designated** [WHJ17, WHJ20]. **Designated-verifier** [WHJ17, WHJ20]. **Designed** [Li14a, Li14b]. **Designing** [LTMW19, NST+17, Uri17, VGJ15, XLL+19]. **Designs** [BABD17, TBB21, ZWL22]. **despite** [PB17]. **Destruct** [CXLG22]. **Destruction** [Cou14]. **detailed** [ARK20]. **d'État** [MK15]. **detect** [KKT+22]. **Detecting** [AGGM16, CLS+21, WZS19, YML+22]. **Detection** [ALGK19, Bog17, CPL+21, DH17, JW18, KPJ22, LZC+17, MMT16b, RRM18, RS21b, SGDT19, WWZ+22, AJA+22, CMR+21, CBST22, CEW15, HYWY22, KKK+21, KTM+21, KKT+22, LW16, LTMW19, LWA21, LTB+22, MLYL20, MGE20, MMT16a, SMB22, SYH22a, SYH22b, VD17, WLZ20, XWY+21]. **detections** [CZ16]. **detector** [LLCF21, NQ20, XGS+20]. **determinants** [PASA22]. **Determining** [JFG18, KRL17, Scr18, GB21]. **Deterministic** [DCK17, GS15b, WLGL19]. **Deterring** [KT15]. **Detrended** [ZWLS18]. **developed** [AR15]. **Developer** [Ano17b, Nor17b]. **developers** [Lee13, Per20]. **Developing** [Ano18g, BBH18, Ksh21, Lim18, FRSU17]. **Development** [AKP17, AKP18, Ant21, DSN17, HS16d, Lei16, ZGY+21, Bra15a, CXY21, wScCcS21, VDVC21]. **Developments** [DMH18k]. **Device** [LGGB+21, LHL20, PK22]. **Devices** [HS16c, LMWL17, ÖY17, Ses18, TSY+21, FMR+19, HYLY19, HCW+18, LL16, LL17a, WLC+22a]. **DEVp2p** [HZT+22]. **dezentrale** [Six17e]. **Dhabi** [ACM17a, ACM17b, ACM17d]. **diabetes** [CMR+21]. **diagnosis** [WWZ+21]. **diced** [Nic17]. **Did** [RS14]. **Dies** [McK19]. **Dietcoin** [FMR+19]. **Difference** [Nis16b, YS21]. **Differences** [Mul14c]. **Different** [Mer19, WLW22]. **Differential** [URC20]. **Difficulty** [GKL17, Kra15, Kra16a, MCJ17]. **diffusion** [YS20]. **Digital** [AKP18, ACV17, BBM+18, Cha81, CMS21, EL14, Gev16, GK14, GANT21, Gri11, KL18a, KT15, KKS14, LPSZ18, Mer88, MK15, Mor17h, Nav17, OZ16, Pav18, Pop15, Pop16b, RBB19, Rin18, Sei20, SK20, Smo18, Spr13, Swe16, TS16, Vel16, WWQ+18, Wer18, Zei16, Bar18, BHS93, BGPW16, CJW17, CRdK16, DGP20, Fan22, GTMP14, Gon17, Goo18, HS91, HS16a, HLF+21, Ker14, KH16, KSLC21, Lee15, LLCH21, Olu21, Pan96, RBM17, RSJP19, SI19, TF16, Uri17, VC15a, VC15b, XWZ21, YL20a, AKP17]. **digitalen** [Ker14]. **digitaler** [RBM17]. **Digitalization** [Sch19b]. **Dilemma** [Eya15]. **Dilemmas** [KKS+17d, KKS+17c]. **dimension** [CLS19b, CLS20]. **dimensional** [GFLS21]. **Dimensionality** [IM21]. **Dimensions** [JB18b, BHMB21, Hal18]. **DiPETrans** [BAPS22]. **Diplomacy** [Ber17]. **Directed** [RJK+17]. **direction** [IKC21, MF19]. **directional** [CTGJ22]. **Directions** [ASSK21, DH76, HHK18, KAKC20, PPMT17, Son16a, DPN+22, JCG+21, KGTK20, PDJ22, URC19]. **Diritto** [MS15]. **Disambiguating** [Dre17e]. **Disaster** [Pan18]. **disclosure** [BEM+20]. **Discontinuity** [TSCT18]. **Discourage** [MKKS14, MKKS15]. **Discovering** [DSBPS+18, Dre17f, EZ17, EZ18, TSCT18]. **Discovery** [ACW17, LWZ+21a, LTB+22, MBT19].

**discrete** [LLWH21]. **discrete-event** [LLWH21]. **Discuss** [FF17, WXH21]. **Discussion** [Ali15, HSB17c, HSB18g]. **Discussions** [WXH21]. **Disease** [CTM22a]. **Dishonest** [AKWW19]. **Disincentivize** [ES14a]. **Disk** [GL00]. **Disparate** [LGK<sup>+</sup>22]. **dispensers** [MTR<sup>+</sup>21]. **Dispute** [BT18a]. **Disputes** [ABL18b]. **Disruption** [BBBB15, DTM20]. **Disruptive** [DT18, FRSU17, GR17]. **disruptiver** [FRSU17]. **Dissecting** [BCCS20, MPC<sup>+</sup>23, NPB<sup>+</sup>21]. **Distance** [OTS<sup>+</sup>21, GFLS21]. **Distilling** [Olu21]. **Distributed** [AMEF21, ALPBT17, AKGN18, Ant21, AABM17, Brül17, BZK<sup>+</sup>21, CZJ<sup>+</sup>17, EGB18, ECdO17, Eti19, EG17, HL16, HLC<sup>+</sup>17a, Her17, Hul17, JCHSR16, KLDS20, KMOD17, Kol22, KYV19, LDWS17, Lau11b, LS17, LLW17, LWL<sup>+</sup>22a, LSP<sup>+</sup>15, MZLW20, MGM<sup>+</sup>17, Mei18, MGGR13, NST<sup>+</sup>17, Poe14, RV21, RKTV22, RSJ21, RBB19, RLT17, SD16b, SW21, SGDT19, Str18, SPS<sup>+</sup>21, TD17a, Tre21, VCPC20, VRK21, Wat17, Wei18, Wu17, XNC21, YLZ20a, ZWQ<sup>+</sup>16, BAPS22, BCK<sup>+</sup>21, BS15, BANT20, BERHE19, CK16, CM19, CHL19, FFL21, FD20a, HS20, Her19, KF19, KTM<sup>+</sup>21, KKT<sup>+</sup>22, LZYZ22, LWCX21, MKS<sup>+</sup>19, MCF20, MMMV21, PLSS17, PK22, SK20, XBX<sup>+</sup>22, ZWH18, dORM<sup>+</sup>20]. **Distributing** [Dre17g]. **Distribution** [NPG<sup>+</sup>22, Yeo15, DAV20, KK21, ZLL<sup>+</sup>18]. **distributions** [GFLS21]. **Diversification** [HJHBG22, BOS15]. **Diversity** [JB21]. **Divide** [Bra13]. **Divisors** [DDX17]. **DL'17** [Spo17]. **DLoc** [ECdO17]. **DLT** [FFL21, Lim18]. **DLT/Blockchain** [Lim18]. **DNA** [YS21]. **DNS** [HSGY20]. **Do** [ALB21, CXLG22, Pec17a, SIDV14, WXH21, Cal21, Kug18]. **Docker** [XJB<sup>+</sup>17]. **doctrinal** [HA15]. **doctrinarias** [HA15]. **Document** [PPR<sup>+</sup>20, HS91]. **Documentation** [Ano17b]. **Documenting** [Dre17h]. **Does** [HSB17c, HSB18g, SGF<sup>+</sup>17, Ste17, Ano17d, Fai17, RE18]. **Dollar** [HJHBG22, ZKU<sup>+</sup>23]. **Domain** [JB18a, WXH21, LZZ<sup>+</sup>20, PK21, RBS17, SMHK21, TDS<sup>+</sup>22a, YS20, YS21, YP21]. **domains** [ARL20, AAC<sup>+</sup>19a]. **Dominant** [AC17]. **Dominating** [SS20]. **donation** [SPB<sup>+</sup>22]. **Done** [BSLM20]. **DONS** [BAK22]. **Don't** [JBK<sup>+</sup>19, MHH<sup>+</sup>16, Pal18]. **doors** [LZDA16]. **Doping** [PRS22]. **Doppelganger** [KKS<sup>+</sup>17b]. **Dormancy** [Smi18]. **DoS-resistant** [CZQ<sup>+</sup>21, Voi11]. **Double** [AMEF21, DNY17, JW18, KAČ12, KAR<sup>+</sup>15, LZC<sup>+</sup>17, NT21, àNOE17, PSDSNAHJ19, PR16, ZL19, DB16, MXW22, RWG21, WWZ<sup>+</sup>21, WLS22, YSLH17]. **double-blockchain** [RWG21]. **Double-Financing** [àNOE17]. **Double-spend** [PR16]. **Double-Spender** [DNY17]. **Double-Spending** [AMEF21, JW18, KAR<sup>+</sup>15, LZC<sup>+</sup>17, ZL19, KAČ12, PSDSNAHJ19, WLS22, YSLH17]. **Down** [Son14, Vig15, Zet13, Sha17]. **DPM** [GANAHHJ17]. **DPoS** [LX21]. **DPS** [FF17]. **DPS-Discuss** [FF17]. **DPSO** [DRS22]. **DR** [FWP21]. **Drain** [VBC<sup>+</sup>17]. **Draw** [Ano18m, Ole18]. **Dread** [RS14]. **Dreamers** [DMH18a]. **Dreams** [Eya17]. **Dredas** [FBL<sup>+</sup>20]. **Drive** [BK17a, BK18, KPW19, Seg18]. **Drive-by** [Seg18]. **Driven** [DCZ<sup>+</sup>21, HSB17b, HSB17a, HSB17d, HSB18f, HSB18e, HSB18h, JBH<sup>+</sup>22, DMR18, LWL<sup>+</sup>21, LTW<sup>+</sup>21, TDS<sup>+</sup>22a, TDS<sup>+</sup>22b, WQGX22, ZDM<sup>+</sup>21]. **Drivers** [PZZ<sup>+</sup>20, GDA<sup>+</sup>21, KVP21]. **Drives** [GMH21, Smu18]. **drone** [LYZ<sup>+</sup>21]. **Drones** [SYK17, CAA<sup>+</sup>22]. **Drug** [Zet13, Gei16]. **Drugs** [STG<sup>+</sup>20]. **Dry** [LJG15]. **DSA** [GGN16, GGK<sup>+</sup>14]. **DSA/ECDSA** [GGN16, GGK<sup>+</sup>14]. **dual** [LYW<sup>+</sup>21, YWX<sup>+</sup>22]. **dual-blockchain** [LYW<sup>+</sup>21]. **Dubai** [Nor17a]. **Dubious** [Roo18]. **Due** [Ami16, McL13]. **dumber** [Ito18]. **dummies** [Ant16]. **d'une** [San14b]. **Duplex** [DW15]. **Duplication** [KKS<sup>+</sup>17b].

**during** [BSKR21, CTM22a, Osb18a]. **Dutch** [PdWWS16]. **dwelled** [UJ16]. **Dynamic** [BAK22, JBH<sup>+</sup>22, KTA<sup>+</sup>20, Lin21, RV21, WMD<sup>+</sup>21, WLW22, YMHY21, ZzH21, AB20, Bar17, DB16, FWP21, KUE17, LDLS22, NAR22a, Sal22]. **Dynamical** [ZKU<sup>+</sup>23]. **Dynamically** [KJ17, KJ18]. **Dynamics** [EDS15, LS20, Sem22, Bla18, GKKT16, GK17, Gon17, VLAF21].

**E-Cash** [MGGR13, BB15, Nak08b]. **e-Cheque** [SV19]. **E-Commerce** [DCZ<sup>+</sup>21, SXZ<sup>+</sup>21, XLM<sup>+</sup>17, ZWY<sup>+</sup>21, GWF<sup>+</sup>21]. **E-Democracy** [QFLM17]. **E-Governance** [QFLM17, LSN21]. **e-Government** [ØJ17]. **E-health** [BJ20, SMM<sup>+</sup>20, ZYL22]. **E-Health-Care** [BSLM20]. **e-Healthcare** [IFD<sup>+</sup>19]. **e-learning** [AC21]. **E-Voting** [HTCW17, HTCW18, KV18, KAK21, KAK20, PR21, ZWX20a]. **Early** [KD16, Mul14g]. **earned** [Tun18]. **Earnings** [Mat13, GS20a]. **Earns** [WvB14]. **EASBF** [EFFM21]. **Easier** [BSLM20]. **East** [Ber17]. **Easy** [But13a]. **Ecash** [Pan96]. **Ecash<sup>TM</sup>** [Sch98]. **ECB2** [BILN21]. **ECBC** [XZK<sup>+</sup>17]. **ECC** [XWZ21]. **ECDSA** [DS17b, GGN16, GGK<sup>+</sup>14, Lin17, WYZ<sup>+</sup>20, WMD<sup>+</sup>21]. **ECIES** [KAS<sup>+</sup>22]. **eclipse** [XGS<sup>+</sup>20]. **eclipsed** [XGS<sup>+</sup>20]. **eCommerce** [MFR<sup>+</sup>21]. **EconLedger** [XNC21]. **Economic** [BHMB21, Bon16a, DdFP18, EKK<sup>+</sup>17, EZR<sup>+</sup>22, Eva14, Hal18, MLD19, Nav17, Pav18, CGR18, GTMP14, VC15a, VC15b, VCS03]. **economically** [KDS<sup>+</sup>20]. **Economics** [Bhe17b, BCEM15, CG16, Fra14, HS16d, Hou14b, Ker18a, KLZ<sup>+</sup>21, KD20, Ksh21, Rec19, Ant20, Bar16, CG20, HS16a, KDF13]. **Economies** [MDAP16, MAP16, Son16b]. **Economy** [BDP17a, Bhe17c, LSN21, TSHI22, XSC<sup>+</sup>17, GTMP14, Har17, LPS<sup>+</sup>20a, LP18c, LP18d, Sir16b, Swa15b, TKW15]. **Ecosphere** [Six17a, Six17f]. **Ecosystem** [Cus14a, GHMO17, GDP<sup>+</sup>17, Ibr17, Kab17, Son18, VTM14, Cus14b, DMH18b, HVM<sup>+</sup>18, HAZ21, LGCY22, MBB13b, MBB13a, PCHD19, dSR21, YV17]. **Ecosystems** [HSY<sup>+</sup>21, SW17, Sto17]. **Edge** [BS20, Du21, MMR<sup>+</sup>21, SD16a, SJ21, TMTB19, YZC22, BKV22, FWP21, HVM<sup>+</sup>18, HZL<sup>+</sup>20, HTLY21, JYTW21, JAK19, KAP20, LDLS22, LGL<sup>+</sup>22, MGN<sup>+</sup>22, QL22, WQGX22, XCZ<sup>+</sup>21, YLZ<sup>+</sup>20b, ZZW<sup>+</sup>21, ZSL21]. **edge-as-a-service** [JAK19]. **edge-cloud** [YLZ<sup>+</sup>20b]. **edge-enabled** [HTLY21, JYTW21]. **Edges** [XWL<sup>+</sup>19]. **Editor** [WR16, Wil17, WR18]. **Editorial** [CCH21, ZMKR22, ZWC21, HWJ22]. **Education** [Jas18, RRD17, SL17, CXLC18]. **Educational** [HRE17, SD16b, XZK<sup>+</sup>17, AC21]. **Edward** [Ano16c, SM-16]. **Effect** [Lin21, GHJ22, NC17a]. **Effective** [BM20, LLYL19, MCD15, WTW<sup>+</sup>23, LML<sup>+</sup>19, PC21, dSR21]. **Effects** [Bai19, MG17, OOF<sup>+</sup>17, KCS<sup>+</sup>14, SG21]. **efficiency** [BHS93]. **Efficient** [BD19, CZQ<sup>+</sup>21, DS17b, Dim20, FYK<sup>+</sup>17, Ibr17, JKKX16, KO22, LS20, Lau11b, LCSR21, LWL<sup>+</sup>22b, MGS22, MHWK16, PHH<sup>+</sup>20, RAH<sup>+</sup>15, RM19, TD17b, WDLL19, WGL19, WPG<sup>+</sup>22, XZK<sup>+</sup>17, XCG<sup>+</sup>17, XWL<sup>+</sup>19, AMME21, BYR<sup>+</sup>20, CM19, CLH<sup>+</sup>20, EFFM21, ES16, FBL<sup>+</sup>20, GLW<sup>+</sup>20, GLY<sup>+</sup>21, HYLY19, HZL<sup>+</sup>20, KW20, Lau11a, LWQ<sup>+</sup>21, LLZ<sup>+</sup>17, RCD<sup>+</sup>19, RSJP19, VD17, WDL<sup>+</sup>18, XHP<sup>+</sup>21, XBX<sup>+</sup>22, YYDC21, ZLL<sup>+</sup>19a, ZLL<sup>+</sup>19b, MRR<sup>+</sup>20]. **Effing** [MSC15]. **Effort** [Coe08]. **Efforts** [Nar19]. **Egalitarian** [Sut20]. **eGose** [ACM17c]. **eHealth** [DXR<sup>+</sup>17, HSX<sup>+</sup>21, HP19, SDT17]. **eHealthcare** [WHA<sup>+</sup>20]. **EHR** [LCL<sup>+</sup>22]. **EHRs** [HSX<sup>+</sup>21]. **Eigentumsrechten** [HP17, HP18]. **Einordnung** [SKG12]. **Einsatz** [DF17a, DF17b]. **Einsteiger** [Ale18b]. **EIP** [Woo14]. **EIP-150** [Woo14].

**Ekiden** [ZHC<sup>+</sup>20]. **Elapsed** [Cor19].  
**Elastic** [HYP<sup>+</sup>22, LML<sup>+</sup>19, Sch14b].  
**ElearnChain** [AC21]. **Election** [MG17].  
**Electric** [KMAJ21, KUE17, ZW15, ZW17].  
**electricity** [Fai17]. **Electronic**  
 [ACM17c, Ano17a, Cha81, Hut17, Ksh18a,  
 MY11, Nar19, OO91, PPR<sup>+</sup>20, Shu19,  
 CLC<sup>+</sup>19, KRK21, Nak08a, Pan96, SHL<sup>+</sup>20,  
 Sub18, TPE20, VBST21, YLM21, YWX<sup>+</sup>22,  
 ZGZ21]. **Electronics** [XRS<sup>+</sup>19]. **Electrum**  
 [VCLK17]. **elements** [Uri17]. **ELIB**  
 [MRR<sup>+</sup>20]. **eliminate** [LLZ<sup>+</sup>17]. **Elipmoc**  
 [GLTS22]. **Elliptic**  
 [Fit22, US23, WHJ17, WHJ20]. **Elon**  
 [Sha17]. **emails** [Pal18]. **Embedded**  
 [IK19, LMWL17, LL16, LL17a]. **embrace**  
 [Cae15]. **Embracing** [And18]. **emergence**  
 [BCV19]. **emergency** [RGSFGHCG21].  
**Emerging** [ACW17, Bai19, But19, Du21,  
 KD16, TODM19, HS20, Son16b]. **Empirical**  
 [JL17, KAK21, MC13, PPW<sup>+</sup>15, VTM14,  
 Vel16, WLXC17, WPC<sup>+</sup>22, CF15, CAMS20,  
 DCB<sup>+</sup>21, MB17b, BBBB15, NPB<sup>+</sup>21].  
**Empower** [DXR<sup>+</sup>17]. **Empowered**  
 [HWCL17, CSKP21, LWL<sup>+</sup>21, TSY<sup>+</sup>21,  
 WLZ20]. **Empowering** [LLL<sup>+</sup>21c]. **Enable**  
 [QXC<sup>+</sup>21]. **Enabled**  
 [AAAO20, BD19, DCZ<sup>+</sup>21, Du21, KV18,  
 Las17, LQYG19, LN17, MZLW20, Mal18,  
 SS17b, XRS<sup>+</sup>19, BKV22, BKM<sup>+</sup>17, CJA<sup>+</sup>19,  
 CMR<sup>+</sup>21, CGC21, DMH18b, EFFM21,  
 FYZ<sup>+</sup>21, GLW<sup>+</sup>20, GDKJ22, Hal21, HH22,  
 HTLY21, ICGB21, JYTW21, JAK19,  
 KKT<sup>+</sup>22, LTB<sup>+</sup>22, MXW22, MRG18,  
 MBK<sup>+</sup>21, MLTT20, MFE<sup>+</sup>20, NVE<sup>+</sup>21,  
 NML19, PCM<sup>+</sup>21, QUG<sup>+</sup>23, SRP20,  
 WQGX22, WLZ20, WLN<sup>+</sup>21, YPDC20,  
 ZWX20a, ZZW<sup>+</sup>21, ZGR<sup>+</sup>22, ZBF22].  
**Enabler** [CBWF17, SS17a, CDS<sup>+</sup>19].  
**Enabling**  
 [ABL18b, GRM22, HGDD20, IK19, LLJ21,  
 Nar19, Øln16, WZW<sup>+</sup>20, XSC<sup>+</sup>17].  
**Enactments** [LSN21]. **Encrypted** [AAG17,  
 DCK17, FYK<sup>+</sup>17, GWF<sup>+</sup>21, DCK21].  
**Encryption** [DDX17, FYK<sup>+</sup>17, HSS<sup>+</sup>20,  
 LLW17, Mer88, SZM22, BILN21, CLC<sup>+</sup>19,  
 HH22, LWQ<sup>+</sup>21, MBK<sup>+</sup>21, TGC<sup>+</sup>21]. **End**  
 [BMSS17, BMSS19, GWX<sup>+</sup>21, MBB<sup>+</sup>15,  
 PR21, Roi13, Rot17, PK21]. **End-to-End**  
 [BMSS19, BMSS17, GWX<sup>+</sup>21, PR21, PK21].  
**Endorsement** [MBT19]. **Energy**  
 [AAAO20, BD19, Dru22, EBD<sup>+</sup>20, LDWS17,  
 OO19, PW17a, Pop18a, WMG<sup>+</sup>21, CJA<sup>+</sup>19,  
 DLK<sup>+</sup>21, Fai19, GB21, GLW<sup>+</sup>20, GLY<sup>+</sup>21,  
 JAK19, KMAJ21, KTA<sup>+</sup>20, Kug18,  
 KGTK20, LWCX21, MNB<sup>+</sup>17, MMMV21,  
 OM14, TKW15]. **Energy-Efficient** [BD19].  
**ENF** [XNC21]. **enforced** [GGJ22].  
**Enforcement**  
 [KT18, ME17, Tzi18, WBK<sup>+</sup>17]. **Enforcing**  
 [Zei16]. **engine**  
 [LPGBD<sup>+</sup>19, SSSJ19, WDL<sup>+</sup>18].  
**Engineering**  
 [CS20, CMM<sup>+</sup>22, Fra14, JJFC22, LP20,  
 Nia19, Not19, PPMT17, SL20, Sve17,  
 TODM19, Bar16, CLS19b, CLS20, LTW<sup>+</sup>21].  
**EngraveChain** [SW21]. **Enhance** [SOA17].  
**Enhanced** [BM20, CC16, KAS<sup>+</sup>22, LST<sup>+</sup>17,  
 XJY17, BK22, HZL<sup>+</sup>20, HTLY21, SZdLZ22,  
 XWY<sup>+</sup>21]. **Enhancements** [CCA<sup>+</sup>20].  
**Enhancing** [BBGP19, CP17b, KKJG<sup>+</sup>16,  
 MO15, MLYL20, WA15a, WA15b, Hea13].  
**enigma** [Nis16a]. **enormous** [Fai17].  
**Enough** [ES14b, GLD<sup>+</sup>18, ES18].  
**Ensemble** [JJFC22, LPSP20]. **Ensuring**  
 [Ano21c, SHL<sup>+</sup>20]. **entail** [Cal21].  
**Entangled** [JB18b]. **Enterprise**  
 [DTM20, Mor17a, dKW17]. **entire** [Nic17].  
**entities** [AAGX<sup>+</sup>22, YV17]. **Entity**  
 [KFBI22, ZSGB<sup>+</sup>22]. **Entrepreneur** [IM16].  
**entrepreneurship** [NC17a]. **Entropy**  
 [GMH21, PMMP19, PW17b]. **Entwicklung**  
 [FRSU17]. **Environment**  
 [LST<sup>+</sup>17, ABB<sup>+</sup>19, ICGB21, JAK19, KK17b,  
 LL16, LL17a, Li14a, Li14b, ML20, WLL<sup>+</sup>13,  
 YL20b, ZWY<sup>+</sup>21]. **Environmental**  
 [GPPB<sup>+</sup>21]. **Environments**  
 [Mer19, VFS<sup>+</sup>19, ZDP<sup>+</sup>22, BPT<sup>+</sup>22, HS20,



HSX<sup>+21</sup>, LTMW19]. **EOSIO** [HSY<sup>+21</sup>, HWW<sup>+20</sup>]. **EPBC** [XCG<sup>+17</sup>]. **EPR** [PLSS17]. **Equi**hash [BK17b]. **Equilibrium** [WdLY<sup>+19</sup>]. **Equities** [HJHBG22]. **equity** [How20, ZZ16]. **Equivocation** [RKS15, TD17b]. **era** [dS17a]. **Erasing** [FBHS19]. **Erratum** [Ano18g, ZFY17, ZDL17b]. **Errors** [JS20]. **erste** [SKG12]. **escalation** [FTS<sup>+20</sup>]. **Escrow** [WLY17]. **ESORICS** [GANAHJ17]. **espoused** [SG21]. **Essays** [Kha19, Rec19]. **estimated** [Nic17]. **Estimating** [Bon14a]. **estimation** [Kat17, YV17]. **ETH** [Osb18a]. **Ether** [Cal21, WKD22]. **Ethereum** [AGK22a, ABBS18, ABC17, BCCS20, BKT17, BCM16, Bon16b, BO17, But13b, CCMN17, CPNX20, CLZ<sup>+20</sup>, CXY21, CPL<sup>+21</sup>, CLS<sup>+21</sup>, CXL<sup>+22</sup>, CXLG22, Dan17b, DMH18g, DMH18m, Fai19, FD20b, GBE<sup>+18</sup>, GKJ<sup>+18</sup>, GLTS22, HSY<sup>+21</sup>, Hir17, HZT<sup>+22</sup>, IM21, JCHSR16, JS20, KSA22, KLM17, KOJ<sup>+20</sup>, LGTS20, LDM<sup>+21</sup>, LTB<sup>+22</sup>, LPGBD<sup>+19</sup>, LWZ<sup>+21b</sup>, MPC<sup>+23</sup>, MB17a, ML20, NPS<sup>+17</sup>, OHJ20, OAS<sup>+21</sup>, Pie20, Six17g, SOA<sup>+21</sup>, TKBK22, WLW<sup>+19</sup>, WZS19, Wool14, WPXZ20, WWZ<sup>+22</sup>, XGS<sup>+20</sup>, YML<sup>+22</sup>, ZWW<sup>+17</sup>, ZTJ<sup>+21</sup>]. **Ethereum-based** [LDM<sup>+21</sup>, ZTJ<sup>+21</sup>]. **EtherQL** [LZY<sup>+17</sup>]. **Ethics** [AM15, BKS19, UJ16]. **EthIKS** [Bon16b]. **EthReview** [ZTJ<sup>+21</sup>]. **EU** [But19]. **Eurasia** [ACM17c]. **Euro** [ZKU<sup>+23</sup>]. **Euro/US** [ZKU<sup>+23</sup>]. **EUROCRYPT** [OF15]. **Europe** [Bri21, Ker18b]. **European** [Gim16, LD17]. **EV** [HZLH19]. **Evaluating** [AKR<sup>+13</sup>, JLX21, YCP<sup>+21</sup>]. **Evaluation** [ACW17, BAR21, DCK17, Doz18, FOA16, IGRS16, KUBS22, Mer19, Sal18, YPFY21, Ano21d, DCB<sup>+21</sup>, LLJ21, MOM22, WLW<sup>+19</sup>, WZ21]. **evaluations** [HGDD20]. **Evasion** [Nar19]. **Even** [Ler14a, VM15]. **Event** [Hul17, Tac17, LLWH21]. **Event-based** [Hul17]. **Events** [LX20, TADS20, RGSFGHCG21]. **eventual** [Sir16a]. **ever** [Cim19, Fai17]. **Every** [Kan20, RDL<sup>+20</sup>]. **Everyone** [GH17]. **Everything** [LSN21, Far18a, SNKG20]. **everywhere** [Laz15]. **Evidence** [DVRM16, GB22, KYLA22, RIMP22, WWQ<sup>+18</sup>, YS21, ZzH21, ALB21, FGHM17, LLCH21, MB17b]. **Evil** [Kru13]. **Evolution** [FPKH17, HSY<sup>+21</sup>, KBS17, Kün16, Smo18, Tay17, WL15, CPSGAA20, OC16]. **Evolutionary** [ADQH22]. **EVOO** [But19]. **examination** [SCP<sup>+20</sup>]. **Examining** [But19, KCD17, VBC<sup>+17</sup>, Uni14]. **Exchange** [CC16, CGLR19, GLG19, HG15, JMM14, Joh19, MSCH15, McK19, MC13, MCS18, Nar19, RJK<sup>+17</sup>, SY22, WXH21, Wu19, YSZ<sup>+19</sup>, ZKU<sup>+23</sup>, Abe18, BCK<sup>+21</sup>, Cim19, JFG18, MF19, SBL19, Son16b, TDS<sup>+22a</sup>, WHJ17, WHJ20, Ano19a, Cim18a]. **Exchanges** [DBB<sup>+15</sup>, DGSW15, Hut17, Son14, WSZN18, FGHM17, K.13]. **Exchanging** [WvB14]. **Exclusive** [WREK18, MLTT20]. **Exclusively** [BdL13, CSG<sup>+18</sup>]. **Executing** [SCAA13]. **Execution** [EMEHR17, GBPDW17, SCAA13, WXR<sup>+16</sup>, BAPS22, LPGBD<sup>+19</sup>, SSSJ19]. **Executive** [WREK18]. **Existential** [RS21a]. **Expected** [Sid14]. **Experience** [Riz16]. **Experiences** [KJGW17]. **experiments** [Li14a, Li14b]. **explaining** [BWZ17]. **exploited** [Fir18]. **Exploiting** [GRU22, MHH<sup>+16</sup>, CZX<sup>+21</sup>, DMR18]. **Exploration** [LCL17, SK17, Wey19, BB14]. **Explorative** [Bri21]. **Exploratory** [AH19, BO17, KFBI22, LW16, Nav17, OHJ20]. **explorer** [KK17b]. **Exploring** [CXLC18, EN19, KSCD16, OOF<sup>+17</sup>, SCN<sup>+22</sup>, SK15, Tre21, WL15, WTW<sup>+23</sup>, Gom16]. **Extended** [BLMR14, Hul17]. **Extending** [BLMR14, FYK<sup>+17</sup>, LPS20b, Wij16]. **extension** [Bak09]. **Extents** [WPXZ20]. **External** [WBK<sup>+17</sup>]. **Extra** [But19].

**Extracting** [SMZ14, YSZ<sup>+</sup>19]. **Extremism** [Lut17].

**Fabric**  
[BSV17, LLHW20, Lin21, MBT19, Suk19, Vuk16, Yew18, GRHS20, MOM22, BHH19].

**Fabric-Based** [Lin21]. **face** [BILN21].

**Facebook** [dS17a]. **Facilitate** [NH17].

**Facilitative** [KCD17]. **Factor**  
[ML15, ML17]. **Factors** [GB21, KCD17, PZZ<sup>+</sup>20, ZSLY20, ZDL17a, ZDL17b]. **Facts** [EDS15, ALB21]. **FaDe** [CGLR19]. **Failings** [Wey19]. **Fair** [ADM14a, Ast16, BK14, BC16a, CGLR19, CGJ<sup>+</sup>17, GLG19, HWCL17, HLC17c, JMM14, MBC<sup>+</sup>17b, PS17, Pia16, QXC<sup>+</sup>21, SY22, WDLL19, YSLH17, Bee16, DSPSNAHJ20, GWL20, GLC<sup>+</sup>22, HCW<sup>+</sup>18, HLC19, LFX<sup>+</sup>20, LWQ<sup>+</sup>21, LLZY20, YTLD19].

**Fair-Exchange** [JMM14]. **Fairness** [CGJ<sup>+</sup>17, GDTP17, MSA<sup>+</sup>22, RSH22, MÖ22]. **Fake** [DDPS22]. **Fall** [Son14]. **falls** [Lee13]. **False** [Han13]. **Fambit** [HRE17].

**Far** [KVL19, Goo18]. **Farming** [PTPR17, PTPR18]. **Fast** [DW15, KAČ12, Lin17, LZC<sup>+</sup>17, LLYL19, SCAA13, SZJ17, DTK20, SZ13, Uri17, YTLD19, VB08].

**fast-payment** [YTLD19]. **faster** [CEN14, Ler14a]. **faucet** [MÖ22]. **Fault** [BVCH22, BSV17, Coe20b, XZY<sup>+</sup>21, TYY<sup>+</sup>19, VG20]. **fault-tolerance** [TYY<sup>+</sup>19]. **Fault-tolerant** [BVCH22, BSV17, VG20]. **FAW** [KKS<sup>+</sup>17d, KKS<sup>+</sup>17c]. **FBI** [Gre13, RS21a].

**FC** [BBMS14, BCJR15, CSN14, CMR<sup>+</sup>16, GP17b, JRB<sup>+</sup>17, Jue04, Ker12, Sad13].

**Fears** [HM18]. **Feasibility** [JCG17, SL18].

**Feature** [JJFC22, NTRK22, RS21a].

**Feature-Rich** [NTRK22]. **Features** [Bog17, Cou16, SS19, ARL20, DAGK20, HZT<sup>+</sup>22].

**February** [CMR<sup>+</sup>16, GP17b, Jue04, Ker12].

**Federal** [HV20, Nav17, Int14]. **Federated** [FZG<sup>+</sup>22, GLC<sup>+</sup>22, Mal18, QUG<sup>+</sup>23, SFYB21, SRA<sup>+</sup>22, AJA<sup>+</sup>22, ARL20, AKT21, MRG18, PSY21, QHNL21, RSH22, SZdLZ22, UHK<sup>+</sup>21, WQGX22, ZDM<sup>+</sup>21].

**Feds** [Zet13]. **Fee** [GCD16, LSZ22]. **Feed** [ZCC<sup>+</sup>16]. **feedback** [GTMP14, MXW22]. **feedback-based** [MXW22]. **Feeding** [Fai17]. **Feel** [SIDV14]. **Fees** [ARL19, Dim19, MB15, TNJJ22, ECA<sup>+</sup>20].

**Felten** [Ano16c, SM-16]. **ferenda** [Kün16].

**FGFL** [GLC<sup>+</sup>22]. **Fi** [SI16]. **fiat** [G.17].

**Fiction** [Lin15]. **Field** [Alz19, MTR<sup>+</sup>21].

**Fighting** [SOA<sup>+</sup>21]. **fight** [Tun18]. **Filters** [GCKG14]. **Finance**  
[Bhe17d, Edw15, Eya17, HSB17b, HSB17a, HSB17c, HSB17d, HSB18a, HSB18b, HSB18f, HSB18e, HSB18g, HSB18h, HSB18i, MSA<sup>+</sup>22, TBY17]. **Financial**  
[Ami16, Bai19, Cal21, DMH18l, EMEHR17, HRF17, JB17a, JMK17, Ksh20, Nor17c, Rec19, Sch19b, TSCT18, WLW22, And18, GS20b, GS20a, K.13, KBTT20, Lee15, Lew15, LMR17, LP18c, LP18d, RSR17, SPB<sup>+</sup>22, Six17d, VX17, WGC19, XLZ20, BBMS14, BCJR15, CSN14, CMR<sup>+</sup>16, GP17b, JRB<sup>+</sup>17, Jue04, Ker12, Sad13].

**financieros** [RSR17]. **Financing** [àNOE17].

**Finanzindustrie** [Six17d]. **Findel** [BKT17].

**finding** [Lar13]. **Findings** [BBBB15]. **finds** [Aro12, Edw15]. **Fine** [RCD<sup>+</sup>19, LCZL21, LHH<sup>+</sup>18, MHL20].

**Fine-grained** [RCD<sup>+</sup>19, LCZL21, LHH<sup>+</sup>18, MHL20].

**fingerprint** [HS19b]. **FinTech** [WM18].

**Fintechs** [Sch19b]. **Fire** [RKS15].

**FireLedger** [BF20]. **firms** [K.13, Nor17c].

**Firmware** [LMWL17, HYLY19, LL16, LL17a, YL20b].

**First** [BH15, BP14, DP18, LF16, Pav18, PL16, SDT17, Ano17a, BHI<sup>+</sup>14, EBSC15, Ker18b, SKG12, WMHL21, YV17].

**First-Generation** [BH15]. **fisheries** [How20]. **Fishes** [ZWW<sup>+</sup>17]. **Fistful** [MPJ<sup>+</sup>13, MPJ<sup>+</sup>16]. **fix** [Lee13]. **Fixed** [LX21]. **FL** [Jue04]. **flance** [Cae15]. **flash** [MBD<sup>+</sup>12]. **flash-speed** [MBD<sup>+</sup>12]. **flaw**

[Duc13, Fir18]. **flaws** [FB17a]. **Flexible** [KXSS21, WDLL19, DKJ19, LTC<sup>+</sup>19, XHST20]. **Flow** [BS17a, JYKA19, YK15, HGDD20, QHNL21]. **flows** [BDP<sup>+</sup>15]. **Fluctuations** [EDS15, PPW<sup>+</sup>15, GAF18]. **Fly** [NVWF14]. **Focus** [TKW15, PCP20]. **Fog** [BAS<sup>+</sup>22, BK22, BATB20, JWNS19, LWZ<sup>+</sup>21a, SNKG20, TMTB19, EFFM21, HCW<sup>+</sup>18, HLC19, IFD<sup>+</sup>19, KGS<sup>+</sup>19]. **Fog-based** [LWZ<sup>+</sup>21a]. **Fog-enhanced** [BK22]. **Fog-oriented** [BAS<sup>+</sup>22]. **FogBus** [TMTB19]. **follow** [RGSFGHCG21]. **follow-up** [RGSFGHCG21]. **folly** [Sch14b]. **FOO** [ZLJW20]. **Food** [But19, CMT<sup>+</sup>21, CTM21, KD20, PK19, Ano21c]. **Footprint** [GB22, OM14]. **Forecast** [PMMP19, ALB21, GS20a]. **Forecasting** [Coh20, LPSP20, PASA22, YK15, Ara21, AAPZ19, PCP20]. **Forensic** [Tzi18, YCP<sup>+</sup>21, KSLC21]. **Forensics** [NHM16, RBB19, Wad18, KSLC21, LLCH21, RSJP19, ZLW19]. **Foreseeable** [ATD17]. **Foreword** [FD20a]. **Forex** [DMO<sup>+</sup>19]. **Forging** [Pop16a]. **Fork** [KLM17, KYLA22, KKS<sup>+</sup>17d, KKS<sup>+</sup>17c, LTC<sup>+</sup>19]. **Fork-free** [LTC<sup>+</sup>19]. **forkable** [WDL<sup>+</sup>18]. **Forkbase** [WDL<sup>+</sup>18]. **Forks** [LK17]. **Form** [Ano18g, BBH18]. **Formal** [BDLF<sup>+</sup>16, MSMH21, SY22, Son16a]. **formalization** [SPZ<sup>+</sup>20]. **Formalized** [CXS<sup>+</sup>17, LN17, NML19]. **Formalizing** [AKGN18, Wel18]. **formation** [DAGK20]. **Fortune** [Pop17b]. **forward** [MAAN19, SBA21]. **Fostering** [Sch19b]. **FOTB** [YL20b]. **Found** [Kee16, Pop17b, YWJ<sup>+</sup>16]. **Foundations** [DMH18h, Ant20, Gom16, HMS17]. **Founder** [McK19]. **Founding** [EL14]. **Four** [LF16]. **FowlerNollVo** [VFN91]. **FPGA** [KXSS21, SNM17]. **FPGA-Based** [KXSS21]. **Fractal** [DVRM16, ZKU<sup>+</sup>23]. **fractality** [LB18]. **Fragen** [BP17b]. **fragment** [RS21a]. **Fragmentation** [Bhe17d]. **Framework** [AvM18, AVA21, Ano18g, BLPB17, BBH18, Cor19, DDPS22, DWC<sup>+</sup>17, FZG<sup>+</sup>22, Gou19, HL16, KT18, Las17, LWY<sup>+</sup>19, Mal18, Nar19, àNOE17, PTPR17, PTPR18, RS17, SK15, Scr18, Ses18, SV19, SCZ<sup>+</sup>21, Tam19, TSY<sup>+</sup>21, TMTB19, WWZ<sup>+</sup>22, BAPS22, BAS<sup>+</sup>22, DHH<sup>+</sup>22, FWP21, Gim16, Hal21, HCB<sup>+</sup>22, HSC21, IFD<sup>+</sup>19, JAK19, KBTT20, KOM<sup>+</sup>20, KRK21, KKK<sup>+</sup>21, KSLC21, LWA21, LGCY22, LYZ<sup>+</sup>21, LQZ<sup>+</sup>20, MZA<sup>+</sup>20, MRG18, MMMV21, PHRH21, Rddb19, RSJP19, SGM20, SCE21, SWG21, SLG<sup>+</sup>21, SRA<sup>+</sup>22, VCS03, YL20b, YLZ<sup>+</sup>20b]. **Fraud** [CZ16, CBWF17, Gof19, HRF17, Kru18, MMT16b, RRCL17, Ano18e, CLS<sup>+</sup>19c, Kha15, LTB<sup>+</sup>22, MMT16a, VD17, ZZB<sup>+</sup>22]. **Frauds** [ZTJ<sup>+</sup>21]. **fraudulent** [LW16]. **Frax** [Men19]. **Free** [HSS<sup>+</sup>20, SPB17, VM15, Dim20, LTC<sup>+</sup>19, Six17f]. **Free2Shard** [RKTV22]. **FreeBSD** [Ano18b]. **freedom** [TF16]. **Frees** [Hou14b]. **Freicoin** [TF16]. **French** [San14b, TFG17]. **Frequencies** [WLW22]. **Frequency** [Gya21, PMMP19, Via16, MLTT20]. **frequency-based** [MLTT20]. **friendly** [ABB<sup>+</sup>19, ZWX<sup>+</sup>20b]. **Friends** [AMVA17]. **frozen** [Cim19]. **FruitChains** [PS17]. **Fuel** [Car15, MTR<sup>+</sup>21]. **Fulfillment** [Nis16b]. **Full** [Ano18b, HSB17c, HSB18g, MMR16, RS13]. **fully** [HLF<sup>+</sup>21]. **fun** [PW17a]. **Function** [Ano18g, Bac03, BBH18, CXLG22, KAS<sup>+</sup>22, Mer88, VFN91]. **Functional** [FBGMPS23, OOF<sup>+</sup>17]. **functionality** [Wij16]. **Functioning** [Ker14]. **Functions** [Bac02b, Ler13, SBBR17, Per09]. **fund** [Pan96]. **fundamental** [CF15]. **Funding** [BDW17, LHZ17]. **funds** [Cim19]. **funktioniert** [RE18]. **Funktionsweise** [Ker14, RE18, Six17h]. **Further** [Dre17u]. **Future** [ASSK21, BBBB15, BVGC22, BK17a, BK18, Bys19, Car15, CWCC21,

EGB18, Her17, JKS16, KAKC20, MDAP16, MAP16, PP16, PSGM22, SG19, Son16a, AKT21, CXY21, DPN<sup>+</sup>22, Ext15, Fri14, GGDK20, HS19b, JCG<sup>+</sup>21, KGTK20, MKY<sup>+</sup>21, PDJ22, SC21, SKG13, URC19]. **futures** [ADZ23]. **futuristic** [URC20]. **fuzziness** [LX21]. **fuzzy** [AAPZ19, Che18, WZQ<sup>+</sup>17].

**Gamble** [Ksh22, Roo18]. **Gambling** [MCHM17, MHM17]. **Game** [Hou14a, Hou16, JLG<sup>+</sup>14, Kra16b, LJG15, LBS<sup>+</sup>15, Ort16, HS19a, HVM<sup>+</sup>18, SZdLZ22, YZC22]. **game-enhanced** [SZdLZ22]. **Game-Theoretic** [JLG<sup>+</sup>14, LJG15]. **Games** [Alz19, KKKT16, LSP<sup>+</sup>15]. **Gaming** [Pia16]. **GAN** [FYZ<sup>+</sup>21]. **Gap** [Dan17a, YZC22]. **GARCH** [Ara21, Kat17, SKG22]. **Gas** [KSA22, DLV<sup>+</sup>22, GKJ<sup>+</sup>18, GKJ<sup>+</sup>20]. **Gasp** [Bue18]. **Gateways** [YWJ<sup>+</sup>16]. **Gave** [Pav18]. **GDPR** [BERHE19, PYC21]. **GDPR-Compliance** [PYC21]. **geautomatiseerd** [PdWWS16]. **Gegenbauer** [PCP20]. **Geld** [Möl13, Cap12]. **Geldwährungen** [WLS17]. **Geleit** [LPW17a, LPW18, LPW17b]. **General** [BLPB17, Int14, SV16, DB16]. **Generalized** [BK17b, PCP20, WdLY<sup>+</sup>19]. **Generals** [LSP82]. **generated** [Goo18]. **Generating** [BBM<sup>+</sup>18, LUBS18]. **Generation** [AMLH15, BH15, But13b, CGT<sup>+</sup>21, OA17, AMLH18, BCK<sup>+</sup>21, BHI<sup>+</sup>14, Hal21, MRG18]. **generative** [ZSGB<sup>+</sup>22]. **Genetic** [MGS22]. **Genius** [Mez19, Gei16]. **Genomic** [KPK17]. **Geospatial** [FHS<sup>+</sup>17]. **German** [ABR17, Ale18b, Ano16b, Blo18, BP17b, Cap12, Dix17, DF17b, FRSU17, GH17, HP17, Ker14, KFR17, LPW17b, MG16, Möl13, PB17, Pla13, RE18, RBM17, San14a, Six17a, Six17d, Six17c, Six17h, Six17f, Six17i, Six17j, SKG12, SKG13, Sto17, WLS17]. **Geschäftsmodelle** [RBM17]. **Get** [WM18, Cim19, Pec15]. **GHash.io** [Mat14]. **GHOST** [KKS<sup>+</sup>17a]. **Gibbard** [Ano18h]. **Gifted** [Ro13]. **giuridica** [Cap15]. **Giving** [Ano19b]. **Glimpse** [LMLA17, Pav18]. **glitch** [Lee13]. **Global** [ACM15, Ali15, BK22, Gre22, MMT16b, Mul14h, Yeo15, CV18, CRdK16, GRHS20, OFA22, PCC22, VC15a, VC15b]. **Go** [BS17a, Fai17]. **Goals** [AKP17, AKP18]. **Going** [Dre17u, GCD16]. **Gold** [BBM<sup>+</sup>18, CTM19, DMH18i, ZzH21, Cap12, LL18, Nis16a, Pop15, Pop16b, Sza08]. **Goldfeder** [Ano16c, SM-16]. **Goldstrike** [BHI<sup>+</sup>14, BH15]. **Golumbia** [Lut17]. **gone** [Nic17]. **Good** [AKP17, AKP18, BP15, WA15a, WA15b, Bon14b, Ito18, Pla13, RKY<sup>+</sup>20]. **Google** [ALB21, Smu18]. **Got** [Ro13]. **Govern** [Nor17a, RRD17]. **Governance** [ACM17c, BCEM15, Bri21, KPP<sup>+</sup>20, LSN21, Mor17b, QFLM17, ROH16, SC20, Yer17, CV18]. **Governed** [LDH17, NOT15]. **Government** [CDZ<sup>+</sup>20, OA17, Øln16, ØJ17]. **Governments** [Chi18, Nar19]. **governor** [GLC<sup>+</sup>22]. **Gox** [FGHM17]. **grained** [LCZL21, LHH<sup>+</sup>18, MHL20, RCD<sup>+</sup>19]. **Grand** [Ort16, Far18a]. **Graph** [ADQH22, CLZ<sup>+</sup>20, DHES16, FPKH17, GGS19, MMR16, OKH13, RS13, WLZ20, ZG15, BDP<sup>+</sup>15, DMR17a, DMR18, DMR19a, GGS20, LTBY20, Tro15b]. **Graph-Based** [ZG15]. **graph-theoretic** [Tro15b]. **Graphene** [OAB<sup>+</sup>17]. **Graphics** [Zei16]. **Gratis** [Six17f]. **Gratis-Bitcoin-Ökosphäre** [Six17f]. **Great** [WA15a, WA15b]. **Greatest** [RS21a]. **Green** [PTPR17, PTPR18, TSY<sup>+</sup>21, CCMN17]. **Grid** [ARL20, GH05, KUEE17, KUEE18, WHW22, ALP15, GLY<sup>+</sup>21, JAK19, LYW<sup>+</sup>21, MNB<sup>+</sup>17, MMMV21, ZLH<sup>+</sup>20]. **Grind** [JB18a, JB18b]. **Ground** [XZL<sup>+</sup>22]. **Grounded** [Doz18]. **Group** [GCH<sup>+</sup>22, OOF<sup>+</sup>17, WHW22, YLZ20a,

NAR22a, NAR<sup>+22b</sup>, Tun18, ZLL<sup>+19a</sup>].  
**Grouping** [NTKS17]. **grow** [Ker18b].  
**Growing** [JB17b]. **grows** [SZ13]. **Growth**  
 [Leo20, CW20, Per20]. **Grundlage**  
 [RBM17]. **Grundlagen** [BP17b].  
**Guarantee** [CLJ<sup>+21</sup>, ZY21]. **guarantees**  
 [CCMN17, ECA<sup>+21</sup>, Sir16a]. **GuardHealth**  
 [WLZ20]. **Guest** [HWJ22, ZWC21].  
**Guidance** [Int14]. **Guide**  
 [DTM20, Sch14a, Wal18, BDP17a, BT18b,  
 Mil15, Pro13, Pro14, Wal19]. **Guidelines**  
 [Ant21, BO17]. **GuiltyWalker** [OTS<sup>+21</sup>].  
**gut** [Pla13]. **Gyges** [JKS16].

### Hack

[GGS19, McM13, Nak18, WSZN18, GGS20].  
**Hacked** [Abe18, DMH18e]. **Hacker**  
 [Ape14, Osb18a]. **Hacker-Proof** [Ape14].  
**Hackers** [WREK18, Boi18, Nic17]. **hacking**  
 [Ano18e]. **Hacks** [dre14]. **Hadoop**  
 [Li14a, Li14b]. **Hailing** [Shi19]. **half**  
 [BBDN21]. **halting** [XHST20]. **Handbook**  
 [LMC18, Lee15, MG16, OZ16]. **Handbuch**  
 [Ale18b, MG16]. **handful** [AF16]. **Handle**  
 [Tre22, SPB<sup>+22</sup>]. **Handling**  
 [GHJ21, LMLA17, dSR21]. **handover**  
 [LCZL21]. **Hands** [PL16]. **Hands-on**  
 [PL16]. **Handshake** [XJY17]. **Hard**  
 [But13a, Lar13, Ler13, ML14, LSZ<sup>+21</sup>,  
 Per09, Tro14a, Tro14b]. **Hardening**  
 [RC17, FMR<sup>+19</sup>]. **Hardfork**  
 [MCHM17, MHM17]. **Hardness** [SFMC21].  
**Hardware** [BNMH17, NMH16, SNM17,  
 Tay17, WRB15, BBDN21, Per22]. **Hash**  
 [Bac97, Bac01, KAS<sup>+22</sup>, LS20, WDLL19,  
 YLZ20a, Bak09, VFN91]. **Hashcash**  
 [Bac02b, Bac02a, Bac03, Tro15a].  
**Hashimoto** [Dry14]. **Hashing** [DCY<sup>+22</sup>,  
 Dre17i, Dre17j, Ler13, LSZ<sup>+21</sup>, Tro15a].  
**Haven** [CTM22a]. **HCI** [SK15]. **headless**  
 [TFG17]. **Health**  
 [BSLM20, DMH18c, SDT17, Shu19, SZM22,  
 AMME21, BJ20, CLC<sup>+19</sup>, SMM<sup>+20</sup>,  
 SHL<sup>+20</sup>, YLM21, YWX<sup>+22</sup>, ZYL22].

**HealthBlock** [ZCJ<sup>+21</sup>]. **Healthcare**  
 [ARBK17, DFKU20, IFD<sup>+19</sup>, Joh18, Ksh18a,  
 RRD17, YWJ<sup>+16</sup>, ABB<sup>+19</sup>, BTS<sup>+21</sup>,  
 CMR<sup>+21</sup>, CDS<sup>+19</sup>, GRM22, JJ22, KRK21,  
 MCLH19, MyPLK22, NVE<sup>+21</sup>, PL20, SJ21,  
 SRA<sup>+22</sup>, SJSY21, TPE20, WLZ20, ZCJ<sup>+21</sup>,  
 ZYL22]. **Healthchain** [WL21]. **hearing**  
 [Uni14]. **Hearings** [Dus14]. **Heater** [Lin15].  
**heck** [Kay17]. **Hedging** [ADZ23]. **heist**  
 [Abe18, Far18a, Hol18]. **Heists**  
 [dre14, Gal18]. **held** [Uni14]. **Help**  
 [MBC17a]. **Hermes** [BVCH22].  
**Heterogeneous** [AA20, LTBY20].  
**Heterotopia** [MK15]. **Hey** [KD16].  
**Hidden** [EZ17, EZ18, GZH<sup>+14</sup>, AABE20].  
**Hiding** [AK14, SZM22]. **Hierarchical**  
 [GS15b, SJ21, TYY<sup>+19</sup>, FTS<sup>+20</sup>, NAR<sup>+22b</sup>,  
 WLGL19]. **hierarchical-deterministic**  
 [WLGL19]. **High**  
 [CGFH16, DMH18g, Dru22, DHES16, Gya21,  
 MPSP17, PMMP19, SS12, SZ15, TOM17,  
 Via16, XLM<sup>+17</sup>, XZK<sup>+17</sup>, BF20, GFLS21,  
 RIMP22, SYH22a, SYH22b, ZLX<sup>+17</sup>].  
**high-availability** [ZLX<sup>+17</sup>].  
**high-dimensional** [GFLS21].  
**High-Frequency** [Gya21, PMMP19, Via16].  
**High-Performance** [DMH18g, DHES16].  
**High-Rate** [SZ15]. **high-tech** [RIMP22].  
**High-Throughput**  
 [MPSP17, SS12, XLM<sup>+17</sup>]. **Higher**  
 [MZLW20]. **Higher-Level** [MZLW20].  
**Highlights** [Sup16]. **Highly**  
 [JKKX16, Far18a, RST11, XBX<sup>+22</sup>, Cim19].  
**Highly-Efficient** [JKKX16]. **highway**  
 [Gal18]. **Hijacking** [AZV17]. **History**  
 [AMVA17, Dre17d, Hil14, Abe18]. **Hit**  
 [Ker18b, Ano18e, Lee13]. **hitchhiker**  
 [Wal19, Wal18]. **HMMs** [SS19]. **Hoc**  
 [RLS<sup>+21</sup>, CGFH16, KT18, LMH16,  
 NAR<sup>+22b</sup>]. **HOL** [ABBS18]. **Hole**  
 [bAHRAK17, bAHRAK18]. **Holistic** [LX20].  
**homes** [RLQ<sup>+21</sup>]. **Honest**  
 [YCMM20, FZC<sup>+20</sup>]. **Honey** [MXC<sup>+16</sup>].  
**hood** [Zoh15]. **Hop** [Voi11]. **Hop-Proof**

[Voi11]. **Hope** [Bue18, Per17]. **hopes** [Pal18]. **hoping** [Hol18]. **hopping** [CK16, CBST22]. **Horizon** [Tre22]. **Host** [Ro13]. **Hosts** [SD16a]. **hot** [Per20]. **Hotwire** [CPMM21]. **Hours** [Cim18b]. **House** [PTPR17, PTPR18]. **HRRS** [DCY+22]. **HSMMS** [SS19]. **Hub** [BKM+17]. **huge** [Hol18]. **Human** [PHD+17, Har17]. **Hundred** [Uni14]. **Hunt** [Gre22]. **Hybrid** [AMEF21, GLO+22, Gya21, SJ21, Ano21d, Ara21, BTS+21, HZLH19, LTC+19, TDS+22b]. **Hype** [PZZ+20, Per17]. **Hypergraph** [RJK+17]. **Hyperledger** [BSV17, DMH18j, LLHW20, Lin21, MBT19, Suk19, Yew18, MOM22, BHH19]. **Hyperpubsub** [ZZJ17]. **Hypothesis** [KO22].

**I.R.S.** [HM18]. **I/O** [Dry14]. **IBM** [MDN+18]. **IC** [AHC+21, IK19]. **Iceland** [Ano18i, Far18a, Hol18]. **Icelandic** [Far18a]. **ICN** [CHL19]. **ICO** [Ito18, Osb18a]. **Idea** [BP15, Nis16b, WK19]. **Identification** [BCCS20, MYSZ19, PPR+20, TT19, TOM17, CAS21, Cha85]. **Identify** [JSKV16]. **Identifying** [DWS21, Dre17k, HZT+22, ZZB+22, NBP+21]. **Identities** [ACC+17, Smo18, Sei20, SJX+20]. **Identity** [AK17, AB17, AABM17, CTM21, DP18, FR16, Hal17, Kue18, LN17, LLW17, LLP+20b, YZL22, LGCY22, LHO+20, MGN+22, NML19, Sar21, YL20a]. **identity-authentication** [NML19]. **Identity-Based** [LLW17, YZL22]. **Ideological** [KPW19]. **IDPS** [Ali19]. **IEEE** [TODM19, ALP15]. **if** [Fai17, Far18b, LP18c, LP18d, Pec17a]. **II** [HSB18c, OF15]. **III** [HSB18d]. **IIoT** [BPT+22, GLW+20, KXSS21, SRB20, WLC+20, ZBF22]. **IIoT-enabled** [GLW+20]. **Illegal** [CPMM21, MCF20, NBP+21]. **illicit** [OTS+21]. **Illinois** [Nor17a]. **Im** [CXG+18, ABR17]. **Image** [CCC19, KTM+21]. **Images** [DCY+22, Via16, XJB+17]. **Imaginaris** [KL17, KL18b]. **imagination** [Fin17b]. **Imaging** [Shu17, dAdSM+22]. **Imbalanced** [HYP+22]. **Immediately** [Ro13]. **Immigrants** [Chi18]. **Immune** [LZC+17, Xu16]. **Immutability** [EN17, DLK+21]. **Impact** [ATD17, Bee18, Blo18, LJG15, SLS20, SGF+17, Smo18, SS20, BCCS20, FGHM17, MLM15, WLW+19]. **Impacts** [LX20, Ün21]. **imperfect** [WLW+19, YCMM20]. **Implants** [Mic16]. **Implement** [PL16]. **Implementation** [Ali19, Ano21d, FNP17, JJ21, RSGA+21, Shu17, Yew18, Bac97, NGS+19, TKBK22, Yue20, ZSLY20]. **Implementations** [Bri21, SG19]. **Implementing** [AKGN18, CC16, Wel18, YNS16, vS02]. **implicated** [Duc13]. **implication** [SBL19]. **Implications** [GSF+20, GB22, MZ19, TSL+17, dCdCM14, MGM+17, ZSLY20]. **imported** [XLL+19]. **Impossibility** [GG17, SFMC21]. **Impossible** [Poe14, Lau11a]. **Improve** [FOA16, Riz16, FOA17]. **Improved** [JJFC22, LZY22, SCE21, ZLJW20, ZGZ21]. **Improvement** [But19, ALMLS16, HC12]. **Improvements** [KVV16, NSB19]. **Improving** [BHS93, CWL17, CXW+21, HM20, LR22, BR17, FA21, Sal18, ZSGB+22]. **In-Browser** [Abr18]. **In-Depth** [ZDP+22]. **in/for** [CWCC21]. **Incentive** [AAJ21, DCZ+21, HLC+17a, NWGF20b, NWGF20a, SBBR17, ZGR17, GLC+22, WLC+20, ZDM+21]. **Incentive-based** [AAJ21]. **Incentive-Driven** [DCZ+21, ZDM+21]. **Incentives** [JMK17, KLZ+21, LTKS15, SZ17, SXZ+21, SZ18]. **Incentivize** [KB14]. **incentivized** [MMM21]. **Incentivizing** [LK17, WCZ21]. **Inclusion** [TNJJ22]. **Income** [Ksh20]. **Incontestable** [ZGGT16]. **inconvenience** [Gal18]. **Increased**

[GK17, LP18c, LP18d, SA20]. **Increasing** [SMD14]. **Independent** [LHZ17]. **Index** [Hil15, Son16b]. **indexes** [Ünv21]. **Indexing** [TD17a]. **India** [RIMP22]. **Indicators** [Gya21, JLLK23]. **Indistinguishability** [HZ20]. **Individual** [EN19, MZ19, AZR+20, SG21]. **individual-level** [SG21]. **Industrial** [Hal21, LSFk17, MBF+20, SLS20, BkV22, CLH+20, FBL+20, Ker18b, KTA+20, KTM+21, SMHK21, WWML21, ZWH+20, ZNX+21]. **industrialise** [BDP17b]. **Industry** [ATD17, BATB20, CTM19, STG+20, Sch19b, And18, Ano21e, GL16, LHH+18, Six17d, XZZ21, ZSLY20, EHA22, GSF+20, MAAAW+22]. **Industry-4.0-Complaint** [MAAAW+22]. **Ineffable** [MSC15]. **inefficiency** [Bar17]. **Inevitable** [DTM20]. **infeasibility** [WM19]. **Infect** [Cim18b]. **infects** [Goo18]. **Infer** [WRB15]. **inference** [GFLS21]. **Inferring** [KCS+14, NAH16, DMR17a]. **Influence** [BO17, ESLB20, RIMP22, YS21, ZDL17a, ZDL17b]. **Info** [Gal18, Bar18]. **Info-highway** [Gal18]. **Information** [AR15, BART17, BKM+17, CTM22b, Cra17, DW13, GK14, HV20, Hut17, JB17b, JL17, JYKA19, Joh18, NH17, OA17, VLAF21, WDS21, Yan21, Zam19, DAV20, LLH21, LHL20, LQZ+20, SSL+19, ZTSS20]. **information-centric** [LQZ+20]. **Information-Processing** [HV20]. **Informational** [BdL13, BW14, CSG+18]. **Infrastructural** [JB18a, JB18b]. **Infrastructure** [EN17, JB17b, MBC+17b, OA17, ØJ17, ÖY17, DGP20, Kol22, PMP19, Ser21, SSV22, ZSM22]. **Infrastructures** [CGT+21, CPMM21]. **Infrastructuring** [KL17, KL18b]. **Initial** [IPL+18, ISM17]. **Initiatives** [ASK+21, HRE17, OO19, OA17, CPSGAA20]. **Innovating** [Bhe17e]. **Innovation** [Doz18, Mor17f, Sch14a, Sch19b, And18, Lee15, LMR17]. **Innovationen** [FRSU17]. **Innovations** [FRSU17, AR15, ZFY16, ZFY17]. **Innovative** [Gri11, BT18b]. **Inonymous** [BK17c]. **input** [Ano21a]. **Inquiry** [PPW+15, MBB13b, MBB13a]. **insecurity** [Sat18, Sat20]. **Insertion** [SLY15, SVS18]. **Insider** [SSV22, MLYL20]. **Insights** [ET17]. **Insolar** [KLZ+21]. **Inspired** [BBH+13, CCA+20, Kri19]. **Instability** [CKWN16]. **instant** [GWL20, ZWX+19a]. **instead** [Blo18]. **Institution** [RRD17]. **institutional** [BDP17a]. **Institutions** [DdFP18, BGPW16, KBTT20]. **instruments** [Cal21, Lee15]. **Insurance** [CIL+21, GLD+18, VMMA17, ZZB+22]. **Integer** [DDX17]. **Integrated** [LTW+21, PK19, XZL+22, ZHZ+22, MRR+20, dSR21]. **Integrating** [ÖY17, Shu19, TBB21]. **Integration** [AKT21, AAKJ22, DAAY22, DT18, GSF+20, MAAAW+22, URC19, UHK+21, XZY+21, Bit09, SBA21]. **integration/staging** [Bit09]. **Integrity** [BBH+13, Dre17l, EBHBL16, Fug19, HP19, Mai18, XRS+19, ZBF22, CFM+22, FWP21, HS20, RS21a, RSH22, WHY+21, WWZ+20, YZL22, YLZ+20b]. **Intellectual** [Zei16]. **Intelligence** [Du21, SG19, SRP20, SMZ14, YWJ+16, YSZ+19, ZBF22, ZDW21, DAT21, DNZ+19]. **Intelligent** [SJ21, SRP20, VFS+19, CJA+19, LYW+21, PSY21, SK18, XZZ21, XBX+22]. **Intensive** [SDT17]. **Intent** [EN19, KLL+15]. **Intentions** [GZH+14, AZR+20]. **Inter** [SYK17, CZX+21, LZZ+20, XZL+22]. **inter-block** [CZX+21]. **inter-constellation** [XZL+22]. **inter-domain** [LZZ+20]. **Inter-Service** [SYK17]. **Interaction** [Fot17, SWG21]. **Interactions** [Kra16b, OR17, PHRH21]. **Interactive** [Hir17, YSZ+19, ZGGT16]. **Interchange** [Nar19]. **Interconnected** [LGK+22]. **Interconnectivity** [HQ15]. **interdisciplinary** [YP21]. **Interest** [BHM20, AAC+19a]. **interface** [DHH+22]. **Intermediation** [KET+17]. **International**

[ACM17c, ACM17d, CMR<sup>+16</sup>, GANAHHJ17, GP17b, JRB<sup>+17</sup>, Ker12, OF15, Sad13, TODM19, BCJR15, IKY05, Jue04].

**internationalization** [RIMP22]. **Internet** [AZDF22, DRS22, MFR<sup>+21</sup>, NSB19, BKV22, AJA<sup>+22</sup>, AA20, AAC<sup>+19b</sup>, AKT21, Älv18, AAKJ22, Ban19, Big20, Böh13, CXC<sup>+20</sup>, CLH<sup>+20</sup>, CVM17, DGP17, EFFM21, GLF20, GLW<sup>+20</sup>, HL16, HYLY19, JCG<sup>+21</sup>, JB21, JBK<sup>+19</sup>, JCG<sup>+22</sup>, KTCI21, KTA<sup>+20</sup>, Ksh17a, Ksh17b, KSLC21, LL16, LL17a, LQYG19, LLCF21, LWZ<sup>+21a</sup>, McM13, Mic14, PK19, PP16, PC21, QFLM17, RKT19, RWG21, RDDB19, RS21b, Ses18, SM20, SNKG20, Son18, SCZ<sup>+21</sup>, SGDT19, Sve17, TSY<sup>+21</sup>, TBB21, UHK<sup>+21</sup>, XAZY17, XAZY18, XLL<sup>+21</sup>, XBK<sup>+22</sup>, ZW17, ZWH<sup>+20</sup>, ZLS<sup>+22</sup>, ZLT<sup>+19</sup>, vO20].

**Internet-of-Forensic** [KSLC21].

**Internet-of-Things** [Ses18, SM20].

**Internship** [HMS17]. **Interoperability** [BVGC22, CWL17, JB18b, JJ21, LGK<sup>+22</sup>, BVCH22, LLP20a, PBHM21].

**Interoperable** [Lim18]. **interoperating** [WHA<sup>+20</sup>]. **interplay** [KCS<sup>+14</sup>].

**INTERPOL** [Tzi18]. **Intersection** [JB18b]. **intra** [CZX<sup>+21</sup>]. **intra-** [CZX<sup>+21</sup>].

**Intraday** [Gya21]. **Intricate** [Bhe17c].

**introduced** [Ano17a]. **Introducing** [Dan17b, JB18a]. **Introduction** [CGT<sup>+21</sup>, Dzi15, HSB17d, HSB18h, JSK<sup>+17</sup>, Kat16, MY11, NBF<sup>+16</sup>, ZFY16, ZFY17].

**intrusion** [KKK<sup>+21</sup>, KKT<sup>+22</sup>, LTMW19, LWA21, MLYL20]. **Inverse** [EDS15, LUBS18]. **Investigating** [JKS16, KAK20, RC16, ZKU<sup>+23</sup>, CXLG22].

**Investigation** [Älv18, Smu18, SXYL23, TNJJ22, VCLK17, WRB15, WWZ<sup>+22</sup>, ZG15, CF15, KK17b, Olu21, RSJP19].

**Investigations** [KT18, VBST21].

**Investment** [Ano18m, JYKA19, Pop17a, Sup16, TOM17, DXW21, KH17, XLZ20].

**Investor** [HZ21, BT18b]. **investors** [Lew15].

**Invitation** [BK17c]. **Invitation-Based** [BK17c]. **Invited** [Gar17, Zoh17]. **Involving** [Nav17]. **IoD** [ICGB21]. **IoF** [KSLC21]. **IoT** [ACM17d, Ban19, MBF<sup>+20</sup>, AKA<sup>+22</sup>, ADA17, AVA21, AAD<sup>+21</sup>, ANMM22, BTF<sup>+21</sup>, BBGP19, BLB<sup>+21</sup>, BLNN17a, CTNS21, CTM22b, DCK21, DKJ17, DKJG19, Du21, FSY<sup>+19</sup>, FBL<sup>+20</sup>, FFL21, FA21, GPPB<sup>+21</sup>, Hal21, HHBS18, JBH<sup>+22</sup>, KS18, KAS<sup>+22</sup>, KSLC21, KKT<sup>+22</sup>, LLH<sup>+20</sup>, LDWS17, LTMW19, LHL20, LSM17, Liu18, LGGB<sup>+21</sup>, MKY<sup>+21</sup>, MAAN19, MBK<sup>+21</sup>, MTR<sup>+21</sup>, MLTT20, MFE<sup>+20</sup>, MGE20, MMR<sup>+21</sup>, MBC<sup>+17b</sup>, MRR<sup>+20</sup>, OEO16, OEO17, ÖY17, PDJ22, QXC<sup>+21</sup>, RKP19, dSR21, RSJP19, SGM20, SD16a, SBA21, SRB20, Ser21, SBHD17, SJ21, SWY<sup>+21</sup>, SSL<sup>+19</sup>, SRP20, SMHK21, SRA<sup>+22</sup>, TDS<sup>+22a</sup>, URC19, VD21, WHI<sup>+21</sup>, WDLS17, WSC<sup>+20</sup>, WHY<sup>+21</sup>, WLC<sup>+22a</sup>, WWML21, XWZ21, YL20b, ZW15, ZW17, ZWS<sup>+20</sup>, ZDP<sup>+22</sup>].

**IoT-assisted** [MLTT20]. **IoT-based** [LDWS17, MKY<sup>+21</sup>, MTR<sup>+21</sup>].

**IoT-ecosystem** [dSR21]. **IOTA** [GPPB<sup>+21</sup>, Hal21, VD21, AGK22a, SM20].

**IoTPTS'17** [ACM17d]. **IoTs** [MKS<sup>+19</sup>, PGS<sup>+21</sup>]. **IoV** [DRS22, KT22].

**IoVT** [XNC21]. **IP** [AGGM16, Gia15].

**IPFS** [ADA17, JJ22, KTM<sup>+21</sup>]. **irrational** [KVP21]. **Irrefutable** [FDT17].

**Irregularities** [RDDL17, SPB<sup>+22</sup>]. **IRS** [Far18b, Int14]. **Isabelle** [ABBS18, Kam17].

**Isabelle/HOL** [ABBS18]. **isn't** [BP15, Ito18, SK14]. **Isolation** [Ses18].

**Issue** [Ano18j, AHWB20, CGT<sup>+21</sup>, Mat14, MFR<sup>+21</sup>, WSZN18, ZMKR22, FD20a, YSD<sup>+20</sup>, ZFY16, ZWC21, ZFY17]. **Issues** [ATZ<sup>+21</sup>, ASSK21, BGM20, Bon16a, CELR18, Du21, bAHRAK17, bAHRAK18, SC21, SRB20, VGJ15, ZFW24, BB15, CXC<sup>+20</sup>, CXY21, CCH21, DSM<sup>+17</sup>, Lyn14, MKS<sup>+19</sup>, SJSY21, URC19]. **Issuing** [LWL<sup>+22a</sup>]. **ITA** [DRS22]. **Italian** [AF16, Cap15]. **Iterative** [NT21]. **it'll**



[PW17a]. **Ivy** [Gei16].

**January** [BCJR15]. **Japan** [Sad13, Nis16b, Ün21, YWW+18, YWS+18]. **Jewels** [vO20]. **Job** [Cim18a]. **jobs** [Per20]. **joint** [WZQ+17]. **Jointgraph** [XHP+21]. **Joseph** [Ano16c, SM-16]. **journal** [WZ21]. **Journey** [BBP19]. **Juan** [BCJR15]. **Judicial** [Nav17, VBST21]. **junctions** [PF18]. **June** [IKY05]. **Junk** [DN93]. **jurisdictions** [Ano14b]. **jury** [Ano18a]. **just** [Kay17].

**Kademlia** [MCD15]. **KARMA** [VCS03, GH05]. **Keep** [WM18]. **Kernel** [WRB15]. **Kernel-Level** [WRB15]. **Key** [Alz19, Bon16b, Eti19, GS15b, Jue04, Kee16, MSCH15, WGL19, WHW22, CSC16, DSPSHJNA18, DAV20, EBSC15, MBB+15, Mer80, NAR22a, NAR+22b, Per09, XLL+21, ZSM22, ZSLY20]. **Key-dependent** [WGL19]. **Keyless** [EN17]. **Keynote** [HM16, Spo17, Web21]. **keys** [Sei20]. **keyword** [JGL+20, SZM22, YWX+22]. **Kimberley** [Wey19]. **Kindleberger** [G.17]. **King** [BSKR21]. **kleptographically** [WLGL19]. **kleptographically-secure** [WLGL19]. **Know** [JBK+19, KD16]. **Knowledge** [CGGN17, Dan17a, GCL16, MGDEK17, MGDEK18, YS20, PCM+21, XCZ+22, YL20a]. **Kodak** [Ano18j, Bue18, Roo18]. **KodakCoin** [Bue18]. **können** [KFR18, KFR17]. **Korea** [Ano18k]. **Kralendijk** [Ker12]. **Kryptoökonomie** [Six17e]. **Kryptowährungen** [Ale18b]. **Kubernetes** [Yew18]. **Kudos** [SD16b]. **kurz** [Pla13].

**Labeling** [NPS+17]. **Lack** [MPC+23]. **landscape** [LSS14]. **Language** [Cob17, HBJB14, O’C17, Wol18, KF19]. **Large** [Chr13, ES14a, SIDV14, SZJ17, WLXC17, WPC+22, vdHKZ14, DKJ19, FA21,

NAR22a, NAR+22b, ZWX20a, ZWX+19a]. **Large-scale** [SIDV14, SZJ17, WLXC17, WPC+22, FA21, ZWX20a, ZWX+19a]. **largest** [Abe18]. **Last** [Bue18, ZGR17, LGL+22]. **Last-Gasp** [Bue18]. **latency** [Sal22]. **lattice** [ES16]. **lattice-based** [ES16]. **launch** [Fir18, Osb18b, Sto20]. **Launching** [Wol18]. **laundering** [MBB13b, MBB13a]. **Laundry** [dBHC17]. **Law** [KT18, Tzi18, Ano16b, DW18, Lev17, VBST21, EDS15]. **Lawful** [WBK+17, LLCH21]. **Laws** [GP17a, KPJ22, McL13, Mic14]. **Layer** [Kla19, LZY+17, LFZ+21, FWP21, LZY22]. **layering** [WLLH21]. **Layers** [Dre17v]. **LBTM** [AZDF22]. **LD** [Spo17]. **LD-DL’17** [Spo17]. **LDA** [WXH21]. **LDC** [ZWH+20]. **lead** [Hol18]. **League** [Gei16]. **Leakage** [GS15b]. **Leaks** [LL17b, LL17c]. **Learn** [HSB17b, HSB18f]. **Learnable** [RRF22]. **Learned** [Son16a]. **Learning** [Als23, BNMH17, Bik16, Böh13, Cae15, Coh20, EZR+22, FZG+22, GLC+22, GMH21, GR17, Gya21, JJFC22, JLLK23, KOM+22, LUBS18, LLL+21b, LLL+21c, LPSP20, NMH16, OAS+21, QUG+23, RT20, RFM+18, SFYB21, SRA+22, SOA+21, WHI+21, AJA+22, AMME21, AKT21, AC21, BCK+21, CLS19b, CLS20, CWCC21, Fan22, GS20b, KKK+21, LLL+21a, MF19, MFE+20, MMT16a, NBP+21, PSY21, PK22, PC21, QHNL21, RSH22, UHK+21, WQGX22, WWML21, XLZ20, YV17, ZDM+21, ZZB+22]. **Learning-Based** [Als23]. **Learns** [NVWF14]. **leasing** [ANMM22]. **least** [Lau11a]. **leave** [Ano13b]. **LEChain** [LLCH21]. **Led** [HSB18a, HSB18b]. **Ledger** [AK17, AKP17, AKP18, AKGN18, Ant21, BMTZ17, CZJ+17, EGB18, EZ17, EZ18, Eva14, GCL16, KLDS20, KYV19, LWL+22a, Muf16, RSJ21, Str18, SPS+21, Tre21, VCPC20, VRK21, Wel18, Wu17, XNC21, BCK+21, CM19, FFL21, MGM+17,

MMMV21, Wat17, Woo14, ZWH18].  
**Ledgers** [AABM17, BMSS19, CWL17, EG17, LDWS17, Lei16, LS17, Mei18, PP16, TD17a, KF19, MCF20, SK20, Brü17]. **Legal** [BP14, Kün16, MBC17a, Ole18, Cap15, Far18b]. **legality** [UJ16]. **legally** [Sha18]. **lege** [Kün16]. **Legitimacy** [IM16]. **Lending** [KMOD17]. **LEO** [LLW17]. **Less** [HBJB14, BDF<sup>+</sup>22]. **Lessons** [Son16a]. **let** [Lau11a]. **Level** [GAK17, MZLW20, SL20, WRB15, BZK<sup>+</sup>21, CSLD17, FSW14, SG21]. **Leverage** [Dir19, ADZ23, PCP20]. **Leveraging** [Ger16, Mue18, RKT19, Cae15]. **LI** [YNS16]. **liabilities** [Cal21]. **Liability** [CIL<sup>+</sup>21]. **Liar** [RKS15]. **Libertarian** [Eya17]. **library** [HZT<sup>+</sup>22]. **Licensing** [Mor17j]. **Life** [KLZ<sup>+</sup>21, SW17, Aro12, CDS<sup>+</sup>19]. **Lifecycles** [NOT15]. **Light** [BD19, PC21, ZWX<sup>+</sup>19b]. **Lightning** [BCV19, BSB19, LPS<sup>+</sup>20a]. **Lightweight** [BL22, GČKG14, MGE20, MRR<sup>+</sup>20, TMTB19, WWQ<sup>+</sup>18, WHW22, XCG<sup>+</sup>17, XNC21, ASB<sup>+</sup>21, AZDF22, BAS<sup>+</sup>22, BTF<sup>+</sup>21, CW20, LLC<sup>+</sup>20, LYW<sup>+</sup>21, WLC<sup>+</sup>22a, ZWH<sup>+</sup>20, DKJG19]. **lightweight-script** [LLC<sup>+</sup>20]. **Like** [HSB17c, HSB18g, KL18a, Pop17a, BW14, SG21, VGJ15]. **Likely** [DL17]. **Limit** [Dim19, WM19]. **Limitationen** [Six17j, Six17i]. **Limitations** [Dre17r, GDTP17, KTCI21, Six17i, Six17j]. **Limits** [BLNN17a]. **line** [GH05]. **Linear** [KPJ22]. **Linkable** [SALY17, ZLL<sup>+</sup>19a]. **Linkage** [WLW22]. **Linked** [EG17, Spo17, TD17a]. **linking** [wScCcS21]. **liquidation** [ADZ23]. **Liquidity** [BSKR21, BLMZ22, VLAF21]. **List** [Ano13a, dre14]. **litecoin** [Cal21, HQ15]. **Literature** [BTvdH20, KT22, SS17a, SJB20, AHH20, VDVC21]. **Live** [BR16]. **Living** [FAC22]. **LLL** [US23]. **LLNs** [SGM20]. **Load** [LWL<sup>+</sup>22b]. **Loafing** [OOF<sup>+</sup>17]. **loan** [WGC19]. **LoC** [WGC19]. **Local** [GMH21, MMT16b, Ano21c, DAGK20, MNB<sup>+</sup>17, Son16b]. **LocalCoin** [CGFH16]. **Locality** [FOA17]. **localization** [GKA<sup>+</sup>21]. **Location** [DS15, ECdO17, LHL20, NYZ<sup>+</sup>20, YZL<sup>+</sup>19]. **lock** [RSW96]. **Locked** [FYK<sup>+</sup>17, DSPSHJNA18, YTLD19]. **Lockmix** [BSK<sup>+</sup>20]. **Log** [ABL18b, Bon16b, SW21, HS19b, MBD<sup>+</sup>12]. **Log-Based** [ABL18b]. **log-in** [HS19b]. **logging** [PMP19]. **Logic** [ARL19, BFS17, BFS18, HM16, IGRS16]. **Logic-Based** [IGRS16]. **Logistics** [PK19, LGL<sup>+</sup>22]. **Logs** [SS17b, vdHKZ14, ASM19]. **Long** [AV22, BR16, LJG15, NTRK22, PASA22, PCP20]. **Long-Range** [AV22]. **Long-Term** [LJG15, NTRK22]. **Longest** [Cou14]. **Longitudinal** [HSY<sup>+</sup>21, MB15]. **Look** [Ano18d, DP18, HSB17c, HSB18g, HMS17, EBSC15, WMHL21]. **LoRaWAN** [LSM17]. **lord** [Gei16]. **Lords** [Gre22]. **Loses** [Ano19a]. **Loss** [RKS15]. **Losses** [Ami16, dre14]. **Lost** [Nak18, Sha17]. **Lösungsansätze** [Six17j]. **Lotteries** [BZ17, MB17a]. **loves** [Ano14a]. **Low** [GAK17, Ksh20, ÖY17, Lee13, PGS<sup>+</sup>21]. **Low-Income** [Ksh20]. **Low-Level** [GAK17]. **Low-power** [ÖY17]. **LPWAN** [DGP20]. **LSB** [DKJG19]. **LSTM** [SYH22a, SYH22b]. **LSTM-TC** [SYH22a, SYH22b]. **Luck** [MHWK16]. **Lucky** [SIDV14]. **Lunch** [VM15].  
**M** [Bon16a, DRS22]. **M-ITA** [DRS22]. **M-Payments** [Bon16a]. **M2M** [BL22, Gia15]. **M2X** [LSN21]. **MA** [HLF<sup>+</sup>21]. **MA-ABE** [HLF<sup>+</sup>21]. **MaaS** [BPT<sup>+</sup>22]. **Machine** [Als23, Bik16, CWCC21, EZR<sup>+</sup>22, Gya21, Hir17, JLLK23, KOM<sup>+</sup>22, LSN21, OAS<sup>+</sup>21, RT20, SOA<sup>+</sup>21, WHI<sup>+</sup>21, CLS19b, CLS20, DCK21, KKK<sup>+</sup>21, MF19, PK22, PC21, UHK<sup>+</sup>21, WLL<sup>+</sup>13, YV17].

**Machine-to-Everything** [LSN21]. **machines** [BHI<sup>+</sup>14, SAL20]. **Made** [VA15, Lam01, PLSS17, ZLX<sup>+</sup>17]. **MadMax** [GKJ<sup>+</sup>18, GKJ<sup>+</sup>20, Liv20]. **Maduro** [Ano17e]. **Mail** [Cha81, DN93]. **main** [YS20, YS21, YP21]. **Mainstream** [Fug19, Fai17]. **Maintaining** [TS20]. **Maintenance** [Ale18a, CXY21]. **Maintenance-related** [CXY21]. **Major** [Lee13, LX20, dre14]. **Majority** [AKWW19, CXG<sup>+</sup>18, ES14b, ES18]. **Make** [BBSU12, VTL17, Cha85, Cro18, DMH18b, Gal18, Lau11a, SI19]. **Making** [CLJ<sup>+</sup>21, CMS21, DGSW15, HLF<sup>+</sup>21, LCO<sup>+</sup>16, XWL<sup>+</sup>19]. **Malicious** [CAS21, Ses18, AJA<sup>+</sup>22, WLS22, Xu16, BBM<sup>+</sup>18]. **Malleability** [ADMM15, DW14, PW17b, RAH<sup>+</sup>15, ADMM13, KAK21, LLZ<sup>+</sup>17]. **Malta** [JRB<sup>+</sup>17]. **Malware** [Ami16, Cim18b, DH17, Ker18b, Bar18, HYLY19, LSS14, Pal18, Tun18]. **malware-proof** [HYLY19]. **Manageable** [WWQ<sup>+</sup>18]. **managed** [LMH16]. **Management** [ACV17, Ban18, CTM22b, DP18, GANAHHJ17, HP17, HP18, KT22, KPP<sup>+</sup>20, KUBS22, KKS14, Liu19, MWV<sup>+</sup>18, Pan18, RKT19, Rin18, TADS20, VMMA17, WMG<sup>+</sup>21, WLC<sup>+</sup>22b, XWW17, YW18, ZWQ<sup>+</sup>16, AHSZ21, AZDF22, BZK<sup>+</sup>21, CLS19a, Cus14b, DAV20, EBSC15, Gir18, HSGY20, HFP<sup>+</sup>22, HLF<sup>+</sup>21, How20, KTA<sup>+</sup>20, KW20, KGS<sup>+</sup>19, KBS<sup>+</sup>21, KGTK20, LM20, LLCH21, LGCY22, LHO<sup>+</sup>20, LHL21, LTW<sup>+</sup>21, MISS22, PHRH21, RGB20, Sar21, Sha18, VBST21, WGC19, WMD<sup>+</sup>20, WLZ20, WLS22, Wij16, XZZ21, YL20a, ZCJ<sup>+</sup>21, ZNX<sup>+</sup>21, ZSL21, ZWGC19]. **Manager** [Men19]. **managers** [LLWH21]. **managing** [AMLH18]. **MANETs** [LDY<sup>+</sup>22]. **manipulating** [KK21]. **Manipulation** [GHMO17, HSX<sup>+</sup>21]. **Manual** [Ale18b]. **manufacturing** [XZZ21]. **Many** [Ito18, Ano13b, Spo17]. **Manycast** [MCD15]. **Mapping** [DS15, LN17]. **maps** [Che18]. **March** [BBMS14, CSN14, Ker12]. **marine** [How20]. **maritime** [ZSLY20]. **Market** [Ano18f, DMO<sup>+</sup>19, Hil15, KYLA22, KO22, LS20, LSZ22, LUBS18, MLM16, Ort16, Str18, SS19, Swe16, Wör16, Wu19, YK15, ZWLS18, ZzH21, CCMN17, IKC21, KCS<sup>+</sup>14, LB18, LMR17, MB17b, PASA22, Son16b, Ün21]. **Marketing** [Swe16]. **Marketplace** [Chr13, Bar16, YKJK21]. **Marketplaces** [KET<sup>+</sup>17, LPSZ18, NRP<sup>+</sup>20, GDKJ22, Sub18]. **Markets** [CCH<sup>+</sup>20, KCD17, Not19, ZzH21, CF15, LT17, MXW22, MNB<sup>+</sup>17, VLAf21, VX17]. **Markov** [KPJ22]. **Masked** [GPPB<sup>+</sup>21]. **Masses** [Per22]. **Massive** [Ano13b, Tun18]. **MasterCoin** [Wil13]. **Mastering** [Ant15]. **Matching** [Lin21, KOS<sup>+</sup>21, MLTT20]. **Mathematica** [Wol18]. **Matter** [HJHBG22]. **Matters** [And14]. **Mature** [GLD<sup>+</sup>18]. **maturity** [WCX16]. **Max** [MÖ22]. **Maximization** [SCYP17]. **maximum** [GB21, MF19]. **May** [Kan18, Bon14b]. **Maybe** [DL17]. **MB** [BPT<sup>+</sup>22]. **MB-MaaS** [BPT<sup>+</sup>22]. **MCS** [FY19]. **MCS-Chain** [FY19]. **me** [NQ20]. **Mean** [Ste17]. **Measure** [Smi18, WPXZ20, Bac02a]. **Measurement** [Chr13, HSY<sup>+</sup>21, WCY19, LZDA16]. **Measurements** [GHJ22, DAT21]. **Measuring** [Vas17]. **MEC** [MISS22]. **MEC-assisted** [MISS22]. **Mechanising** [PS18]. **Mechanism** [AMEF21, AAJ21, DRS22, HLC<sup>+</sup>17a, KK17a, Lin21, RSGA<sup>+</sup>21, XLM<sup>+</sup>17, DAV20, FZC<sup>+</sup>20, GLF20, HTLY21, LZY22, LX21, MHL20, MKL<sup>+</sup>22, RLQ<sup>+</sup>21, RDDB19, Shi16, SSL<sup>+</sup>19, WWZ<sup>+</sup>20, dORM<sup>+</sup>20]. **Mechanisms** [CCC19, JWNS19, JSK<sup>+</sup>17, MLD19, KOS<sup>+</sup>21, ZLS<sup>+</sup>22, ZLL<sup>+</sup>18, SKNM21]. **Media** [CR17, DDPS22, MLM16, AZR<sup>+</sup>20, MLM15, VD17]. **Media/Messaging**

[DDPS22]. **MediBchain** [ARBK17]. **Medical** [Big20, ISM17, LCL<sup>+</sup>22, Liu16, Shu17, WL21, WDS21, CAA<sup>+</sup>22, CXWY21, ESP22, GRU22, HZX<sup>+</sup>20, LLH21, PSY21, TGC<sup>+</sup>21, ZZB<sup>+</sup>22, ZGZ21, dAdSM<sup>+</sup>22]. **Meet** [Ras13]. **Meets** [DSW14, DSW16, LQYG19, LZD21, NGS<sup>+</sup>19]. **Mehr** [Dix17]. **Membership** [CV21, Sal22]. **Memory** [But13a, Kad18, Lar13, Ler13, LSZ<sup>+</sup>21, VCLK17, DKJ19, LGTS20, PASA22, Per09, PCP20, SKNM21, Tro14a, Tro14b, Tro15b]. **Memory-Easy** [But13a]. **Memory-Hard** [But13a, Lar13, LSZ<sup>+</sup>21, Per09, Tro14a, Tro14b]. **Men** [MPJ<sup>+</sup>13, MPJ<sup>+</sup>16]. **Merchant** [Mul14d, Nar19]. **Merge** [Hea13, SFMC21]. **Merge-Avoidance** [Hea13]. **Merged** [JZS<sup>+</sup>17]. **Merkle** [Bak09, CCC19, Coe08, ZGZ21]. **Mesh** [FDT17, KDS<sup>+</sup>20]. **Message** [FYK<sup>+</sup>17, GADO17, RSJ21, SLY15, WGL19]. **Message-Locked** [FYK<sup>+</sup>17]. **Messaging** [DDPS22, GPPB<sup>+</sup>21, Hal17, MCD15]. **Meta** [SV16]. **Meta-products** [SV16]. **Metadata** [BP17a, BBP19, GBSAS17]. **Metaverses** [OFA22]. **metering** [MTR<sup>+</sup>21, SSV22]. **Method** [ACW17, Hal21, JJ21, KKS14, LZZ<sup>+</sup>22, WHW22, WPXZ20, Kha15, KW20, QL22, SH16, SYH22a, SYH22b, Ün21, XCZ<sup>+</sup>21]. **Methodology** [AAD<sup>+</sup>21, YCP<sup>+</sup>21]. **Methods** [DH17, YF22, ZDW21, IKC21]. **Metrics** [Pie20]. **Metrology** [MBC17a]. **metropolitan** [LZZ<sup>+</sup>20]. **Micro** [VMMA17, YNS16]. **Micro-insurance** [VMMA17]. **Micro-Pricing** [YNS16]. **MicroBTC** [WDL19]. **microgrid** [ML20]. **Microgrids** [BLSD17]. **MicroMint** [RS96a, RS96b, vS02]. **Micropayment** [BDW17, DW15, RM19, RS96b, WDL19, RS96a]. **Micropayments** [Pas15, KK20b, Riv04]. **microservices** [LKP<sup>+</sup>21]. **Microsoft** [Cim18b, Tun18]. **Microstructure** [Wu19]. **Middleman** [MC13]. **middleware** [BVCH22]. **Might** [Hur16]. **mile** [LGL<sup>+</sup>22]. **mileage** [Ano21e]. **Miller** [Ano16c, SM-16]. **Million** [Cim18a, Gre13, McK19, Nak18, YWW<sup>+</sup>18, YWS<sup>+</sup>18, Cim19, Osb18b]. **Millionaires** [Ras13, Pop15, Pop16b]. **Millions** [Ano19a, BBM<sup>+</sup>18, Seg18]. **MILP** [Coe20b]. **min** [MÖ22]. **Mind** [Ano14a, MBC<sup>+</sup>17b]. **Minds** [GCL16]. **mine** [GKKT16]. **Miner** [Eya15, Ler14b, SGF<sup>+</sup>17, WL15, CSLD17, Tun18, YCMM20, QXC<sup>+</sup>21]. **Miners** [BM20, BBM<sup>+</sup>18, GCD16, Kan18, TNJJ22, FZC<sup>+</sup>20, GB21, LLWH21]. **mines** [CP17a]. **MiniChain** [CW20]. **minimal** [MAQ99]. **minimisation** [MyPLK22]. **minimum** [MF19]. **Mining** [ADQH22, Abr18, BS16, BH15, BGN<sup>+</sup>22, BD19, Ber18, BPT<sup>+</sup>22, CTM19, CGN14, CPMM21, De18, DMH18i, Dim17, Dru22, ES14a, ES14b, HVM<sup>+</sup>18, Hou14a, Hou16, JB21, JLG<sup>+</sup>14, JZS<sup>+</sup>17, Ker18a, Ker18b, KKKT16, KJ17, KJ18, Kwo14, KKS<sup>+</sup>17b, LS21, LS20, LJG15, LBS<sup>+</sup>15, LL17b, LL17c, LSP<sup>+</sup>15, Mat14, MGS22, MKKS14, MKKS15, Mul14e, RSV15, RJK<sup>+</sup>17, RC17, Ros11, SCYP17, SSZ17, SBBR17, TSHI22, VTL17, WCY19, ZWW<sup>+</sup>17, ZP17a, ZP17b, ZGR17, BHI<sup>+</sup>14, CEW15, Dev14, DTK20, ES18, Goo18, HS19a, Hol18, KDF13, LLWH21, OM14, Ole18, Sat18, Sat20, Sem22, SA20, Tro15a, VDK16, WLW<sup>+</sup>19, YCMM20, YZC22, ZLL<sup>+</sup>18, Nic17]. **Mining-as-a-Service** [BPT<sup>+</sup>22]. **Mining-based** [JB21]. **MiningVis** [TSHI22]. **Minority** [Ort16]. **MinT** [QXC<sup>+</sup>21]. **Mirror** [BBGP19]. **Mis** [HWW<sup>+</sup>20]. **Misbehavior** [KAR<sup>+</sup>15]. **misfits** [Pop15, Pop16b]. **Misleading** [EHA22]. **Missions** [Raz19]. **mistrusting** [dORM<sup>+</sup>20]. **Mitigating** [ZTJ<sup>+</sup>21, QHW<sup>+</sup>20]. **Mitigation** [BRS17, Gou19, RBL<sup>+</sup>17, RBS17, AHC<sup>+</sup>21, SSV22]. **MitM** [QHW<sup>+</sup>20]. **mix** [BSK<sup>+</sup>20]. **Mixcoin** [BNM<sup>+</sup>14]. **Mixed** [Mic14]. **Mixers** [Cou13]. **Mixes** [BNM<sup>+</sup>14, VR15]. **Mixing**

[BOLL14, RMSK14, RMS17, SMB22, SFMC21, YCP<sup>+21</sup>, ZGH<sup>+15</sup>, SYH22a, SYH22b, ZMH<sup>+17</sup>, ZMH<sup>+18</sup>]. **MLP** [RRF22]. **MLP-based** [RRF22]. **MNC** [IM16]. **Mobile** [Abr18, BPT<sup>+22</sup>, Gev16, MCS<sup>+21</sup>, SVL17, FY19, FMR<sup>+19</sup>, Gim16, HSC21, HS19b, LGL<sup>+22</sup>, PCC22, PF18, QL22, SAS<sup>+21</sup>, ZSL21]. **mobility** [ANMM22, LM20, PCC22]. **MOBT** [WLGL19]. **Mode** [Gya21]. **Model** [BBGP19, CTM19, Coe20b, ESLB20, FOA16, FYK<sup>+17</sup>, Gya21, HG15, Hut17, HP19, JBH<sup>+22</sup>, LS21, LS20, LS17, LT17, MZWX21, ML14, MAAAW<sup>+22</sup>, OEO16, OEO17, Tam19, YLZ20a, ZzH21, AC19, BCK<sup>+21</sup>, BCV19, BSF22, HZL<sup>+20</sup>, JJ22, KOM<sup>+22</sup>, KKM19, LLWH21, LTW<sup>+21</sup>, MAM22, MRR<sup>+20</sup>, NBP<sup>+21</sup>, NAH15, NVE<sup>+21</sup>, PC21, SZdLZ22, TDS<sup>+22a</sup>, WCX16, WLS22, WdLY<sup>+19</sup>, XWY<sup>+21</sup>, YKJK21, ZW15, ZW17, ZDL17a, ZDL17b]. **Model-based** [LT17, MAM22]. **model-driven** [LTW<sup>+21</sup>]. **Modeling** [ADM14b, Bys19, JL17, JW18, LLH<sup>+20</sup>, LUBS18, CFvdPS15, Suk19, VSE21, IKC21, LGTS20, SKG22]. **Modelling** [Kab17, MSMH21]. **Models** [GMH21, LPSP20, vM18, Ara21, Kat17, LW16, Liu18, PCP20, PR16, RBM17]. **Moderately** [ML14, VA15]. **Moderately-Hard** [ML14]. **Modern** [PP16]. **Modernize** [Ger16]. **modifiable** [CLS<sup>+19c</sup>]. **modifying** [Bar18]. **MOF** [DKJ19]. **MOF-BC** [DKJ19]. **möglich** [Möl13]. **Momentum** [Lar13]. **Monero** [SALY17, AGK22a, KFTS17]. **Monetary** [Hut17, Rec19]. **monete** [AF16]. **Monetised** [Zei16]. **Monetization** [AVA21]. **monetizing** [AKA<sup>+22</sup>, HDM<sup>+14</sup>]. **Money** [BWZ17, Bel18, BW14, Ber13, Bhe17c, CMS21, Dre17s, Gia15, Har17, Nak18, Nis16b, NVWF14, OFA22, Pan96, Roi13, WvB14, CSG<sup>+18</sup>, Fri14, G.17, GC08, Möl13, MBB13b, MBB13a, Nis16a, OC16, Pal18, Pop15, Pop16b, Rot17, Sch14b, SZ13, TT16, TTC16, VC15a, VC15b, PP16]. **Money-like** [BW14]. **Money-over-IP** [Gia15]. **Monies** [BdL13]. **Monitoring** [Nar19, Shu17, WXR<sup>+16</sup>, MFE<sup>+20</sup>, SJ21]. **monnaie** [San14b, TFG17]. **Month** [De18]. **Moonwalk** [KZVT17]. **Moratorium** [De18]. **Most** [KPW19]. **Motivates** [BSB16]. **Motivating** [JMK17]. **Motivations** [KSCD16]. **Move** [WREK18, Nor17c]. **Movement** [LUBS18, IKC21, RSR17]. **movimiento** [RSR17]. **MSV** [ZzH21]. **Mt.** [FGHM17]. **Mt.Gox** [BR16]. **MtGox** [DW14]. **much** [Kug18]. **MudraChain** [KBTT20]. **Mulls** [De18]. **Multi** [ABL18b, GLG19, KK20a, LFZ<sup>+21</sup>, LYZ<sup>+21</sup>, RBS17, SZM22, WLL<sup>+13</sup>, ZGH<sup>+15</sup>, AAGX<sup>+22</sup>, Ano21a, CLT<sup>+20</sup>, FWP21, FZC<sup>+20</sup>, HVM<sup>+18</sup>, HZL<sup>+20</sup>, LB18, MPSW19, PK21, Sko19, TDS<sup>+22a</sup>, WLS22, XCZ<sup>+22</sup>, YKJK21]. **multi-agent** [Sko19]. **Multi-Blockchain** [KK20a]. **multi-blocks** [FZC<sup>+20</sup>]. **multi-contracting** [AAGX<sup>+22</sup>]. **multi-cryptocurrency** [HVM<sup>+18</sup>]. **Multi-domain** [RBS17, PK21, TDS<sup>+22a</sup>]. **multi-fractality** [LB18]. **multi-input** [Ano21a]. **Multi-keyword** [SZM22]. **Multi-Layer** [LFZ<sup>+21</sup>, FWP21]. **multi-malicious** [WLS22]. **multi-output** [Ano21a]. **Multi-Party** [ZGH<sup>+15</sup>, ABL18b, GLG19, LYZ<sup>+21</sup>, CLT<sup>+20</sup>, XCZ<sup>+22</sup>]. **Multi-processor** [WLL<sup>+13</sup>]. **multi-resource** [YKJK21]. **multi-signatures** [MPSW19]. **multi-tenant** [HZL<sup>+20</sup>]. **Multifaceted** [MMT16b]. **Multifractal** [WKD22, ZWLS18, GB22]. **Multimedia** [JCG<sup>+21</sup>, LWZ<sup>+21a</sup>, NPG<sup>+22</sup>, WZW<sup>+20</sup>]. **Multiparty** [ADMM14, BZ17, CGJ<sup>+17</sup>, NT21, ADMM16, BHH19]. **Multiple** [GCL16, RLQ<sup>+21</sup>, AAC<sup>+19a</sup>, GDKJ22, KOM<sup>+20</sup>, WLGL19]. **multipurpose** [Fir18]. **MultiRes** [DCY<sup>+22</sup>]. **MultiRes-RCF** [DCY<sup>+22</sup>]. **multisignature** [ES16].

**multivariate** [CA21]. **Multivocal** [BTvdH20]. **Municipal** [Nar19]. **Music** [Sha18]. **Musical** [KPP<sup>+</sup>20]. **Musk** [Sha17]. **mutual** [LHH<sup>+</sup>18]. **My** [CMJ21, MBC<sup>+</sup>17b]. **mysteriously** [Osbl8a]. **Myth** [EBHBL16].

**naar** [PdWWS16]. **Nakamoto** [Cha14, RZJ20, Sha17]. **Namecoin** [HQ15]. **named** [JZLL17, ARK20]. **Names** [MPJ<sup>+</sup>13, HS97, MPJ<sup>+</sup>16]. **Narayanan** [Ano16c, SM-16]. **Narrative** [CR16, RC16]. **National** [Pan18, SG21, Sto20]. **native** [MKL<sup>+</sup>22]. **Natural** [AW18]. **Nature** [DVRM16, Dre17w]. **navigating** [Hol15]. **NDN** [TKBK22, Yan21]. **NDN-based** [TKBK22]. **Near** [Alz19, Ber17]. **Necessity** [ZP17a]. **need** [Pec17a]. **needed** [Fai17]. **needs** [Pec15, TLS<sup>+</sup>21]. **negotiation** [FZC<sup>+</sup>20]. **Neighbor** [BAK22, PW17a]. **NEM** [Ano18]. **Neo** [CCA<sup>+</sup>20]. **Neoadjuvant** [Shu17]. **nervous** [Ano13b]. **Net** [Kuz19a, Kuz19b]. **Network** [AK17, Ali19, AGT<sup>+</sup>22, BCV19, BSB19, BKP14, CTNS21, CPL<sup>+</sup>21, DWS21, DW15, DSBPS<sup>+</sup>18, DPSHJ14, EBHBL16, FOA16, FSW14, FPD<sup>+</sup>21, GHJ22, HWCL17, IST19, JW18, KM20, KLM17, KLZ<sup>+</sup>21, KFBI22, Kla19, KKM14, Leo20, LLW17, LPS<sup>+</sup>20a, LF16, LWL<sup>+</sup>22b, LX20, MCD15, MZWX21, NSB19, NAH16, NH17, RRM18, RS21b, SCN<sup>+</sup>22, SOA17, SCAA13, SMZ14, Suk19, TDW<sup>+</sup>22, VFFV17a, VFFV17b, VFFV17c, WL15, WLZ20, WRB15, YK15, Zam19, ZL19, Ano21a, BS15, BSF22, Cas12, CK16, DW13, DAGK20, ECA<sup>+</sup>20, ECA<sup>+</sup>21, FOA17, GS20b, GRM22, Hal21, HVM<sup>+</sup>18, IKY05, KCS<sup>+</sup>14, KKT<sup>+</sup>22, Lee13, LLWH21, LTBY20, LLL<sup>+</sup>21c, NC17a, NPB<sup>+</sup>21, NAH15, NVE<sup>+</sup>21, OTS<sup>+</sup>21, PCC22, RKP19, RWG21, Sal18, wScCs21, Six17h, WLW<sup>+</sup>19, WCZ21, XLZ20, YCMM20, ZWS<sup>+</sup>20, ZWL22, Ser21]. **Networked** [CTGJ22]. **Networking** [DPS<sup>+</sup>21, YPFY21, JZLL17, LQZ<sup>+</sup>20, WLN<sup>+</sup>21, YPDC20]. **Networks** [ADQH22, BL22, BDW17, EKK<sup>+</sup>17, FDT17, GBE<sup>+</sup>18, JL17, JWNS19, Kat16, KG17, LMH16, LWL<sup>+</sup>21, MMSK<sup>+</sup>17, MMSH16, MMR<sup>+</sup>21, NPG<sup>+</sup>22, PSS17, RGB20, RLS<sup>+</sup>21, RLT17, SKA<sup>+</sup>20, SYK17, SZJ17, TWFO20, WCY19, WK19, WPXZ20, XNC21, YMHY21, ZY21, AJA<sup>+</sup>22, AGK22a, A<sup>+</sup>13, BAK22, BAJ20, BLMQ19, BERHE19, Che18, DKJ19, FZC<sup>+</sup>20, FD20b, HLC<sup>+</sup>17b, KDS<sup>+</sup>20, KO22, LCSR21, LCZL21, LDLS22, LP18c, LP18d, LZZ<sup>+</sup>20, MLYL20, NAR<sup>+</sup>22b, NPDS20, PASA22, SCP<sup>+</sup>20, SYCC21, TKW15, VD17, WHY<sup>+</sup>21, XCZ<sup>+</sup>21, YS21, ZGR<sup>+</sup>22, ZLS<sup>+</sup>22, ZSGB<sup>+</sup>22, ARK20, HCB<sup>+</sup>22, XZL<sup>+</sup>22]. **Netzwerks** [Six17h]. **NeuCheck** [LWZ<sup>+</sup>21b]. **Neural** [JL17, Ser21, VCPC20, WK19, BCK<sup>+</sup>21, Che18, GS20b, KO22, LTBY20, LLL<sup>+</sup>21c]. **neuro** [AAPZ19]. **neuro-fuzzy** [AAPZ19]. **Neutrality** [Kuz19b, Kuz19a]. **Never** [McM13, SA20]. **newly** [Pal18]. **News** [Ano16a, DDPS22, Kug18, Pec15, Pec16, Und16]. **Next** [AMLH15, BCK<sup>+</sup>21, But13b, CGT<sup>+</sup>21, MRG18, OA17, Tre21, AMLH18, Ant20, Hal21, LP17b, LP17c, LP18b]. **Next-Generation** [AMLH15, But13b, MRG18, AMLH18]. **NEXTLEAP** [Hal17]. **NFC** [Mic16]. **NG** [EGSvR15, NWGF20b, NWGF20a]. **NIC** [SNM17]. **NiceHash** [Nic17]. **Nick** [McG18]. **NIST256p** [US23]. **NIST521p** [US23]. **No** [MPJ<sup>+</sup>13, Pop17a, VM15, MPJ<sup>+</sup>16]. **Node** [Ano18b, JBH<sup>+</sup>22, YLZ20a, AJA<sup>+</sup>22, HYWY22, HZT<sup>+</sup>22, XHST20]. **Nodes** [FBHS19, Yeo15, OTS<sup>+</sup>21]. **Non** [BMSS19, EAvm20, FDT17, GCL16, TD17b, Sar21, WLL21]. **Non-blocking** [EAvm20]. **Non-equivocation** [TD17b]. **Non-Permissioned** [BMSS19]. **Non-Repudiation** [FDT17, WLL21]. **non-transferable** [Sar21]. **Non-Users** [GCL16]. **Noncausal** [HG15]. **nondeterministic** [WZS19]. **nonmathematicians** [Gom16].

**Nonoutsourcable** [MKKS14, MKKS15]. **Nonparametric** [DH17]. **normal** [YZC22]. **Normative** [RC16]. **North** [Ano18k]. **Northbound** [DHH<sup>+</sup>22]. **Norway** [GANAHHJ17]. **Notarization** [MGDEK17, MGDEK18]. **Note** [BS16, Nis16b, WR16, Wil17, WR18, Hea13]. **Nothing** [Pop18a]. **Notice** [ALP15]. **Novel** [EHA22, LSZ<sup>+</sup>21, LZZ<sup>+</sup>22, MCS<sup>+</sup>21, OEO16, OEO17, YWJ<sup>+</sup>16, BILN21, BAR21, LDLS22, LZZ<sup>+</sup>20, LKP<sup>+</sup>21, SGM20]. **NovidChain** [ACKJ22]. **NRE** [KZVT17]. **Nudge** [WMD<sup>+</sup>20]. **nuevas** [HA15]. **number** [Duc13, Kin13, SAS<sup>+</sup>21]. **nutzen** [KFR17, KFR18]. **Nxt** [Pop16a]. **NY** [IKY05]. **NyaYa** [VBST21].

**O** [Dry14]. **Obama** [WM19]. **Object** [OR17]. **Object-Oriented** [OR17]. **objectives** [TBB21]. **Objects** [AKGN18, Wel18]. **oblivion** [RS21a]. **Oblivious** [CXS<sup>+</sup>17, KPK17, CLT<sup>+</sup>20]. **Obsidian** [Cob17, CAMS20, COE<sup>+</sup>20a]. **obsolete** [Cha85]. **Obstacles** [Mei18]. **occupies** [Nor17c]. **Odometer** [CBWF17]. **Off** [Ape14, ET17, GH05, HBG16, KG17, Kra16b, MKKS15, Ano21d, Gal18, JJ22, Lee13, MKKS14, XZXP21]. **Off-Blockchain** [HBG16, KG17, Ano21d]. **Off-Chain** [Ape14, Kra16b, JJ22, XZXP21]. **Off-Chaining** [ET17]. **Off-line** [GH05]. **öffentlicher** [PB17]. **Offerings** [IPL<sup>+</sup>18]. **Official** [Ano18m]. **Offline** [DNSY14, DNY17, WLGL19]. **Offloading** [DCZ<sup>+</sup>21, HSC21, XCZ<sup>+</sup>21, ZGR<sup>+</sup>22]. **offs** [KLDS20, SIDV14]. **ohne** [Möl13]. **Oil** [But19, ZzH21]. **Okinawa** [Sad13]. **Ökosphäre** [Six17a, Six17f]. **Ökosysteme** [Sto17]. **Oligopoly** [AW18]. **Olive** [But19]. **OLSR** [CTNS21]. **Omni** [SS20]. **on-** [Ano21d]. **On-Blockchain** [HBG16]. **On-chain** [KOM<sup>+</sup>22]. **once** [Sha17]. **Oncology** [DXR<sup>+</sup>17]. **One** [GCL16, Pav18, Uni14, Nor17a, Tun18].

**Onion** [GDP<sup>+</sup>17, Esc18]. **Online** [Chr13, JKKX16, LD17, RRCL17, RGB20, WXH21, CZ16, JFG18, SCE21, YYN<sup>+</sup>20]. **Only** [McK19, LP18c, LP18d]. **Onto** [SD16a]. **Ontology** [RC16, dKW17]. **op** [PdWWS16, SS20]. **OP\_RETURN** [BP17a]. **Open** [ACM17c, ATZ<sup>+</sup>21, BGM20, BLBS17, Du21, HRE17, Lim18, LNZ<sup>+</sup>16, TNM17, XWL<sup>+</sup>19, dCdCM14, Cap12, CXC<sup>+</sup>20, Hol15, KS18, LFX<sup>+</sup>20, LGCY22, MKS<sup>+</sup>19, Sko19, SJSY21, VDVC21, WMD<sup>+</sup>20, Cap12]. **Open-source** [dCdCM14, Cap12]. **Open-Source-** [TNM17]. **Open-Source-Geld** [Cap12]. **Opening** [MSC15]. **Opera** [Abr18]. **Operability** [SYK17]. **operate** [SAL20]. **operation** [Ole18]. **Operations** [Ber18]. **Opinions** [GCL16]. **opportunità** [AF16]. **opportunités** [San14b]. **Opportunities** [ASSK21, BGM20, EBD<sup>+</sup>20, FFL21, HSB17a, HSB18e, JB17a, MWV<sup>+</sup>18, SK17, Van14b, ACA<sup>+</sup>19, AF16, DCB<sup>+</sup>21, DPN<sup>+</sup>22, HYL21, Ker14, LZD21, MCLH19, San14b, San14a, ZFY16, ZFY17]. **Opportunity** [Mul14f, Tzi18]. **Optimal** [GGN16, LS21, SSZ17, ZGR<sup>+</sup>22, HZLH19, JFG18, Sal22]. **optimal-latency** [Sal22]. **Optimistic** [JMM14]. **Optimization** [AGT<sup>+</sup>22, DXW21, Hal21, KZVT17, GS20a]. **optimizations** [CSC16]. **Optimized** [BAK22, DKJ17, GBPDPW17, MAAAW<sup>+</sup>22, DKJ19, MDN<sup>+</sup>18]. **Optimizing** [CGN14, LDH17, SS13, TNJJ22]. **Options** [Nia19]. **Oracle** [Cal22]. **oracles** [KGS<sup>+</sup>19]. **orchestration** [AC19]. **Order** [DDX17, Pav18, VC15a, VC15b]. **Order-Preserving** [DDX17]. **Ordering** [BSV17]. **Orders** [YWS<sup>+</sup>18, GAF18]. **Organisations** [NST<sup>+</sup>17]. **Organization** [NOT15, ZWX<sup>+</sup>20b]. **organization-friendly** [ZWX<sup>+</sup>20b]. **organizational** [AAGX<sup>+</sup>22]. **Organizations** [DMH18f, KPP<sup>+</sup>20, Son18]. **Organized**

[MDAP16, MAP16, Pie20, Far18a]. **Oriented** [GvRS17, OR17, BAS<sup>+</sup>22, IPSP17, ICGB21, NML19, PPMT17]. **origin** [CCMN17]. **Origins** [SJZG19]. **Orphan** [DSBPS<sup>+</sup>18, IST19]. **Oscillators** [YF22]. **Oslo** [GANAHJ17]. **Other** [EDS15, Eva14, JYKA19, KJGW17, Pop17a, Ano18a, FGHM17]. **Our** [Smo18]. **Ouroboros** [KRDO17]. **out-of-gas** [GKJ<sup>+</sup>18, GKJ<sup>+</sup>20]. **Outbreak** [ZKU<sup>+</sup>23, Tun18]. **outfit** [Nic17]. **Outliers** [MMT16b]. **Outlive** [Hur16]. **Outlook** [LWL<sup>+</sup>21, GL16, ZZ16]. **output** [Ano21a, BBDN21]. **outsourced** [LWL<sup>+</sup>22b, FBL<sup>+</sup>20]. **outsourcing** [BJ20, HS20, HCW<sup>+</sup>18]. **Overcoming** [BLNN17a, GG17, HRF17]. **overflow** [TML<sup>+</sup>22]. **Overlay** [ADQH22]. **Overlays** [CM16, MO15]. **Overlooked** [Tre21]. **Overstock** [Sid14]. **Overview** [Cal22, Ros12, YMRS18, ZFY16, VG17, ZFY17]. **Own** [Ano18j, PW17a]. **Owner** [GANT21, Gre13]. **Owner-Custodianship** [GANT21]. **Ownership** [Dre17h, Dre17w, CAMS20, GDKJ22, HP17].

**P** [SS19]. **P2P** [ACM15, Ali15, BKP14, Cas12, DPSHJ14, FSW14, GHJ22, HLC<sup>+</sup>17a, KKM14, Nak08b]. **p2pool** [Voi11]. **P4** [YPDC20]. **P4-to-blockchain** [YPDC20]. **PACChain** [Yue20]. **packet** [YPDC20]. **paid** [Ito18]. **Pairing** [DFKP13, WHW22, AAGA19]. **Pairing-based** [DFKP13, AAGA19]. **Pairings** [Fit22]. **pairs** [LT17]. **PAMBA** [Ler14b]. **Pandemic** [BSKR21]. **Paper** [AM15, BDLF<sup>+</sup>16, GvRS17, MCJ17, Sch14b, XJY17, Ano17a, Nak08b, Sad13]. **Papers** [BBMS14, CSN14, JRB<sup>+</sup>17, Ker12, BCJR15, CMR<sup>+</sup>16, GP17b, Jue04]. **Paradigm** [Mor17c, HZL<sup>+</sup>20]. **Parallel** [HM20, LSH13, BAPS22, CSLD17, TDS<sup>+</sup>22b, XZXP21]. **parallelity** [TDS<sup>+</sup>22a]. **Parking** [KK20a]. **parliament** [Lam89]. **parser** [YPDC20]. **Parsing** [RDDL17]. **Part** [OF15, Lam89]. **part-time** [Lam89]. **Partial** [YLZ20a]. **partially** [WZQ<sup>+</sup>17]. **Participants** [ACV17]. **participation** [LP18c, LP18d]. **Participatory** [Las17, KAP20]. **particle** [GS20a]. **Parties** [FWB15]. **Partition** [KLM17]. **Partitioning** [SCN<sup>+</sup>22]. **Partnering** [Sch14a]. **Party** [ADM14a, FYK<sup>+</sup>17, HLC17c, ZGH<sup>+</sup>15, ABL18b, CLT<sup>+</sup>20, GLG19, HLC19, Lin17, LYZ<sup>+</sup>21, XCZ<sup>+</sup>22]. **Password** [IK17, JKKX16, LSZ<sup>+</sup>21, McK19, WGL19, HZ20]. **password-based** [HZ20]. **Password-Protected** [JKKX16, WGL19]. **Past** [BVG22]. **patch** [KW20]. **Path** [LCL17, Mei18, LPS<sup>+</sup>20a, YS20, YS21, YP21]. **paths** [YS20]. **Patient** [WDS21]. **Pattern** [LLP<sup>+</sup>20b, RJK<sup>+</sup>17, TNJJ22, TOM17, HLC<sup>+</sup>17b]. **Patterns** [EZ17, EZ18, MYSZ19, NML19, SMB22]. **PAutoBotCatcher** [LLCF21]. **PAXOS** [DLL00, DLL97, GL00, HMS17, Lam01, MBD<sup>+</sup>12, MPSP17, PLSS17, RST11, Ros03, SS12, SS13, Sut20, VA15, VB08]. **PaxosStore** [ZLX<sup>+</sup>17]. **Pay** [Ede14, HSB17d, HSB18h, ZGR17, BDE<sup>+</sup>13]. **payer** [ZLL<sup>+</sup>19a]. **Paying** [Dre17]. **Payload** [Kan18]. **Payment** [AH12, CGFH16, DW15, EKK<sup>+</sup>17, GM17, KG17, Lei16, LZC<sup>+</sup>17, MMSK<sup>+</sup>17, MMSH16, MSH17, RLT17, Sch98, Sou13, TWFO20, ZY21, CJW17, ECA<sup>+</sup>20, ECA<sup>+</sup>21, Kha15, LWQ<sup>+</sup>21, MSMH21, WZS19, YTLD19, ZWX<sup>+</sup>19a, ZWX<sup>+</sup>19b]. **Payment-Channel** [MMSK<sup>+</sup>17]. **Payments** [AM15, BSCG<sup>+</sup>14, Bon16a, CGGN17, Cha83, DNSY14, DNY17, Gev16, Gom16, KAČ12, MPJ<sup>+</sup>13, SCG<sup>+</sup>14, Bar18, Gim16, HCW<sup>+</sup>18, MPJ<sup>+</sup>16, PCHD19]. **PayWord** [AH12, RS96a, RS96b]. **PBFT** [CCA<sup>+</sup>20, GRU22, LFZ<sup>+</sup>21, XBX<sup>+</sup>22]. **PBFT-based** [GRU22]. **PBFT-Inspired** [CCA<sup>+</sup>20]. **PCS** [KLR<sup>+</sup>17b]. **Peak** [LS20]. **Pedigree** [NC17b]. **Peer**



[AAAO20, Ano17a, CVM17, CS15, GH05, KN12, NAH16, Rin18, SOA17, SZJ17, FOA17, GHJ22, Nak08a, NAH15, TF16, VCS03]. **Peer-to-Peer** [AAAO20, Ano17a, KN12, NAH16, SOA17, CS15, GH05, SZJ17, FOA17, Nak08a, NAH15, TF16, VCS03]. **Peers** [Dre17g]. **Pegged** [IK19]. **Penalizing** [RKS15]. **Penalties** [KB16, KVV16]. **People** [BSB16, Ksh20]. **Peppercoin** [Riv04]. **perceived** [AZR<sup>+</sup>20]. **Perceptions** [GCL16]. **percolation** [BCV19]. **Perfection** [Ger16]. **Performance** [ABF<sup>+</sup>16, Cor19, DMH18g, Gao17, GKW<sup>+</sup>16, JB21, KKJG<sup>+</sup>16, Mah18, MOM22, MMR<sup>+</sup>21, RZJ20, SCAA13, Suk19, XZK<sup>+</sup>17, BANT20, BLB<sup>+</sup>21, DCB<sup>+</sup>21, Dev14, DHES16, GLO<sup>+</sup>22, KAK20, Li14a, Li14b, Sal18]. **Performant** [ZHC<sup>+</sup>20]. **perhaps** [Osb18b]. **Perils** [ACM15, Ali15]. **Perish** [ZP17b]. **Permacoin** [MJS<sup>+</sup>14]. **Permeability** [JB18b]. **permissible** [ZLW19]. **permission** [AAC<sup>+</sup>19b]. **Permissioned** [BANT20, BMSS19, CZQ<sup>+</sup>21, EN17, HS16c, HYP<sup>+</sup>22, HP19, Moh19, Suk19, Vuk17, ZZJ17, ASB<sup>+</sup>21, AAE19, BHMB21, DCB<sup>+</sup>21, HSGY20, PMP19, SJX<sup>+</sup>20, TYY<sup>+</sup>19]. **permissionless** [BHMB21, LLZY20]. **Persistent** [GB22]. **Personal** [EN19, Gir18, LN17, ZTSS20]. **personnel** [CLS19a]. **perspectivas** [HA15]. **Perspective** [FSW14, Kan20, Kün16, LD17, Mor17f, Mor17g, Sir16b, Sve17, Tzi18, CZ16, CGR18, FD20b, Her19, KFR17, Liv20, WGL<sup>+</sup>21, WLLH21]. **Perspectives** [BMC<sup>+</sup>15, PZZ<sup>+</sup>20, Dus14, HA15]. **Pervasive** [YPFY21, CJW17]. **Petersburg** [ACM17c]. **Petro** [Osb18b]. **Petroleum** [Nia19]. **PGP** [WA15a, WA15b]. **Pharmaceutical** [STG<sup>+</sup>20]. **PharmaCrypt** [STG<sup>+</sup>20]. **phase** [EA<sub>v</sub>M20]. **phenomenal** [GC08]. **Phishing** [CPL<sup>+</sup>21, Ano18k, Pal18]. **photo** [ZLW19]. **Physical** [CGT<sup>+</sup>21, FYZ<sup>+</sup>21, LSZ<sup>+</sup>21, MKL<sup>+</sup>22, NVE<sup>+</sup>21, Sko19]. **Picture** [Dre17q]. **Pieces** [Dre17c]. **Pikachu** [AV22]. **pilfered** [Nic17]. **Pinocchio** [DFKP13]. **Pipelining** [SS12, SS13]. **Pirate** [RS14]. **Pistis** [LWL<sup>+</sup>22a]. **PKI** [AB17, JLX<sup>+</sup>19, KKM19, QHW<sup>+</sup>20, TADS20]. **place** [Ant20]. **plan** [Nor17c]. **planet** [TVK<sup>+</sup>20]. **planet-scale** [TVK<sup>+</sup>20]. **planned** [AZR<sup>+</sup>20]. **Planning** [Dre17m, MAM22]. **Plans** [Ano17e]. **plants** [LWCX21]. **Plastic** [AM15]. **Platform** [ARBK17, BSV17, BO17, But13b, JCHSR16, KMOD17, MZLW20, Shi19, SV16, SVL17, WDLS17, ZHC<sup>+</sup>20, ACKJ22, ABB<sup>+</sup>19, DCK21, HYLY19, HS19b, KGS<sup>+</sup>19, KOJ<sup>+</sup>20, LFX<sup>+</sup>20, LXL<sup>+</sup>19, MBK<sup>+</sup>21, MOM22, Nor17a, OHJ20, Osb18a, Sto20, Wij16, ZTSS20]. **Platforms** [DDPS22, Eva14, Mah18, WXH21, BLB<sup>+</sup>21, DCB<sup>+</sup>21, Olu21, Raj18]. **PlatIBART** [WDLS17]. **Platoon** [AS18]. **Play** [KMB15]. **plunges** [K.13]. **PNPCoin** [Kol22]. **PoET** [Cor19]. **Point** [ECHL16, Tre22]. **points** [Far18a]. **Poker** [KMB15]. **PoLe** [LLL<sup>+</sup>21c]. **police** [Ano18i, Far18a, Hol18]. **policies** [JLX21]. **Policy** [GB22, Rec19, SZM22, ZSLY20]. **policymakers** [BC16b]. **Politics** [Bel18, Lut17, Bra15a]. **Poly1305** [GADO17]. **Polynomial** [CLS<sup>+</sup>19c]. **Polynomial-based** [CLS<sup>+</sup>19c]. **Ponzi** [BCCS20, CLS<sup>+</sup>21, Lew15]. **Pool** [RC17, SCYP17, SBBR17, CBST22, LLWH21, Voi11, ZLL<sup>+</sup>18]. **pool-hopping** [CBST22]. **Pooled** [LSP<sup>+</sup>15, Ros11]. **Pooling** [SGF<sup>+</sup>17]. **Pools** [BS16, ES14a, JLG<sup>+</sup>14, KKS<sup>+</sup>17b, LJG15, LBS<sup>+</sup>15, VTL17, WCY19, ZWW<sup>+</sup>17, ZGR17, CK16, HS19a, HS20, SKNM21]. **poorer** [Ano13b]. **Popularity** [VM15]. **portability** [SAS<sup>+</sup>21]. **Portfolio** [BOS15, HJHBG22, DXW21]. **PoRX** [WLC<sup>+</sup>20]. **PoS** [Ano18k, AV22]. **Possibility** [LS20, CXG<sup>+</sup>18]. **possible** [Möll13]. **Post** [WKD22, BGPW16, CGHC21, CXY21, SK20]. **Post-COVID-19** [WKD22].

**post-deployed** [CXY21]. **post-digital** [BGPW16]. **post-quantum** [CGHC21, SK20]. **postage** [Bac97]. **Postal** [JB17a]. **Poster** [CGFH16, DNSY14, Hil14, JCG17, XWW17, MHH+16]. **Potential** [BBBB15, Dre17o, Hil15, HSB17c, HSB18g, Ksh20, Tre21, WZ21, CXLC18]. **Pound** [Hil14]. **PoW** [QXC+21, AV22, BDF+22]. **PoW-less** [BDF+22]. **Power** [Bon14a, DVRM16, LSP+15, WMG+21, YKDEV19, Cae15, Gon17, Hol18, LWCX21, ML20, Ole18, ÖY17, PW17a]. **Powered** [QFLM17, AMME21, ZDM+21]. **powerful** [Hol18, RS21a]. **Powering** [AMLH15]. **PPCoin** [KN12]. **PQChain** [EGB18]. **Practical** [CDD17, KFN+17, Ksh20, RMSK14, THF17, VSE21, XZY+21, vS02, LWZ+21b, ZLX+17]. **Practice** [Ami21, BNMH17, ELFCFL20, NMH16, PCM+21]. **Practices** [IPL+18, Mor17d, BGPW16]. **Pre** [KLL+15]. **Pre-Search** [KLL+15]. **Precise** [LGTS20]. **Predictable** [MLM16]. **Predicting** [EZR+22, GGKR21, GAF18, IKC21, JLLK23, KLL+15, Koo18, LUBS18, MF19]. **Prediction** [Gya21, JL17, KK21, NTKS17, RT20, BAR21, CA21, CLS19b, CLS20, IM21, KOM+22, QHNL21, RRF22]. **Predictions** [MDAP16, MAP16]. **predictor** [MLM15]. **Preemption** [RRCL17]. **Preface** [Ano19c, LPW17b]. **preference** [YP21]. **Preferences** [NTKS17, KOS+21]. **premise** [PCM+21]. **Premises** [Han13]. **Prescribed** [ZP17a]. **prescription** [GRU22]. **Presence** [GCR16, GKKT16, KDF13, Pou20]. **Present** [BVG22]. **Preservation** [LLYL19, MJS+14, WWQ+18, LLH21, SRA+22, URC19]. **preserved** [XZL+22]. **Preserving** [ARBK17, ACV17, DCK17, DDX17, KLR+17a, KLR+17b, KMMW17, KUEE17, KUEE18, LS17, LL17b, LL17c, OEO16, OEO17, SVL17, WQH17, WQH20, ZHC+20, ACKJ22, AC21, BYR+20, BSK+20, CXWY21, DBB+15, DAT21, GGJ22, GLY+21, HZX+20, JLX+19, KUE17, LCL+22, LLCF21, LYW+21, MZA+20, NAR22a, PHH+20, QHNL21, RLS+21, STN22, SJX+20, WQGX22, XCZ+22, YZL+19, ZYL22, ZLT+19]. **Prestige** [KSAB+21]. **Pretty** [WA15a, WA15b, Ito18, Sha17]. **prevent** [Lew15, QL22]. **Preventing** [àNOE17]. **Prevention** [AMEF21, CBWF17, Peo13, SPB17, Kha15, PSDSNAHJ19]. **Price** [Bla18, EDS15, EZR+22, GHMO17, Gya21, Kha19, LUBS18, PPW+15, RT20, Urq17, Wu19, AAPZ19, CLS19b, CLS20, CLXW22, DAGK20, Edw15, GAF18, K.13, KK21, Lee13, MB17b, RRF22, Son16b, SOA+21, VLAf21, ZDL17a, ZDL17b]. **Prices** [BSKR21, JL17, KPJ22, Smu18, LLJ21, MF19, MYSZ19]. **Pricing** [DN93, YNS16, YF22, KTA+20, LYW+21, WZW+20, ZGR+22]. **pricing-based** [ZGR+22]. **PriFoB** [BK22]. **prime** [Kin13]. **Primecoin** [Kin13]. **primer** [BC16b]. **Primitives** [GCR16, GCR18, WSL+19]. **Principles** [ALP15, TT19, Pil16]. **Prioritization** [MPC+23]. **Prioritized** [Gou19]. **Privacidad** [Bec14]. **Privacy** [ACM17d, ATZ+21, ARBK17, ABB+19, ADA17, AAKJ22, AKR+13, ACV17, Ban18, BK22, CIL+21, CBWF17, CVM17, CELR18, DBB+15, DAT21, DCK17, EN19, GANAHHJ17, GPP18, GCKG14, GANT21, GLY+21, Hal17, HHK18, HJPS16, JLX+19, KLR+17a, KLR+17b, KC18, KMMW17, Kat16, KL18a, KAS+22, KUE17, KUEE17, KUEE18, KJGW17, Ksh18b, LDWS17, LST+17, LLYL19, LGGB+21, MMSK+17, MO15, NTKS17, OEO16, OEO17, PS16, QHNL21, RLS+21, RMS17, SDT17, SFMC21, SVL17, SS17b, TWFO20, URC19, WBK+17, WHI+21, WQGX22, WL21, WDS21, XSC+17, YWJ+16, ZLMR19, ZXL19, ZZS+20, ACKJ22, A+13, AC21, BYR+20, BSK+20, BLB+21, CSG+20, CCG21, CXWY21, CLXW22, CCH21,

ECA<sup>+21</sup>, FHZ<sup>+19</sup>, GGJ22, Hea13, HZX<sup>+20</sup>, JJ22, LCL<sup>+22</sup>, LLCF21, LL17b, LL17c, LYW<sup>+21</sup>, MZA<sup>+20</sup>, MRR<sup>+20</sup>, MGN<sup>+22</sup>, NAR22a, PHH<sup>+20</sup>, Pec16, RSH22, STN22, SJX<sup>+20</sup>, SHL<sup>+20</sup>]. **privacy** [SRA<sup>+22</sup>, URC20, WQHX17, WMD<sup>+20</sup>, WQHX20, WWZ<sup>+21</sup>, WLL<sup>+13</sup>, XZL<sup>+22</sup>, XCZ<sup>+22</sup>, YZL<sup>+19</sup>, YSD<sup>+20</sup>, ZYL22, ZFW24, ZLT<sup>+19</sup>, PB17]. **Privacy-aware** [BK22]. **Privacy-Enhancing** [MO15, Hea13]. **Privacy-friendly** [ABB<sup>+19</sup>]. **privacy-preservation** [SRA<sup>+22</sup>]. **privacy-preserved** [XZL<sup>+22</sup>]. **Privacy-Preserving** [DCK17, KLR<sup>+17a</sup>, KLR<sup>+17b</sup>, KMMW17, KUEE17, KUEE18, OEO16, OEO17, DBB<sup>+15</sup>, DAT21, GLY<sup>+21</sup>, JLX<sup>+19</sup>, KUE17, QHNL21, RLS<sup>+21</sup>, WQGX22, ACKJ22, AC21, BYR<sup>+20</sup>, BSK<sup>+20</sup>, HZX<sup>+20</sup>, LLCF21, LYW<sup>+21</sup>, MZA<sup>+20</sup>, NAR22a, PHH<sup>+20</sup>, STN22, SJX<sup>+20</sup>, XCZ<sup>+22</sup>, YZL<sup>+19</sup>, ZLT<sup>+19</sup>]. **Privacy-Utility** [TWFO20]. **Private** [CTNS21, DWC<sup>+17</sup>, ISM17, LSFK17, SFYB21, Yue20, BHH19, DSPSHJNA18, ECA<sup>+21</sup>, JGL<sup>+20</sup>, Ler14b]. **Privately** [ZC16]. **privilege** [FTS<sup>+20</sup>]. **PrivySharing** [MZA<sup>+20</sup>]. **Probabilistic** [ARL19, GZ18, Pop16a]. **probably** [Lau11a]. **Problem** [BK17b, Dre17f, KJ17, KJ18, LSP82, Bra17, Lee13, LGL<sup>+22</sup>, Pec17a]. **Problems** [vS02]. **Proceedings** [ACM17c, CRS83, OF15, ACM17a, ACM17b, ACM17d, GANAHHJ17, IKY05]. **Process** [CWL17, Doz18, MWV<sup>+18</sup>, VCLK17, WXR<sup>+16</sup>, DCK21, FMR<sup>+19</sup>, KFR17, KK17b, LPGBD<sup>+19</sup>, SJB22, SSSJ19, Wey19]. **Processes** [GBPDW17, KL17, KL18b, LTW<sup>+21</sup>, PSHW20]. **Processing** [DN93, HV20, Hul17, PP16, PSGM22, SZ15, QNM<sup>+19</sup>, SZ13, XZXP21]. **Processor** [BH15, Sou13, BHI<sup>+14</sup>, WLL<sup>+13</sup>]. **procurement** [LLJ21]. **producer** [CHL19]. **Product** [Kri19, LD17, LX17, ZTJ<sup>+21</sup>, AB20, KFR17, XLL<sup>+19</sup>]. **production** [Gon17]. **products** [Ano21c, GS20a, SV16]. **Produkt** [KFR17, KFR18]. **Produkt-Sicht** [KFR17, KFR18]. **Professional** [BT18a]. **Professionals** [Hut17]. **Profiling** [DLV<sup>+22</sup>]. **Profit** [SCYP17, PW17a]. **profitability** [GPM18]. **Profitable** [SVL17]. **Profits** [VM15]. **Programmed** [Cou14]. **Programmers** [WXH21]. **Programming** [ARL19, Cob17, COE<sup>+20a</sup>]. **Programs** [TOM17]. **Progress** [XCW<sup>+22</sup>, ÖY17, ZFW24]. **Project** [DMH18j]. **Projects** [BO17, OOF<sup>+17</sup>]. **Promise** [Fot17]. **Promises** [Han13, Rou18]. **Promising** [HRE17]. **Promoting** [AIM19]. **promptly** [Far18b]. **Proof** [Abr16, AMEF21, Ape14, Ast16, Bac03, BLP17, BBH<sup>+13</sup>, BLMR14, BK17b, Coe08, DFKP13, FZC<sup>+20</sup>, GKW<sup>+16</sup>, HM20, JB21, Kam17, KN12, KSAB<sup>+21</sup>, Lar13, LABK17, LTC<sup>+19</sup>, LLL<sup>+21c</sup>, MGS22, MHWK16, Poe14, Pou20, QXC<sup>+21</sup>, SW21, SLY15, SDK<sup>+17</sup>, Tro15a, Voi11, Vuk16, WSC<sup>+20</sup>, XNC21, YLN<sup>+19</sup>, AC19, Dry14, HYLY19, KRDO17, Kin13, Shi16, Tro14a, Tro14b, Tro15b, WHJ17, WHJ20, YL20a, ZLT<sup>+19</sup>, Cor19, LC04]. **Proof-of-Activity** [LTC<sup>+19</sup>]. **Proof-of-Belief** [Abr16]. **proof-of-delivery** [ZLT<sup>+19</sup>]. **Proof-of-Elapsed-Time** [Cor19]. **Proof-of-ENF** [XNC21]. **Proof-of-negotiation** [FZC<sup>+20</sup>]. **Proof-of-Prestige** [KSAB<sup>+21</sup>]. **Proof-of-QoS** [YLN<sup>+19</sup>]. **Proof-of-Stake** [AMEF21, BLP17, KN12, LABK17, KRDO17]. **Proof-of-Work** [AMEF21, Bac03, BBH<sup>+13</sup>, BK17b, Coe08, Lar13, QXC<sup>+21</sup>, SLY15, Tro15a, Vuk16, Kin13, Shi16, Tro14a, Tro14b, Tro15b, LC04]. **Proofs** [DBB<sup>+15</sup>, SBRS16, SAL20, XCZ<sup>+22</sup>]. **Propagation** [FOA16, OAB<sup>+17</sup>, SOA17, DW13, FOA17, GHJ22, GKKT16, HTLY21, XWY<sup>+21</sup>, ZWL22]. **Properties** [Gar17, YK15, DMR18]. **Property** [Int14, Zei16]. **proportion** [YV17].

**Proposal** [CTM22b, GP17a, SI16, HC12]. **Proposals** [Bra13, EBHBL16, ALMLS16]. **Prospect** [SCYP17]. **Prospects** [Hil14, GGDK20, URC19, WZ21]. **prosumer** [DLK+21]. **prosumer-side** [DLK+21]. **Protect** [ABL+18a, JKX16, RS14, FLL+22]. **Protected** [JKKX16, WGL19]. **Protecting** [Dre17k, Dre17n, WLL+13]. **Protection** [NPG+22, WL21, BP17b, FHZ+19, HWDD17, WWZ+21, WWZ+20]. **Protocol** [Ape14, BM20, BLP17, Böh13, Coe08, EGSvR15, GPPB+21, GKL17, GLG19, HSS+20, HLC17c, Ibr17, KKS14, LN17, Ler14b, LLW17, LPS20b, LNZ+16, ML15, MSH17, MHWK16, Mue18, NT21, OAB+17, PSS17, SYB14, SALY17, WCL17, ZP17a, ASB+21, AB20, BB15, BF20, CW20, DSPSNAHJ20, DAV20, GKL15, GCH+22, Hea13, HLC19, JCG+22, KRDO17, KBS+21, LCSR21, Ler14a, LCZL21, LLZY20, LKP+21, CFvdPS15, ML17, MSMH21, NML19, PHH+20, PBHM21, Sal22, TYY+19, VG17, WSC+20, WLL21, XHST20, XLL+21, YYN+20, YLN+19, ZW15, ZWS+20, dAdSM+22, RC17]. **Protocols** [BK14, LABK17, Luu17, Mer80, MXC+16, HWJ22, KKS+17a, PLSS17, P16, ZWH18]. **prototype** [Ano21e]. **Provable** [SDT17]. **Provably** [NAR22a, Pia16, KRDO17, NAR+22b]. **ProvChain** [LST+17]. **Provenance** [AS18, LST+17, NSNF17, PK19, CTGJ22, RCD+19]. **Provers** [Hir17]. **proves** [LC04]. **provider** [Gir18]. **providers** [LKP+21]. **Providing** [LDWS17]. **provision** [UHK+21]. **Provisioning** [Eti19, AJA+22, MAM22]. **Provisions** [DBB+15, GČKG14]. **ProvNet** [CTGJ22]. **Proximity** [SOA17]. **Proxy** [MBK+21]. **Prozess** [KFR17, KFR18]. **Prozess-** [KFR17, KFR18]. **Pseudo** [MY11]. **Pseudo-anonymous** [MY11]. **Pseudonym** [FWB15]. **Pseudonymization** [FWB15, KMMW17]. **Pseudonymous** [FF17]. **Pseudonyms** [Cha81]. **PTAS** [JLX+19]. **pub** [HZL+20, Zha19]. **pub/sub** [HZL+20, Zha19]. **Public** [Alz19, Bri21, CCH+20, CGJ+17, CPM21, Eva14, GP17a, HRF17, JWNS19, Liu19, Luu17, Mai18, Muf16, RT20, XCG+17, XSC+17, vdHKZ14, AR15, BAS+22, CW20, CLXW22, FCH21, HAZ21, HZY+19, Mer80, PB17, YZL22, ZSM22, ZLS+22]. **Public-Ledger** [Eva14]. **Publication** [ALP15]. **Publicly** [Bac02b, YYN+20, YCX18]. **Publish** [ZP17b, ZZJ17]. **Publish/Subscribe** [ZZJ17]. **Puerto** [BCJR15, Nar19]. **PUF** [AHC+21, IK19]. **PUFs** [PHH+20]. **pugno** [AF16]. **Punishes** [YWW+18]. **Punishment** [Ano21b]. **Purposes** [Int14]. **Push** [SD16a]. **Putting** [CIL+21]. **Puzzles** [BC16a, ML14, MKKS14, MKKS15, RRCL17, RSW96]. **PVORM** [CZJ+17]. **Qatar** [Ano18m]. **qBitcoin** [Ike17]. **QHSE** [BYR+20]. **QoS** [PK21, RDDB19, YLN+19]. **QoS-aware** [RDDB19]. **Quality** [CTM21, BR17, LLJ21]. **quantification** [Dev14]. **Quantifying** [FS20]. **Quantile** [HZ21]. **Quantile-Varying** [HZ21]. **Quantiles** [HZ21]. **Quantitative** [Hut17, RS13]. **Quantum** [ABL+18a, Bee18, BGN+22, BD19, BTS+21, CGHC21, Sat18, Sat20, SK20, TB17, ESP22]. **Quantum-Enabled** [BD19]. **Query** [LZY+17, PSGM22, WPG+22, XZK+17, QNM+19]. **querying** [KRK21]. **Quest** [Vuk16]. **Questions** [Pav18, BP17b]. **Queue** [ZWW+17]. **Queue-Based** [ZWW+17]. **Queueing** [KK17a, MZWX21, RFM+18]. **Quick** [LSO+15]. **Quorum** [Mer19]. **quota** [BSF22]. **R** [Li14a, Li14b]. **R-Hadoop** [Li14a, Li14b]. **Race** [Mat14, Pec13]. **Radar** [Laz15]. **Radiation** [DXR+17]. **Radio** [SKA+20].

**Raises** [Pav18, Osb18b]. **RAM** [CLT<sup>+</sup>20, KBK17]. **Rampenlicht** [ABR17]. **Random** [ADQH22, Ser21, CFM<sup>+</sup>22, Duc13, FZC<sup>+</sup>20]. **random-honest** [FZC<sup>+</sup>20]. **randomness** [LB18, WYZ<sup>+</sup>20]. **Randpay** [KK20b]. **Range** [AV22, XCZ<sup>+</sup>22]. **Ranked** [SZM22]. **Ransom** [BBM<sup>+</sup>18]. **ransoms** [LZDA16]. **Ransomware** [ALGK19, Als23, DWS21, PCHD19, WPC<sup>+</sup>22, CGR18, DMSCA20, UJ16]. **Raps** [YWS<sup>+</sup>18]. **Rare** [TADS20]. **Rate** [Joh19, SZ15, Wu19, MF19, Son16b]. **Rates** [BHM20, HG15, ZKU<sup>+</sup>23, SBL19]. **Rating** [Van14b, ZTJ<sup>+</sup>21]. **rationality** [KVP21]. **RC** [SYCC21]. **RC-chain** [SYCC21]. **RCF** [DCY<sup>+</sup>22]. **RDIC** [WHY<sup>+</sup>21]. **Re** [Nak08b, MBK<sup>+</sup>21]. **re-encryption** [MBK<sup>+</sup>21]. **RE\_BBC** [SL20]. **reader** [BGPW16]. **Real** [Bys19, Dre17j, ECHL16, GSF<sup>+</sup>20, KLZ<sup>+</sup>21, Lei16, Nia19, NCS17, OO19, RRCL17, RT20, WM18, Wör16, XLM<sup>+</sup>17, HGDD20]. **Real-Time** [GSF<sup>+</sup>20, Lei16, RT20, Wör16, XLM<sup>+</sup>17, Bys19, HGDD20]. **Real-World** [ECHL16, NCS17, OO19]. **Realities** [Bri21, Eya17]. **Reality** [Ksh20, Mic14]. **Realization** [DNP17]. **really** [BWZ17, SA20]. **reappeared** [Osb18a]. **reasoning** [PLSS17]. **Rebalancing** [KG17]. **recall** [SYH22a, SYH22b]. **Recht** [Ano16b]. **recipient** [KK20b]. **recognition** [IFD<sup>+</sup>19]. **Recognizing** [Dre17o]. **recommendation** [SJ21]. **Recommendations** [Kön20]. **Recommender** [ATZ<sup>+</sup>21]. **Reconciliation** [OAB<sup>+</sup>17]. **reconfiguration** [VG20]. **Record** [Liu16, SD16b, CLC<sup>+</sup>19, PK22, SHL<sup>+</sup>20, TGC<sup>+</sup>21, TPE20, VBST21, YLM21, YWX<sup>+</sup>22, ZGZ21]. **Records** [Ale18a, Ksh18a, Shu19, AC21, Ano21e, BBDN21, KRK21, PL20, SMM<sup>+</sup>20]. **recoverable** [XHST20]. **Recovery** [Mis17, CSC16]. **Recruiting** [ACV17]. **Recurrent** [BCK<sup>+</sup>21]. **recursive** [BLMZ20, BLMZ22]. **recursos** [RSR17]. **Red** [BDOZ11, BDOZ12]. **Redactable** [AMVA17, ZNX<sup>+</sup>21]. **Redemption** [Mez19]. **reden** [GH17]. **Redesigning** [LSZ22, VFV17a, VFV17b, VFV17c]. **redirection** [CEW15]. **reduced** [ECA<sup>+</sup>20]. **Reducing** [DDPS22, JS20]. **reduction** [IM21]. **Reference** [AS14, VDG19, WXH21]. **Refinable** [DHES16]. **refinement** [TML<sup>+</sup>22]. **Refiner** [ZDM<sup>+</sup>21]. **Refining** [Wey19]. **Reflections** [Gev16]. **Refund** [MSH17]. **refunded** [BSF22]. **regarding** [Ano18]. **Region** [CSZ<sup>+</sup>21, Ano21c]. **Register** [ALPBT17]. **Registration** [AABM17]. **Regression** [Gya21, SZ14]. **Regulation** [Ano14b, Lew15]. **Regulations** [CIL<sup>+</sup>21]. **Regulatory** [Bai19, Nav17, Lyn14]. **reimburse** [Abe18]. **Reinforcement** [AMME21, LUBS18, LLL<sup>+</sup>21b, LLL<sup>+</sup>21a, MFE<sup>+</sup>20, PC21, WWML21]. **Reinforcing** [EN17]. **reinvent** [Pop15, Pop16b]. **Reinventing** [Dre17p]. **Related** [KCD17, WB17, CXY21, JLX21, RGSGHGCG21]. **Relational** [AAG17, NGS<sup>+</sup>19]. **Relationship** [ZWLS18, SKG22, Son16b]. **Relationships** [BSKR21]. **Relay** [NSB19, WCZ21]. **Release** [Mat13, Wol18, RSW96]. **released** [Sch13]. **Relevant** [Tre22]. **Reliability** [JBH<sup>+</sup>22, BHS93]. **Reliable** [AS18, FBL<sup>+</sup>20, HZL<sup>+</sup>20, ZDM<sup>+</sup>21]. **remains** [Goo18]. **Remote** [Shu17, FBL<sup>+</sup>20, WHY<sup>+</sup>21]. **removable** [DLK<sup>+</sup>21]. **removing** [CLS<sup>+</sup>19c]. **Repay** [McK19, Nak18]. **Repeatable** [WDLS17]. **replaces** [Goo18]. **Replication** [Vuk16]. **Repositories** [MGDEK17, MGDEK18]. **Repository** [Pie20]. **Representatives** [Uni14]. **RepuCoin** [YKDEV19]. **Repudiation** [FDT17, WLL21]. **Repurposing** [MJS<sup>+</sup>14]. **Reputation** [JBH<sup>+</sup>22, KUBS22, ME17, MCS<sup>+</sup>21, SD16b, SYCC21, SXZ<sup>+</sup>21, Tam19, YKDEV19,

AHH20, SSV22, WLC<sup>+</sup>20, ZWY<sup>+</sup>21, dORM<sup>+</sup>20]. **Reputation-based** [SYCC21, dORM<sup>+</sup>20]. **Reputation-Driven** [JBH<sup>+</sup>22]. **repute** [WSC<sup>+</sup>20]. **requesters** [KOM<sup>+</sup>20]. **require** [KK20b].

**Requirements** [LN17, Lei16, SL18, SL20, ZGY<sup>+</sup>21, MKY<sup>+</sup>21, MAQ99, MKS<sup>+</sup>19, Olu21].

**Research** [BNMH17, BART17, BMC<sup>+</sup>15, Cal22, GK14, HJ15, LHZ17, MCLH19, NMH16, OZ16, RS17, SDT17, SK15, wScCcS21, Tre22, US23, Vel16, XCW<sup>+</sup>22, Ant20, BR17, JCG<sup>+</sup>21, LMC18, PDJ22, SC21, URC19, YP21, ZFY16, ZFY17, HMS17]. **reserves** [JFG18]. **Reshoring** [ME17]. **Resilient** [RC19, GRHS20, dORM<sup>+</sup>20]. **ResilientDB** [GRHS20]. **Resistant** [BOLL14, FWB15, HL16, FF17, OdVP20, RKTv22, Voi11, XHST20, CZQ<sup>+</sup>21].

**ResNet** [NVE<sup>+</sup>21]. **Resolution** [ABL18b, BT18a, NOT15]. **Resource** [HWCL17, HYP<sup>+</sup>22, HM19, JWNS19, MMR<sup>+</sup>21, RKTv22, XWW17, XWL<sup>+</sup>19, ZZW<sup>+</sup>21, vdHEM<sup>+</sup>17, BKV22, PGS<sup>+</sup>21, QL22, SLG<sup>+</sup>21, SSSJ19, VCS03, WZW<sup>+</sup>20, YKJK21, ZGR<sup>+</sup>22, ZLS<sup>+</sup>22, ZSL21]. **resource-aware** [SSSJ19].

**Resource-Constrained** [MMR<sup>+</sup>21, vdHEM<sup>+</sup>17].

**Resource-Efficient** [XWL<sup>+</sup>19]. **Resources** [HRE17, IM16, Nor17b, RSR17, YZC22].

**Respecting** [XSC<sup>+</sup>17]. **Response** [EN19, KT22, LSO<sup>+</sup>15]. **Responses** [Shu17]. **responsibility** [BERHE19]. **Responsible** [BEM<sup>+</sup>20]. **Restoring** [EBHBL16]. **Result** [SFMC21, LWQ<sup>+</sup>21]. **Results** [GG17].

**Retail** [AIM19]. **Rethinking** [KYV19, Vuk17]. **Retricoin** [SBRs16].

**Retrievability** [SBRs16]. **Retrieval** [MGDEK17, MGDEK18]. **Return** [Cha81, YK15, ZWLS18, BOS15].

**Return-Volume** [ZWLS18]. **Returns** [HZ21, SS20, Osb18a, PASA22, SKG22, VX17].

**Revealing** [Kan20, RDL<sup>+</sup>20, GZH<sup>+</sup>14]. **Reveals** [Ker18a]. **Reverse** [HSB18c, HSB18i].

**Review** [Ano16c, Ant21, Big20, BTvdH20, FAC22, HHO<sup>+</sup>21, KT22, KS18, LGK<sup>+</sup>22, OA17, SM-16, SS17a, SJB20, THFI21, XCW<sup>+</sup>22, ZDP<sup>+</sup>22, ZTJ<sup>+</sup>21, AKA<sup>+</sup>22, AHH20, CSG<sup>+</sup>18, CXC<sup>+</sup>20, CPSGAA20, HH22, LHO<sup>+</sup>20, NAK<sup>+</sup>22, SC21, SCP<sup>+</sup>20, TBB21, VDVC21]. **reviews** [LDM<sup>+</sup>21].

**Revised** [BBMS14, BCJR15, CSN14, GP17b, JRB<sup>+</sup>17, Ker12, Sad13, CMR<sup>+</sup>16, Jue04].

**Revision** [Woo14]. **Revisited** [CGGN17, NWGF20b, Bar17, NWGF20a].

**Revisiting** [DLL97, DLL00, HMS17, MCJ17, MCS18].

**Revive** [KG17]. **Revocation** [DNY17, AHSZ21, LCB<sup>+</sup>20, SJB22].

**Revolution** [CMS21, Kün16, Dus14, Hal18, Rot17, TT16, TTC16]. **Revolutioniert** [HP18, HP17]. **revolutionizing** [HP17].

**Revolutions** [DMH18]. **Reward** [Ano21b, CKWN16, GCD16, KSAB<sup>+</sup>21, Ros11, SBBR17, SD16b, So19, ZLL<sup>+</sup>18].

**Rewarding** [LDM<sup>+</sup>21]. **rewards** [SIDV14].

**Rewriting** [AMVA17]. **RFID** [Mic16].

**RFID/NFC** [Mic16]. **Rhetoric** [Bel18].

**Rich** [NTRK22]. **richtigen** [FRSU17]. **Rico** [BCJR15, Nar19]. **Ride** [Shi19].

**Ride-Hailing** [Shi19]. **rigging** [QL22].

**Right** [FRSU17, Lut17, SK14, HLF<sup>+</sup>21].

**Right-Wing** [Lut17]. **Rights** [KPP<sup>+</sup>20, KKS14, Rin18].

**Rigorous** [Tre22].

**Ring** [JKS16, MPSP17, NMt16, SALY17].

**RingCT** [SALY17]. **Ringing** [BW17].

**Ripple** [SYB14, AGK22a, Ale18b]. **rischi** [AF16].

**Rise** [Bec18, Son14, FRF<sup>+</sup>19, Gei16]. **Rises** [Vig15].

**Risiken** [Ker14, San14a]. **Rising** [Sid14, Pro13, Pro14].

**Risk** [Bys19, Kab17, MC13, MBB14, PMMP19, SIDV14, YWJ<sup>+</sup>16, AZR<sup>+</sup>20, DAT21, Gof19, KBS17, NML19, San14b, Ün21].

**risk-oriented** [NML19]. **Risk-rewards** [SIDV14]. **Risks** [AAG17, Mai18, MHH<sup>+</sup>16, MCS18, Peo13, AF16, Ker14, San14a, Uni14, Wea18]. **risques** [San14b]. **RMB** [Wu19]. **RMKABSE** [SZM22]. **Road** [BABD17, FRSU17, PdWWS16, Chr13, Gre13, Zet13]. **Roads** [CIL<sup>+</sup>21]. **Roadside** [XLL<sup>+</sup>21]. **Roaring** [Wol18]. **robbery** [Gal18]. **Roberts** [RS14]. **Robotics** [ASSK21, Raz19]. **Robust** [Ibr17, RZJ20, ZY21, HFP<sup>+</sup>22, MMT16a, Sal22]. **Robustness** [SGK21, ZWX20a]. **RobustPay** [ZY21]. **Roger** [MCHM17, MHM17]. **Role** [LGK<sup>+</sup>22, SLS20, SL20, AZR<sup>+</sup>20, Blo18, Bra15a, DAGK20]. **Rolle** [Blo18]. **Rolling** [HZ21]. **Rolling-Window** [HZ21]. **RON** [HTLY21]. **RON-enhanced** [HTLY21]. **rooftop** [PW17a]. **root** [HSGY20, HSGY20]. **Ross** [Gre13]. **Route** [RLT17]. **Router** [Esc18, WCL17]. **Routing** [AZV17, EKK<sup>+</sup>17, TWFO20, ZY21, AC19, JCG<sup>+</sup>22, KBS<sup>+</sup>21, LCSR21, LZZ<sup>+</sup>20, PK21, SGM20]. **RTChain** [SXZ<sup>+</sup>21]. **rubbish** [Sha17]. **Rule** [Cou14, DW18, Nor17a, VB08]. **Rules** [Int14, Ber13]. **Run** [LJG15]. **Running** [BCM16]. **Runtime** [JS20, PSHW20]. **Rush** [BBM<sup>+</sup>18, DMH18i, LL18]. **Russia** [ACM17c]. **Rust** [NQ20].

**s** [Rou18, Sup16, Che18, SS19]. **SADPonzi** [CLS<sup>+</sup>21]. **Safe** [CTM22a, FDT17]. **Safeguarding** [NML19]. **Safer** [Cob17, COE<sup>+</sup>20a]. **Safety** [ALMLS16, CXW<sup>+</sup>21, LDWS17]. **Said** [BSLM20]. **Sale** [ECHL16, HA15]. **Sales** [Nar19, Sid14, YW18]. **Salvador** [Ksh22]. **sample** [CLS19b, CLS20]. **sampled** [RWG21]. **Samplings** [Leo20]. **SAMR** [Ale18a]. **San** [BCJR15]. **Sanctions** [Ano18d]. **Santa** [CRS83]. **Sarkar** [BB15]. **SASLedger** [SPS<sup>+</sup>21]. **Satoshi** [Ant20, Cha14, Sha17]. **Satterthwaite** [Ano18h]. **saved** [Bar18]. **saving** [KW20]. **Savings** [CPM17]. **Sawtooth** [Cor19]. **say** [Far18a, G.17]. **Says** [Ano17e, Gre13, McK19, Far18b, Nic17, Sha17]. **SBAC** [LQZ<sup>+</sup>20]. **SBRAC** [CLXW22]. **SCAB** [VD21]. **Scalability** [Gen17, GSWV20, Gos17, HM20, HJPS16, Kar16, PS16, vdHEM<sup>+</sup>17, FA21, SC21]. **Scalable** [BABD17, BDW17, DW15, DKJG19, EGSvR15, JJ22, LSFK17, LFZ<sup>+</sup>21, LZY22, NAK<sup>+</sup>22, RV21, SPS<sup>+</sup>21, Vuk16, WWZ<sup>+</sup>22, YLZ20a, ZLL<sup>+</sup>19b, AJA<sup>+</sup>22, CCG21, CZX<sup>+</sup>21, ECA<sup>+</sup>21, KBS<sup>+</sup>21, OdVP20, RST11, RSH22, ZSM22, dORM<sup>+</sup>20]. **Scale** [Luu17, Riz16, DKJ19, Far18a, FA21, GRHS20, SIDV14, SZJ17, TVK<sup>+</sup>20, WLXC17, WPC<sup>+</sup>22, ZWX20a, ZWX<sup>+</sup>19a]. **Scaling** [CV21, CDE<sup>+</sup>16, Kuz19b, Zha19, Kuz19a, XZXP21]. **scam** [Goo18]. **Scams** [CPL<sup>+</sup>21, VM15, dre14]. **Scan** [AGGM16]. **Scenario** [Tre21, HZLH19]. **Scenarios** [Tre22, BBH<sup>+</sup>13]. **SChain** [CZX<sup>+</sup>21]. **scheduling** [HZLH19]. **Scheme** [BL22, CGFH16, CGLR19, CCC19, CLJ<sup>+</sup>21, HSS<sup>+</sup>20, JLX<sup>+</sup>19, KLR<sup>+</sup>17a, KLR<sup>+</sup>17b, KFN<sup>+</sup>17, LSZ<sup>+</sup>21, PYC21, RS21b, So19, WGL19, Wey19, BYR<sup>+</sup>20, BTS<sup>+</sup>21, BILN21, CLH<sup>+</sup>20, CMJ21, EFFM21, ES16, FSY<sup>+</sup>19, FBL<sup>+</sup>20, FTS<sup>+</sup>20, FLL<sup>+</sup>22, GWL20, GGK<sup>+</sup>14, GKA<sup>+</sup>21, HZX<sup>+</sup>20, ICGB21, KGA<sup>+</sup>22, KMAJ21, LLH21, LCB<sup>+</sup>20, LLCH21, LYW<sup>+</sup>21, MISS22, MGN<sup>+</sup>22, PCC22, RLS<sup>+</sup>21, SPB<sup>+</sup>22, SAS<sup>+</sup>21, SK20, SMM<sup>+</sup>20, TGC<sup>+</sup>21, VBST21, WLC<sup>+</sup>20, WWZ<sup>+</sup>21, WHY<sup>+</sup>21, WLC<sup>+</sup>22a, XZL<sup>+</sup>22, XZZ21, YCX18, YL20a, YWX<sup>+</sup>22, YZL22, ZLL<sup>+</sup>19b, ZLH<sup>+</sup>20, ZNX<sup>+</sup>21, ZBF22, ZLJW20, ZGZ21]. **Schemes** [Ano12, CLS<sup>+</sup>21, DP18, GCD16, KT15, RS96b, BCCS20, Lew15, RS96a]. **Schnorr** [MPSW19]. **scholarly** [WZ21]. **School** [BKM<sup>+</sup>17]. **Science** [BLBS17, DMH18d, LHZ17, LMC18, Wat17].

**sciences** [CDS<sup>+</sup>19]. **Score** [KVL19, SSV22]. **Scoring** [MBB14]. **SCPki** [AB17]. **scrambled** [Lee13]. **Scrapes** [Pop17a]. **Scratch** [MKKS14, MKKS15]. **Scratch-Off** [MKKS15, MKKS14]. **script** [LLC<sup>+</sup>20]. **Script** [But13a]. **SDN** [CJA<sup>+</sup>19, DHH<sup>+</sup>22, JAK19, PK21]. **SDN-enabled** [CJA<sup>+</sup>19, JAK19]. **SDS** [SK20]. **sealed** [CLXW22, LLJ21]. **sealed-bid** [CLXW22]. **Search** [GWF<sup>+</sup>21, KLL<sup>+</sup>15, MLM16, JGL<sup>+</sup>20, MLM15, YWX<sup>+</sup>22]. **Searchable** [AAG17, SZM22, CLC<sup>+</sup>19, HH22, LWQ<sup>+</sup>21, TGC<sup>+</sup>21]. **Searchain** [JGL<sup>+</sup>20]. **Seasonality** [HQ15]. **Second** [TODM19, LPS<sup>+</sup>20a, Uni14]. **SECP256k1** [US23]. **Secret** [GP17a, JKKX16, CSKP21]. **SecTEP** [LLJ21]. **section** [CSZ<sup>+</sup>21]. **Sector** [CTM22b, HRF17]. **Secure** [ASM19, Alz19, ADMM14, ADMM16, BDWW14, BL22, BKT17, DRS22, DCK21, DNY17, EL14, FTS<sup>+</sup>20, FMR<sup>+</sup>16, FHS<sup>+</sup>17, FYK<sup>+</sup>17, GWL20, GWF<sup>+</sup>21, HS97, Hal17, HS16d, HZY<sup>+</sup>19, Ibr17, KFN<sup>+</sup>17, KAS<sup>+</sup>22, KXSS21, KMOD17, KB16, KVV16, LWZ<sup>+</sup>21a, LNZ<sup>+</sup>16, Luu17, NVE<sup>+</sup>21, PTPR17, PTPR18, RSJ21, SFYB21, Shi19, SL18, SZ15, SDK<sup>+</sup>17, Tac17, TDS<sup>+</sup>22b, VD21, WLY17, WZQ<sup>+</sup>17, ZGH<sup>+</sup>15, ZMH<sup>+</sup>17, ZMH<sup>+</sup>18, AMME21, BSK<sup>+</sup>20, BHH19, CJA<sup>+</sup>19, CAA<sup>+</sup>22, CM19, CLH<sup>+</sup>20, CMJ21, CGC21, GKA<sup>+</sup>21, GLW<sup>+</sup>20, HCB<sup>+</sup>22, HLF<sup>+</sup>21, HZX<sup>+</sup>20, ICGB21, JCG<sup>+</sup>22, JAK19, KGA<sup>+</sup>22, KAK20, KRDO17, LCSR21, LL16, LL17a, LFX<sup>+</sup>20, LLJ21, LHH<sup>+</sup>18, Lin17, LQZ<sup>+</sup>20, MZA<sup>+</sup>20, MBK<sup>+</sup>21, MAQ99, NAR22a, NAR<sup>+</sup>22b, NYZ<sup>+</sup>20, PR21, PGS<sup>+</sup>21, PMP19, RDDB19, RCD<sup>+</sup>19, SGM20, SCE21, SBA21, SMM<sup>+</sup>20, SWG21, SMHK21, TGC<sup>+</sup>21, UHK<sup>+</sup>21, Uri17, VCS03, WLGL19, WZW<sup>+</sup>20, WLZ20, Woo14, XBX<sup>+</sup>22]. **secure** [YKJK21, YYDC21, YPDC20, YL20b, ZCJ<sup>+</sup>21, ZSM22, ZWX<sup>+</sup>19a, ZWX<sup>+</sup>19b, ZGZ21, Ale18a, AABM17, CDD17]. **SecureCoin** [Ibr17]. **Secured** [LN17, SPS<sup>+</sup>21, DAV20, Gir18, KRK21, KTM<sup>+</sup>21]. **Securing** [AV22, Boi18, FA21, GPPB<sup>+</sup>21, GGK<sup>+</sup>14, Joh18, LABK17, MKS<sup>+</sup>19, PL20, SKA<sup>+</sup>20, DS17b, DHH<sup>+</sup>22, YLM21]. **Securitisiation** [HSB18c, HSB18i]. **Security** [ACM17a, ACM17d, AMGBK22, A<sup>+</sup>13, AAKJ22, AKWW19, BB15, Bee18, Bra15b, CC16, CSG<sup>+</sup>20, Cha85, CPNX20, CSN14, CELR18, ESLB20, GGN16, Ger16, GKW<sup>+</sup>16, GGDK20, GCR16, GCR18, bAHRAK17, bAHRAK18, Hut17, JRB<sup>+</sup>17, JCG<sup>+</sup>21, Kar16, KC18, Kat16, Ker12, KKJG<sup>+</sup>16, Kri19, KJGW17, LDWS17, LKL<sup>+</sup>14, LDY<sup>+</sup>22, LDH17, Mor17i, Pan18, Sad13, SDT17, Sch98, SRB20, Ses18, SIDV14, Son16a, Sve17, TSL<sup>+</sup>17, WHI<sup>+</sup>21, WGL19, WDS21, XWW17, ZLMR19, ZXL19, ZZS<sup>+</sup>20, dCdCM14, van20, vO20, BJ20, BBMS14, BS20, BCJR15, BLB<sup>+</sup>21, CMR<sup>+</sup>16, DSM<sup>+</sup>17, DKJG19, ESP22, FGHM17, FB17a, GLF20, GP17b, HFP<sup>+</sup>22, HAZ21, IKY05, JJ22, JO13, KA16, KBS17, KS18, KTM<sup>+</sup>21, LJC<sup>+</sup>20, LWZ<sup>+</sup>21b, MSMH21, MRR<sup>+</sup>20, MCF20, NML19, PK22, RKP19, RWG21, SBL19, Sal18, SHL<sup>+</sup>20, SSL<sup>+</sup>19, Sir16b, Tun18, WGL<sup>+</sup>21, YSD<sup>+</sup>20]. **Security-critical** [dCdCM14]. **Seeing** [Bog17, Dre17q, Dre17r]. **seek** [Far18b]. **Sees** [Sid14]. **Seized** [Gre13]. **Seizure** [YCP<sup>+</sup>21]. **seizures** [Ano13b]. **Selected** [BBMS14, CSN14, JRB<sup>+</sup>17, Ker12, Sad13, Ano14b, BCJR15, CMR<sup>+</sup>16, GP17b]. **selecting** [LKP<sup>+</sup>21]. **Selection** [BAK22, Dir19, Hal21, MAAAW<sup>+</sup>22, RLT17, ADZ23, FZC<sup>+</sup>20, GHJ22, HYWY22, LLZY20]. **Selective** [YYDC21]. **Self** [CXLG22, CTM21, Cou14, LMH16, LLP<sup>+</sup>20b, MDAP16, MAP16, Nis16b, Pia16, RZJ20, Sei20]. **Self-adaptive** [RZJ20]. **Self-Contained** [Pia16]. **Self-Destruct** [CXLG22]. **Self-Destruction** [Cou14]. **Self-Fulfillment** [Nis16b]. **Self-managed**



[LMH16]. **Self-Organized**  
 [MDAP16, MAP16]. **Self-Sovereign**  
 [LLP+20b]. **self-sovereignty** [Sei20].  
**Selfdestruct** [CXLG22]. **Selfish**  
 [KKS+17d, KKS+17c, SSZ17, ZP17b,  
 GKKT16, WLW+19, YCMM20].  
**selfish-mine** [GKKT16]. **sell**  
 [GAF18, Lee13, PW17a]. **sell-off** [Lee13].  
**Semantic** [FR16]. **Semi**  
 [KMMW17, DMSCA20]. **semi-autonomous**  
 [DMSCA20]. **Semi-structured** [KMMW17].  
**send** [Far18b]. **sending** [Pal18]. **Sense**  
 [CMS21]. **SenseChain** [KOM+20]. **Sensing**  
 [LHZ+21, NVWF14, SVL17].  
**Sensing-as-a-Service** [LHZ+21]. **Sensitive**  
 [DCY+22]. **Sensor**  
 [AJA+22, ME17, WvB14, LCSR21].  
**Sensor-Based** [ME17]. **Sensornetzwerke**  
 [TNM17]. **Sentiment**  
 [JLLK23, Mue18, RT20, Smu18].  
**September** [GANAHHJ17]. **sequential**  
 [Per09]. **Series** [LPSP20, IKC21]. **server**  
 [Ano18i, PR21]. **Service** [BSV17, BPT+22,  
 ESLB20, GvRS17, KET+17, LWZ+21a,  
 LHZ+21, LLP+20b, NVWF14, SS17a,  
 SYK17, SL20, SGDT19, VTM14, Yew18,  
 ZGY+21, ZZJ17, AJA+22, AABE20, Bac02a,  
 BSK+20, BZK+21, Gir18, JAK19, LXL+19,  
 MBT19, MAQ99, MAM22, PK22, Bee16].  
**Service-Level** [SL20, BZK+21].  
**Service-Oriented** [GvRS17]. **Services**  
 [AVA21, CGGN17, HRF17, JB17a, Mul14d,  
 Sch19b, SFMC21, WPG+22, YCP+21,  
 dBHC17, Bar16, GGJ22, IFD+19, LZD21,  
 LYZ+21, SAL20, SZdLZ22, SYZ16, ZSM22].  
**SeShare** [HZY+19]. **session** [Uni14]. **Set**  
 [OAB+17]. **Sets** [AC17]. **Setting** [NTKS17].  
**Settings** [NTKS17]. **Setup** [HSS+20].  
**Setup-Free** [HSS+20]. **Seven** [Cou16].  
**several** [PASA22]. **SG** [XBX+22].  
**SG-PBFT** [XBX+22]. **SHA**  
 [BBDN21, FA21]. **SHA-256**  
 [BBDN21, FA21]. **SHA1** [Ste17]. **SHA256**  
 [CGN14]. **Sharding** [GvRS17, HYP+22,  
 JBH+22, LNZ+16, NAR+22b, XHST20].  
**Sharding-Based** [HYP+22]. **Share**  
 [KKS+17b]. **Shared**  
 [ALPBT17, CWL17, Liu19, ANMM22,  
 EHBA+19, MBD+12, dAdSM+22]. **Shares**  
 [ZGR17]. **Sharing**  
 [BCM16, CGLR19, FHS+17, HWCL17,  
 JKX16, LSM17, LHZ+21, PYC21, RSJ21,  
 SBHD17, Shu19, XSC+17, YMHY21, Zam19,  
 ANMM22, CSKP21, CLC+19, CXWY21,  
 CTGJ22, CLH+20, CMJ21, DAV20,  
 HCB+22, HZY+19, HZX+20, KGA+22,  
 KRK21, LCL+22, LYW+21, MZA+20,  
 MBK+21, SMM+20, SWY+21, SLG+21,  
 SSL+19, SMHK21, SYZ16, TGC+21, VCS03,  
 YWX+22, ZTSS20]. **Sharks** [ZWW+17].  
**Shipping** [JB18a, JB18b]. **shocks**  
 [FGHM17]. **Shopping** [LD17]. **Short**  
 [BDLF+16, GvRS17, MCJ17, XJY17, YF22,  
 GAF18, PASA22, Pla13]. **Short-Term**  
 [YF22, GAF18, PASA22]. **Should**  
 [Chu15, McM13]. **Shows** [McM13]. **Shuts**  
 [Son14]. **Sicht** [KFR17, KFR18]. **Side**  
 [ABF+16, AGGM16, BBM+18, KJGW17,  
 Ano16a, DLK+21]. **Sidechain** [SCP+20].  
**sided** [KOS+21]. **Sidestep** [Ano18d].  
**Signals** [RRM18, GTMP14, GS15a].  
**Signature**  
 [EN17, GCH+22, KFN+17, LLYL19, Mer88,  
 SALY17, ZGGT16, BTS+21, GGK+14,  
 LTMW19, MLTT20, RLS+21, SK20,  
 WMD+21, XWZ21, ZLL+19a].  
**signature-based** [BTS+21, LTMW19].  
**Signatures**  
 [Cha83, DMO+19, GGN16, SK20, DGP20,  
 MPSW19, WZQ+17, YML+22]. **Signed**  
 [HBG16]. **significance** [CGR18]. **Signing**  
 [KKJG+16, THF17, BILN21, HLC19, Lin17].  
**Silicon** [Tay13]. **Silk** [Chr13, Gre13, Zet13].  
**Silver** [McG18]. **Simple**  
 [CG16, CCG21, MPSW19, RAH+15, RS96b,  
 CG20, Lam01, RS96a]. **Simplicity** [O'C17].  
**simplified** [Per22]. **Simulating** [CCMN17].  
**Simulation**

[AvM18, Gos17, MLD19, NSB19, ZWH18, CSLD17, LW16, LLWH21, NAH15].

**Simulations** [SZJ17]. **Simulators** [ZDP+22]. **sincerely** [Gal18]. **Singapore** [ZSLY20]. **Singing** [HLC17c]. **Single** [IK17, MLTT20]. **Sins** [Cou16]. **Sites** [GDP+17]. **situations** [RGSFGHCG21].

**Size** [Dim19, RRF22, Ano18c, GK17].

**Sketching** [Vel16]. **Sliema** [JRB+17].

**SlimChain** [XZXP21]. **SmaCC** [RDDL17].

**Smart**

[ACW17, AB17, ARL20, AHH20, ABBS18, ABC17, BNMH17, BDLF+16, Blo18, BS17b, BS18, BCM16, BATB20, But13b, CIL+21, CS20, CXG+18, CLS+21, CXL+22, CXLG22, DGHK17, Gao17, GLD+18, GLG19, IPSP17, IGRS16, JKS16, JS20, KPP+20, Kee16, KK20a, KUEE17, KUEE18, Kün16, LP20, LHZ+21, LWCX21, LCO+16, Mis17, Mor17j, NMH16, Øln16, PTPR17, PTPR18, PP16, Pia16, Pie20, RBL+17, SY22, SW17, SNKG20, SZM22, Swa16, Tam19, TSY+21, VTL17, WHW22, XJY17, YW18, ZCC+16, ZHC+20, ZLH+20, ZGY+21, ACA+19, AMME21, ALP15, Ano21d, BAS+22, BAK22, BZK+21, CSKP21, CGHC21, CXY21, CGC21, DAT21, DLV+22, FBL+20, GRU22, Gia15, GKJ+18, GKJ+20, GLTS22, GLY+21, HYL21, HTLY21, JYTW21, KMAJ21, KAP20, KTA+20, KGS+19, KOJ+20, LCL+22, Lev17, LYW+21, LML+19, LZZ+20, LTB+22, Liv20, LWZ+21b, LYZ+21, MKY+21, MZA+20, MLTT20].

**smart** [MNB+17, MMMV21, ML20, NAR22a, NAR+22b, OHJ20, PHH+20, PGS+21, PK22, Pou20, RLQ+21, SPZ+20, SSV22, SJSY21, SYZ16, VDVC21, WZS19, WM19, WGC19, WLZ20, XGS+20, YKJK21, YML+22, ZWH+20, Ano21c, Ser21, SK20].

**Smarter** [LCO+16]. **Smartphone** [FMR+16]. **Smartpool** [Kad18]. **SME** [CMT+21, RIMP22]. **SMEs** [RIMP22].

**Smileycoins** [SL17]. **Smileys** [SL17].

**smoothing** [MYSZ19]. **SMS** [DSN17].

**snack** [BDE+13]. **Snapshot** [Leo20]. **sniffer** [Cas12]. **Soar** [McL13]. **Sociable** [HBJB14].

**Social** [AZR+20, CR17, DDPS22, FYZ+21, GS15a, HBJB14, KH16, MLM16, OOF+17, RGB20, RC16, ROH16, Smo18, YPFY21, A+13, LMC18, Lev17, OFA22, PCM+21, VD17, AZDF22]. **Social-Chain** [YPFY21].

**Socialism** [HW16]. **Socializing** [SYK17].

**Societal** [MZ19]. **Society** [ACM17c, ATD17, GRM22]. **Socio** [EBHBL16, GTMP14]. **socio-economic** [GTMP14]. **Socio-technical** [EBHBL16].

**sofa** [Sha17]. **Sofia** [OF15]. **Software** [AK17, FS16, HS16d, Lut17, PPMT17, RS21b, SD16a, SDK+17, TODM19, ZGY+21, dCdCM14, Aro12, HAZ21, NQ20, YPDC20, ZLT+19, HCB+22]. **Software-Defined** [RS21b, SD16a]. **SoK** [ABC17, BMC+15].

**solar** [PW17a]. **Solidity** [RDDL17, Dan17b, DLV+22, TML+22].

**Solidus** [CZJ+17]. **SolType** [TML+22].

**Solution** [ABL18b, Coe08, HRE17, Kuz19b, PL16, SPS+21, VDG19, Wey19, XWW17, DLK+21, Kuz19a, MDN+18, RWG21].

**Solution-Verification** [Coe08]. **Solutions** [ATZ+21, Ano19c, But19, bAHRAK17, bAHRAK18, HJPS16, PS16, SRB20, ZMKR22, ZHZ+22, DSC21, FFL21, KS18, KGTK20, SC21, SBA21].

**solve** [Pec17a].

**Solvency** [DBB+15]. **Solving** [KJ17, KJ18, LGL+22, Six17j].

**Some** [Ber13, CG16, CG20, Sha17]. **someone** [Ito18]. **sound** [BLZ20].

**Source** [Cap12, Pie20, TNM17, Hol15, dCdCM14].

**Sources** [WKEM20]. **Sovereign** [CTM21, LLP+20b, LCL17]. **Sovereignty** [Roi18, Sei20].

**Space** [XZL+22].

**Space-Ground** [XZL+22]. **spam** [SKNM21]. **Spanish** [HA15, RSR17].

**sparks** [Lee13]. **spatio** [QNM+19]. **spatio-temporal** [QNM+19].

**Special** [AHWB20, CGT+21, MFR+21, YSD+20, ZMKR22, CSZ+21, FD20a, ZFY16, ZFY17, ZWC21]. **Specializing**

[MKGT16a, MKGT16b, TVK<sup>+</sup>20]. **Specificability** [Swa16]. **Specific** [Son18]. **Specifically** [Hut17]. **Specification** [SL20, Wil13]. **Specifications** [LN17]. **Spectra** [DVRM16]. **speculation** [Cra17]. **Speculative** [CF15, Bla18, LL18]. **speculators** [Ito18]. **Speed** [CSC16, HM20, MBD<sup>+</sup>12]. **Speeding** [ZWL22]. **spend** [PR16]. **Spender** [DNY17]. **Spending** [AMEF21, Dre17s, JW18, KAR<sup>+</sup>15, LZC<sup>+</sup>17, ZL19, KAČ12, PSDSNAHJ19, WLS22, YSLH17]. **Spillover** [ZzH21]. **splines** [MYSZ19]. **Splitting** [LSP<sup>+</sup>15, KKS<sup>+</sup>17a]. **sponsored** [Sto20]. **Sporny** [Spo17]. **Sports** [PRS22]. **spotlight** [ABR17]. **Spread** [DDPS22]. **spurs** [Far18a]. **Square** [EDS15, Per22]. **SSI** [CTM22b]. **St** [ACM17c]. **Stability** [GSWV20]. **Stable** [Men19, SI19]. **Stablecoins** [OFA22, Ano20, CDM20]. **Stack** [WXH21]. **Stacking** [Ara21]. **Stage** [Gya21, KD16, WLL21]. **Staged** [WLL21]. **staging** [Bit09]. **Stake** [AMEF21, BLP17, BLMR14, KN12, LABK17, Poe14, KRDO17]. **stakeholders** [SWY<sup>+</sup>21]. **stamp** [HS91]. **stamping** [BHS93]. **Standards** [HV20, Kön20, Lim18]. **Starting** [Tre22]. **startup** [Far18b]. **stash** [Hol18]. **State** [DPS<sup>+</sup>21, GGDK20, Nar19, NT21, PSGM22, Sup16, WRB15, ASK<sup>+</sup>21, NPDS20, SAL20, SCP<sup>+</sup>20, Sir16b, Sto20]. **State-of-art** [GGDK20]. **State-of-the-Art** [DPS<sup>+</sup>21, SCP<sup>+</sup>20]. **state-sponsored** [Sto20]. **Stateless** [RRCL17]. **static** [LGTS20]. **Statistical** [KM20, ALB21, SMB22]. **statt** [Blo18]. **Status** [ATZ<sup>+</sup>21, AHSZ21]. **Stay** [SGF<sup>+</sup>17]. **steal** [Hol18, Pal18]. **stealing** [LSS14]. **steals** [Bar18]. **Stealth** [van20]. **steam** [Gon17]. **Steven** [Ano16c, SM-16]. **Stick** [KLM17]. **Still** [BSKR21, Ano18a]. **stochastic** [PCP20]. **Stock** [ZzH21, BCK<sup>+</sup>21, Son16b, Ün21]. **Stolen** [Cim18a, Ro13, Sou13, WREK18, HDM<sup>+</sup>14, Osb18a]. **stop** [LP18c, LP18d]. **Stops** [Cim18b]. **Storage** [LWL<sup>+</sup>22b, RV21, RBB19, SBHD17, SJB20, SV16, SPS<sup>+</sup>21, XAZY17, XAZY18, YW18, YLZ20a, AGK22b, BAJ20, JJ22, JGL<sup>+</sup>20, KRK21, LHL20, LZY22, RLQ<sup>+</sup>21, SMM<sup>+</sup>20, SJB21, SJB22, WDL<sup>+</sup>18, XZXP21, YCX18, YZL22, YLZ<sup>+</sup>20b, ZLX<sup>+</sup>17, ZGZ21]. **Store** [Dre17g, Dre17n, Dre17y, MHH<sup>+</sup>16, McM13]. **Stores** [MCS<sup>+</sup>21]. **Storing** [Dre17t, Ano21e]. **Story** [Kan20, Mez19, RDL<sup>+</sup>20, Pop15, Pop16b, Rot17]. **Strategic** [EGB18, LLWH21]. **Strategies** [DFKU20, SSZ17, GPM18, QL22]. **Strategy** [LDLS22, LLL<sup>+</sup>21b, Cus14b, GKKT16, KK21, LLZ<sup>+</sup>17, LLL<sup>+</sup>21a]. **Stratum** [RC17]. **Streaming** [BGM20]. **street** [Lev17, Nor17c]. **street-smart** [Lev17]. **Strengthen** [Ksh17a, Ksh17b]. **Stress** [BHMW16, Mer19]. **Stressing** [BHMW16]. **Strict** [Ler13]. **Strong** [DSW14, DSW16, KKJG<sup>+</sup>16, Sir16a]. **Stronger** [Per09]. **Structure** [FPD<sup>+</sup>21, KK20a, LMLA17, Mor17c, OKH13, CLS<sup>+</sup>19c, DMR19a, FD20b, KCS<sup>+</sup>14, LZY22, SCE21]. **structure-based** [SCE21]. **Structured** [SS17a, KMMW17]. **Structures** [Ban18, AGK22a]. **stubborn** [WLW<sup>+</sup>19]. **Stuck** [NQ20]. **Stuck-me-not** [NQ20]. **Student** [PCP20]. **Student-** [PCP20]. **Studies** [KPK17]. **Study** [AMGBK22, AH19, BO17, CMT<sup>+</sup>21, Doz18, HSY<sup>+</sup>21, Hut17, ISM17, JL17, KAR<sup>+</sup>15, LX17, MB15, WLXC17, WXH21, YNS16, Yew18, YW18, ANMM22, Bar16, BANT20, CSLD17, CAMS20, DSM<sup>+</sup>17, FRF<sup>+</sup>19, GRU22, GHJ22, KOJ<sup>+</sup>20, OHJ20, Son16b, UJ16, XLL<sup>+</sup>19, EHA22]. **Studying** [ARL19]. **stutters** [Per20]. **Stylized** [EDS15, ALB21]. **sub** [HZL<sup>+</sup>20, Zha19]. **Subchains** [BLP17, LPS20b, Riz16]. **Subject** [DCY<sup>+</sup>22]. **Subject-Sensitive** [DCY<sup>+</sup>22]. **Subnetworks** [GGS19, GGS20]. **Subscribe** [ZZJ17]. **Success**

[KVL19, MCHM17, MHM17, PZZ<sup>+</sup>20, Sei20, ZSLY20]. **Succinct** [DFKP13]. **suitability** [BLB<sup>+</sup>21]. **Sukuk** [AIM19]. **Summarizing** [Dre17u]. **Summary** [TODM19]. **Summer** [HMS17]. **Super** [LCL17]. **Super-sovereign** [LCL17]. **Supervised** [CLJ<sup>+</sup>21, NBP<sup>+</sup>21, YV17]. **Supervision** [Nar19, CJW17, Fan22, WGL<sup>+</sup>21]. **supplies** [CAA<sup>+</sup>22]. **Supply** [CTM21, HSB17b, HSB17a, HSB17c, HSB17d, HSB18a, HSB18b, HSB18f, HSB18e, HSB18g, HSB18h, HSB18i, Kri19, KD20, Ksh21, Nia19, RKT19, SCZ<sup>+</sup>21, Wu17, XRS<sup>+</sup>19, XZY<sup>+</sup>21, Älv18, AHC<sup>+</sup>21, DB16, DAV20, How20, NNGV19, PCM<sup>+</sup>21, STN22, XZZ21]. **Supply-chain** [SCZ<sup>+</sup>21]. **Support** [CTM21, Gya21, HRE17, Las17, ME17, Nar19, ØJ17, DCK21, WLL<sup>+</sup>13]. **supported** [BAR21]. **Supporting** [BHH19, CXS<sup>+</sup>17, XLM<sup>+</sup>17, MKL<sup>+</sup>22]. **Surface** [ZWW<sup>+</sup>17]. **surge** [Hol18]. **surrounding** [FB17a]. **Surveillance** [Raz19, MTR<sup>+</sup>21]. **Survey** [ATZ<sup>+</sup>21, ASSK21, Ami16, AGT<sup>+</sup>22, ABC17, BVGC22, CPNX20, CELR18, DFKU20, DPS<sup>+</sup>21, HYL21, KL18a, LLH<sup>+</sup>20, LWL<sup>+</sup>21, QUG<sup>+</sup>23, SRB20, TS16, WGL<sup>+</sup>21, WLC<sup>+</sup>22b, ZZS<sup>+</sup>20, ZHZ<sup>+</sup>22, ARK20, BAJ20, DCB<sup>+</sup>21, DPN<sup>+</sup>22, DM20, DSC21, FHZ<sup>+</sup>19, FCH21, GAdFGMA21, LJC<sup>+</sup>20, MyPLK22, NPDS20, SHL<sup>+</sup>20, SJSY21, WLLH21, WWML21, ZLL<sup>+</sup>18]. **surviving** [GKJ<sup>+</sup>18]. **SURVIVOR** [JAK19]. **Suspected** [Cim18a, Ano18i]. **sustain** [Fai17, KH16]. **Sustainability** [Vra17, FS20, LMC18]. **Sustainable** [AKP17, AKP18, MAAAW<sup>+</sup>22, KDS<sup>+</sup>20, MNB<sup>+</sup>17]. **Swarm** [Raz19, GS20a]. **Swimming** [ZWW<sup>+</sup>17]. **Swindle** [Ito18]. **SWOT** [MM17]. **SXSW** [Vig15]. **Sybil** [ZL19, BOLL14, FWB15, FF17, OdVP20]. **Sybil-Resistant** [BOLL14, FWB15, FF17, OdVP20]. **symbiotic** [Sko19]. **synchronization** [FSY<sup>+</sup>19]. **Syndicate** [HM19]. **Syntax** [LS17]. **Synthetic** [LUBS18]. **System** [AB17, Alz19, Ano17a, ACC<sup>+</sup>17, BK17c, CBWF17, CXS<sup>+</sup>17, CMT<sup>+</sup>21, CTM22b, DFKP13, Eti19, HWCL17, JMK17, JW18, JBK<sup>+</sup>19, KK20a, KXSS21, KSAB<sup>+</sup>21, LS20, LLHW20, LZY<sup>+</sup>17, LHZ<sup>+</sup>21, Lin21, Liu16, LDY<sup>+</sup>22, LSH13, MY11, MCS<sup>+</sup>21, Mor17e, PPR<sup>+</sup>20, RC19, RH11b, RH11a, RH13, Sch98, SD16b, SFYB21, SW21, SL20, SLY15, So19, SCZ<sup>+</sup>21, SZM22, SXZ<sup>+</sup>21, SXYL23, TADS20, US23, Van14b, VSE21, WWQ<sup>+</sup>18, WCX21, WL21, WLSZ17, XAZY17, XAZY18, YW18, ZZS<sup>+</sup>20, ZTJ<sup>+</sup>21, AKA<sup>+</sup>22, AHSZ21, AZDF22, AC21, BK22, BMSS17, CJA<sup>+</sup>19, CJW17, CLS19a, CXWY21, CMR<sup>+</sup>21, DSN17, DTK20, DAV20, FWP21, FHZ<sup>+</sup>19, GRU22, Gir18, HHBS18, HLP<sup>+</sup>21, HSX<sup>+</sup>21, JZLL17, KAK20, KTM<sup>+</sup>21, KKT<sup>+</sup>22, LW16, LHL20, LYW<sup>+</sup>21, LGL<sup>+</sup>22, LHH<sup>+</sup>18, Nak08a, PR21, PSY21, RSH22, SCE21, STN22, SJB21, SJB22, SJ21, Six17j, TPE20, Tro14a, Tro14b, TLS<sup>+</sup>21, WGC19, WHA<sup>+</sup>20]. **system** [WLN<sup>+</sup>21, Wij16, YZL<sup>+</sup>19, YYDC21, YZL22, ZCJ<sup>+</sup>21, ZSM22, ZWX20a, ZZW<sup>+</sup>21, ZDM<sup>+</sup>21, ZYL22, ZWX<sup>+</sup>20b, ZWX<sup>+</sup>19a, ZWX<sup>+</sup>19b, ZWY<sup>+</sup>21]. **Systematic** [BTvdH20, KT22, OO19, SJB20, THFI21, ZHZ<sup>+</sup>22, AHH20, NAK<sup>+</sup>22, SC21, TBB21, VDVC21]. **SystemC** [CSLD17]. **Systems** [ATZ<sup>+</sup>21, AvM18, AGT<sup>+</sup>22, Bai19, BART17, BSLM20, BATB20, BLKD20, CPNX20, Coh20, CMM<sup>+</sup>22, EBD<sup>+</sup>20, FYZ<sup>+</sup>21, GSF<sup>+</sup>20, GK14, GCD16, GSWV20, Gou19, HM20, HTCW17, HTCW18, HHO<sup>+</sup>21, IGRS16, Kan20, KL18a, LLH<sup>+</sup>20, LDWS17, LX17, LSZ<sup>+</sup>21, Mai18, MCJ17, Mor17a, Mor17i, OR17, PSGM22, Ros11, RDL<sup>+</sup>20, SS17a, Shu17, SPS<sup>+</sup>21, Sve17, WLXC17, WLC<sup>+</sup>22b, WKEM20, WDS21, WPG<sup>+</sup>22, Yew18, ZHZ<sup>+</sup>22, AMME21, AHH20, Ano21e, BAS<sup>+</sup>22, BJ20, BAR21, Cha85, CAMS20, DMR19b, FCH21, FD20a, GLO<sup>+</sup>22,

GADFGMA21, GC08, Ker18b, Kra15, Kra16a, LLH21, LCB<sup>+</sup>20, LJC<sup>+</sup>20, LLJ21, LHO<sup>+</sup>20, NVE<sup>+</sup>21, RCD<sup>+</sup>19, SHL<sup>+</sup>20, Six17i, Sko19, TYY<sup>+</sup>19, TBB21, URC19, WSC<sup>+</sup>20, YLM21, CGT<sup>+</sup>21, Six17i, Six17j].

**T** [Che18]. **T-S** [Che18]. **Table** [YLZ20a]. **Taboo** [Roi13]. **Tactics** [van20]. **Takeover** [BBM<sup>+</sup>18]. **takes** [Sto20]. **Taking** [KVL19]. **tale** [dS17a]. **Talk** [Gar17, Spo17, Zoh17]. **talking** [GH17]. **Talks** [McG18, BWZ17]. **tallying** [YYN<sup>+</sup>20]. **Tamper** [HL16, SW21]. **Tamper-Proof** [SW21]. **Tamper-Resistant** [HL16]. **Tampering** [GRKČ15]. **tangible** [BOS15]. **Tangle** [GPPB<sup>+</sup>21, Hal21, SM20]. **TangleCV** [RSJ21]. **Taproot** [AV22]. **targets** [Seg18]. **Tariff** [KUEE17, KUEE18, KUE17]. **task** [KOS<sup>+</sup>21]. **Tasks** [KSAB<sup>+</sup>21]. **Tax** [Int14, Nar19, WLSZ17, Lyn14]. **Taxonomy** [TT19, VRK21]. **TC** [SYH22a, SYH22b]. **TD** [HSGY20]. **TD-Root** [HSGY20]. **Teaching** [van20]. **tech** [RIMP22]. **Technical** [AAAKJ22, Gya21, JLLK23, Kan20, Ksh20, Sir16b, Spr13, TS16, Via16, YF22, EBHBL16, Liv20, MYSZ19, BP17b]. **Technique** [KUBS22, NPG<sup>+</sup>22, RSJ21, Riz16, WK19]. **Techniques** [AGT<sup>+</sup>22, OAS<sup>+</sup>21, OF15, RT20, SOA<sup>+</sup>21, AAPZ19, CXY21, Heal13, MF19, MyPLK22, VDVC21]. **Technische** [BP17b]. **Technological** [DMH18l, KYLA22, Nav17]. **Technologie** [Ale18b, DF17b, DF17a, HP17, HP18, KFR17, KFR18, TNM17, BP17b]. **Technologien** [GR17]. **Technologies** [ATD17, BT18a, CIL<sup>+</sup>21, CR16, ELFCFL20, EGB18, GBSAS17, Gen17, Ksh20, PP16, ROH16, SJZG19, TT19, YNS16, AR15, BLMQ19, FFL21, NBF<sup>+</sup>16, SCP<sup>+</sup>20, YSD<sup>+</sup>20, Ano16c, SM-16]. **Technology** [AKP17, AKP18, ACW17, AH19, ALM19, Ano19c, Ant21, AHWB20, BART17, Ber17, BK17a, BK18, BCEM15, But19, CPM17,

Cus14b, Esc18, Eya17, EN19, FAC22, Fot17, Fug19, GANAHHJ17, GLD<sup>+</sup>18, Ger16, HSB17c, HSB18d, HSB18g, HSB18i, HTCW17, HTCW18, HHO<sup>+</sup>21, Hut17, JB17a, JB18a, Joh18, KLDS20, KT22, KSCD16, Koe17, KD16, KYV19, LSM17, MGDEK17, MGDEK18, NRP<sup>+</sup>20, Nia19, àNOE17, OOF<sup>+</sup>17, Øln16, ØJ17, OEO16, OEO17, RC16, RKT19, SPJ<sup>+</sup>17, SLS20, SK15, Sch19b, SS17a, SJB20, Smo18, SCZ<sup>+</sup>21, Swe16, Tre21, TBY17, VFS<sup>+</sup>19, Wey19, WDS21, YMRS18, Ale18b, Ano21e, ARK20, BR17, BP17b, CZ16, CSG<sup>+</sup>20, CXLC18, CPSGAA20, DF17b, Fan22, FA21, GGDK20, Gir18, GKA<sup>+</sup>21, HP17, JLX21, KK20b, KFR17, MGM<sup>+</sup>17, PL20, Pec17a, Pil16, PSY21, Raj18, RIMP22, RKY<sup>+</sup>20]. **technology** [SSL<sup>+</sup>19, SK18, SRA<sup>+</sup>22, SSV22, SYZ16, TT16, TTC16, URC20, WGL<sup>+</sup>21, Wat17, ZW17, ZZ16]. **TEE** [LWL<sup>+</sup>22a]. **telecare** [LLH21]. **Telegram** [Fir18, Smu18]. **telematico** [MS15]. **Telemedicine** [Shu17, WWZ<sup>+</sup>21]. **Tell** [Ber17, Pec17a]. **temporal** [QNM<sup>+</sup>19]. **Temporality** [Swa16]. **temporarily** [Lee13]. **Temporary** [AKWW19, DLK<sup>+</sup>21]. **Ten** [Mei18]. **tenant** [HZZ<sup>+</sup>20]. **tender** [LLJ21]. **TenderMint** [Kwo14]. **Tensions** [KPW19]. **Tensor** [FYZ<sup>+</sup>21]. **Tensor-based** [FYZ<sup>+</sup>21]. **Term** [Dre17e, LJG15, YF22, GAF18, NTRK22, PASA22]. **Terminal** [ECHL16]. **Terror** [Car15]. **Tessera** [Li14a, Li14b]. **test** [ACKJ22]. **test/vaccine** [ACKJ22]. **testbed** [GHJ22]. **Testing** [BHMW16, CQLL18, WDLS17]. **Thanks** [CPM17]. **Theft** [Ano19a, AGGM16, Bra13, YWW<sup>+</sup>18, YWS<sup>+</sup>18, Ano18e, Far18a]. **Thefts** [dre14, Ano13b, Duc13]. **Their** [AMGBK22, CDD17, JSK<sup>+</sup>17, MLD19, Ito18, Sar21]. **Them** [ABL<sup>+</sup>18a, Mic14, Hol18, Ito18, Lau11a, Nor17a, Sha17]. **Theorem** [Hir17, Ano18h]. **Theoretic** [JLG<sup>+</sup>14, LJG15, LBS<sup>+</sup>15, SCYP17, Tro15b]. **Theories** [EZR<sup>+</sup>22, ROH16]. **Theory**

[BHM20, Doz18, Hut17, OF15, RFM<sup>+</sup>18, Wu19, AZR<sup>+</sup>20, DB16, FD20b, Ito18, WMD<sup>+</sup>20, YZC22]. **There** [Pop18a, VM15, Tro15a]. **these** [Cim19]. **they'll** [Pec17b]. **Thickness** [Lin21]. **Thickness-Based** [Lin21]. **Thieves** [Hol18, Ano18i]. **Thin** [JLX<sup>+</sup>19]. **Thin-client** [JLX<sup>+</sup>19]. **thing** [LP17b, LP17c, LP18b]. **Things** [Ban19, BKV20, FA21, AJA<sup>+</sup>22, AA20, AAC<sup>+</sup>19b, AKT21, Älv18, AAKJ22, AZDF22, Big20, CXC<sup>+</sup>20, CLH<sup>+</sup>20, CVM17, DGP17, GLF20, HYLY19, JCG<sup>+</sup>21, JB21, JCG<sup>+</sup>22, KTA<sup>+</sup>20, Ksh17a, Ksh17b, LL16, LL17a, LQYG19, LLCF21, LWZ<sup>+</sup>21a, Mic14, PK19, PC21, QFLM17, RKT19, RWG21, RDDB19, RS21b, Ses18, SM20, Son18, SCZ<sup>+</sup>21, SGT19, Sve17, TSY<sup>+</sup>21, TBB21, UHK<sup>+</sup>21, XAZY17, XAZY18, ZW17, ZWH<sup>+</sup>20, ZLT<sup>+</sup>19, MFR<sup>+</sup>21]. **Things-Integrated** [PK19]. **Thinking** [Dre17v]. **Third** [FWB15, IKY05]. **thirst** [Far18a]. **Thirteenth** [Uni14]. **thousands** [Nic17]. **Thread** [CSLD17]. **Thread-** [CSLD17]. **Threat** [RS21a, ZBF22]. **threaten** [Mea19]. **Threats** [AMGBK22, EGB18, EN19, WHI<sup>+</sup>21]. **Three** [FYK<sup>+</sup>17, HLC17c, HLC19]. **Three-Party** [FYK<sup>+</sup>17, HLC17c, HLC19]. **Threshold** [GGN16, HSS<sup>+</sup>20, İK17, DS17b, GGK<sup>+</sup>14, JFG18, WMD<sup>+</sup>21]. **Threshold-Optimal** [GGN16]. **Throughput** [MPSP17, RZJ20, SS12, XLM<sup>+</sup>17, BF20]. **ticket** [Per20]. **Tickets** [Tac17]. **tie** [DMR19a]. **TIIA** [ZBF22]. **Tikiri** [BTF<sup>+</sup>21]. **Time** [EZ17, EZ18, GSF<sup>+</sup>20, HZ21, JCG17, KK17a, LLHW20, Lei16, LPSP20, RRCL17, RT20, RSW96, Swa16, WLW22, WKD22, Wör16, WWZ<sup>+</sup>22, XLM<sup>+</sup>17, BHS93, Bys19, DB16, HS91, HGDD20, IKC21, Ker18b, Koo18, Lam89, Nor17b, PR16, YTLD19, Cor19]. **Time-** [HZ21]. **Time-lock** [RSW96]. **time-locked** [YTLD19]. **Time-Series** [LPSP20]. **time-stamp** [HS91]. **time-stamping** [BHS93]. **Time-travel** [WWZ<sup>+</sup>22]. **TimeBank** [Lin21]. **Timed** [ADM14b, RSW96]. **timed-release** [RSW96]. **times** [ECA<sup>+</sup>20, GHJ22, GGKR21, SGK21]. **Timestamp** [SPB17]. **Timestamp-Free** [SPB17]. **timestamping** [MAQ99]. **Timestamps** [DHES16]. **Timing** [NAH16]. **Tip** [Hal21, KRL17]. **Tips** [MB15]. **Tithonus** [RC19]. **TLS** [XJY17]. **Together** [Dre17c, Pec15]. **Token** [KLZ<sup>+</sup>21]. **Tokenization** [Liu16, MZ19]. **Tokenizer** [MBF<sup>+</sup>20]. **Tokens** [DMH18g, Muf16, BLZ20, Ito18, LDM<sup>+</sup>21]. **Tolerance** [XZY<sup>+</sup>21, TYY<sup>+</sup>19]. **Tolerant** [Coe20b, BVCH22, BSV17, GRM22, VG20]. **Tolerate** [GS15b]. **Tolls** [MB15]. **too** [G.17]. **Took** [Zet13]. **Tool** [ESLB20, Kha15, LWZ<sup>+</sup>21b]. **Tooling** [YCP<sup>+</sup>21]. **Toolkit** [KMMW17]. **Tools** [vO20, MBB13b, MBB13a, Raj18, VDVC21]. **Top** [Mei18]. **Topological** [ALGK19]. **Topology** [DSBPS<sup>+</sup>18, NAH16]. **TOR** [Esc18, AABE20, BP15]. **torrent** [Bak09]. **Tourism** [Ano21c]. **Town** [ZCC<sup>+</sup>16]. **TPPSUPPLY** [STN22]. **Traceability** [But19, CMT<sup>+</sup>21, GCH<sup>+</sup>22, GDKJ22, IK19, Ksh21, KFTS17, LX17, PK19, Ano21c, Che18, FLL<sup>+</sup>22, XLL<sup>+</sup>19]. **traceable** [STN22, SJX<sup>+</sup>20]. **TraceChain** [FLL<sup>+</sup>22]. **Tracers** [Gre22]. **traces** [GTMP14]. **Tracing** [But19, HSJ<sup>+</sup>21, YP21, ZLL<sup>+</sup>19a]. **Tracking** [Bra13, GWX<sup>+</sup>21, NSNF17, RRM18, VM15, dAdSM<sup>+</sup>22]. **Trade** [KLDS20, SIDV14]. **Trade-offs** [KLDS20, SIDV14]. **Tradeoffs** [TWFO20]. **Trading** [AAAO20, Bik16, MCHM17, MHM17, MBC<sup>+</sup>17b, NTRK22, NCS17, Smi18, Via16, WMG<sup>+</sup>21, WKD22, YF22, AKA<sup>+</sup>22, ALP15, Bla18, CJA<sup>+</sup>19, DSPSNAHJ20, DLK<sup>+</sup>21, GWL20, GS15a, GLW<sup>+</sup>20, GLY<sup>+</sup>21,

HLP<sup>+21</sup>, JAK19, KMAJ21, LFX<sup>+20</sup>, LT17, LWCX21, MLM15, MMMV21, ML20, PW17a, Uri17, WZQ<sup>+17</sup>, YKJK21].

**Traditional** [Bai19, CMT<sup>+21</sup>, WLW22].

**Traffic** [BSB19, ESLB20, KKM14, LLH<sup>+20</sup>, WRB15, HZT<sup>+22</sup>, MISS22, PK22, QHNL21].

**Traffickers** [PHD<sup>+17</sup>]. **Trail** [RSGA<sup>+21</sup>].

**TrailChain** [GDKJ22]. **training** [DCK21, LLL<sup>+21c</sup>]. **Traitor** [KT15].

**Transaction** [AK14, AC17, ARL19, BMTZ17, BLSD17, CPL<sup>+21</sup>, DW14, Dim19, Dre17d, Dre17t, GHJ21, GCD16, GGS19, HL16, HM20, Hou14b, HYP<sup>+22</sup>, KK17a, Leo20, LLYL19, LLL<sup>+21b</sup>, LZZ<sup>+22</sup>, MPC<sup>+23</sup>, MAAAW<sup>+22</sup>, MB15, OKH13, OAS<sup>+21</sup>, PP16, RAH<sup>+15</sup>, RJK<sup>+17</sup>, RS13, RMS17, SZ15, SXZ<sup>+21</sup>, TDW<sup>+22</sup>, TNJJ22, TSCT18, Van14b, WLS<sup>+16</sup>, XLM<sup>+17</sup>, YK15, Bar16, BDP<sup>+15</sup>, Cha85, ECA<sup>+20</sup>, FMR<sup>+19</sup>, GS20b, GHJ22, GGS20, HP17, KAK21, LLZ<sup>+17</sup>, LLL<sup>+21a</sup>, LYZ<sup>+21</sup>, PK22, RDDB19, SZ13, VG17, WQHX17, WQHX20, Woo14].

**Transaction-Confirmation** [KK17a].

**Transactional** [DHES16, Kad18].

**Transactions** [Als23, ADMM15, ABL18b, Ape14, CZJ<sup>+17</sup>, CXS<sup>+17</sup>, CP17b, DSBPS<sup>+18</sup>, Dre17a, Dre17z, FNP17, FMR<sup>+16</sup>, GRKČ15, HBG16, HJPS16, Int14, IST19, JJFC22, KM20, LUBS18, LK17, MPC<sup>+23</sup>, Mic16, MFR<sup>+21</sup>, MBB14, Muf16, NST<sup>+17</sup>, NMt16, PS16, RMS17, SCAA13, TOM17, WTW<sup>+23</sup>, ZG15, ZGGT16, AABE20, ADMM13, Ano21a, BAPS22, BYR<sup>+20</sup>, BCK<sup>+21</sup>, BILN21, CLS<sup>+19c</sup>, CGR18, CEN14, DSPSHJNA18, DSPSNAHJ20, Gof19, GGKR21, KSA22, KK20b, Koo18, LLC<sup>+20</sup>, PSDSNAHJ19, Per22, dSR21, SMB22, WLGL19, XZXP21, YSLH17, YTLD19]. **Transactive** [BLSD17, EBD<sup>+20</sup>, LDWS17, WDLS17].

**Transaktionskosten** [HP17, HP18].

**Transaktionssysteme** [Six17e].

**Transcript** [Ali15]. **Transfer** [GMH21, Pan96, PBHM21]. **transferable** [Sar21]. **Transformation** [DTM20, KMMW17, CDS<sup>+19</sup>].

**Transformations** [OZ16, ZLW19].

**Transforming** [Eya17]. **Transition** [RSV15]. **transmediale** [BGPW16].

**Transmission** [Yan21, LDLS22].

**Transparency** [BKS19, Bon16b, Bre17, CM16, Ksh18b, KKM19, MPC<sup>+23</sup>, MG17, Ano21c, MBB<sup>+15</sup>].

**Transparent** [DGSW15, ASM19, DF17b].

**transparente** [DF17b, DF17a].

**transportation** [BAS<sup>+22</sup>, CJA<sup>+19</sup>].

**TRAQR** [PK21]. **Travel** [LD17, WWZ<sup>+22</sup>].

**Traveling** [Chr13]. **Treated** [Int14].

**Treatment** [BMTZ17]. **Tree** [CCC19, Bit09, DCK21, SCE21, ZGZ21].

**tree-based** [ZGZ21]. **Trees** [Coe08, Kam17, SZ13]. **Trend** [BS15, CA21].

**Trends** [BVG22, Coh20, Du21, JLLK23, Lei16, MB15, TODM19, Zoh17, CSZ<sup>+21</sup>, JCG<sup>+21</sup>, PDJ22, SBA21, ALB21, Smu18].

**Trials** [ACV17]. **tributario** [MS15]. **Tried** [Cim18b]. **tries** [Pal18]. **trillions** [Nor17c].

**Trims** [Vig15]. **trotz** [PB17]. **Trouble** [Kru18]. **True** [Mez19]. **truly** [AB20].

**Trump** [Men19, WM19]. **Trust** [ACM17d, CCH<sup>+20</sup>, FB17b, HHBS18, KPW19, KGS<sup>+19</sup>, LSM17, OFA22, SK15, SK17, Sch19a, Smo18, Tam19, TS20, Wer18, YPFY21, AZDF22, BDP17b, Cra17, GKA<sup>+21</sup>, How20, KBS<sup>+21</sup>, LHL21, MAQ99, PHRH21, P16, PdWWS16, TLS<sup>+21</sup>, XJB<sup>+17</sup>, ZZW<sup>+21</sup>, DGP17, PK21].

**Trustable** [CMM<sup>+22</sup>]. **TrustChain** [OdVP20]. **Trusted** [AP20, Ano21e, BM20, EHA22, FWB15, LWL<sup>+22a</sup>, MZLW20, MBC<sup>+17b</sup>, HYWY22, KGA<sup>+22</sup>, SWY<sup>+21</sup>, YYN<sup>+20</sup>, ZWS<sup>+20</sup>].

**TrustedBaaS** [MZLW20]. **Trustful** [AKA<sup>+22</sup>, Chi18]. **Trustless** [KET<sup>+17</sup>, Kra16b, KGS<sup>+19</sup>, MBF<sup>+20</sup>, TLS<sup>+21</sup>].

**Trustworthy** [AAD<sup>+21</sup>, KPW19, XWW17, ZHC<sup>+20</sup>, FY19, HSGY20, MMMV21,

TGC<sup>+21</sup>, ZNX<sup>+21</sup>, ZWGC19]. **TrustZone** [GMS17]. **TrustZone-backed** [GMS17]. **Truthful** [ZLS<sup>+22</sup>]. **try** [Nor17a]. **Trying** [WREK18, Pop15, Pop16b]. **Tuning** [SS12]. **Turkey** [Ano18m, Ün21]. **Turning** [Rao14]. **Turnover** [Smi18]. **Tutorial** [JW16b, KAKC20, Moh17, NHM16]. **TV** [Ro13]. **Tweetchain** [BLNN17b]. **Twice** [Dre17s]. **twin** [DCK21]. **Twins** [Pop17b, QXC<sup>+21</sup>, Gei16]. **Twitter** [HBJB14]. **Two** [ADM14a, Gal18, GCL16, Gya21, KOS<sup>+21</sup>, Kha19, ML15, ML17, RS96a, RS96b, Via16, EAvM20, LZYZ2, Lin17, WLL21, dS17a]. **Two-Factor** [ML15, ML17]. **two-layer** [LZY22]. **Two-Party** [ADM14a, Lin17]. **two-phase** [EAvM20]. **Two-sided** [KOS<sup>+21</sup>]. **Two-Stage** [Gya21, WLL21]. **TxProbe** [DSBPS<sup>+18</sup>]. **type** [CAMS20]. **types** [TML<sup>+22</sup>]. **Typestate** [COE<sup>+20a</sup>, CAMS20]. **Tyranny** [CXG<sup>+18</sup>].

**U.S.** [Int14]. **UAE** [ACM17a, ACM17b, ACM17d]. **UAV** [CSG<sup>+20</sup>, MISS22]. **UAV-based** [MISS22]. **UAVs** [KKK<sup>+21</sup>]. **uBaaS** [LXL<sup>+19</sup>]. **UC** [CDD17]. **UC-Secure** [CDD17]. **Ulbricht** [Gre13]. **Ultimate** [Smo18, Mil15]. **Ultra** [SYK17]. **Ultra-Dense** [SYK17]. **Ultrasound** [Shu17]. **un’analisi** [Cap15]. **Unauthorized** [Ker18b]. **Unchain** [PZZ<sup>+20</sup>]. **Unchaining** [Kla19]. **uncle** [WLW<sup>+19</sup>]. **Uncoded** [ZWL22]. **Unconfirmed** [WTW<sup>+23</sup>]. **uncovered** [Pal18]. **Uncovering** [MMR16, PHD<sup>+17</sup>]. **Under-price** [SOA<sup>+21</sup>]. **underground** [UJ16]. **Underlying** [SZ17, KGA<sup>+22</sup>, SZ18]. **understand** [DMH18b]. **Understanding** [Bog17, CLZ<sup>+20</sup>, Dre17w, Fra14, HSY<sup>+21</sup>, HWW<sup>+20</sup>, Lew15, NST<sup>+17</sup>, PP16, dKW17]. **Understandings** [MSC15]. **underworld** [Ano14a]. **Unenumerated** [Sza08]. **Unexpected** [Kuz19b, Kuz19a]. **unextractability** [HZ20]. **Unfair** [CGJ<sup>+17</sup>]. **unified** [LXL<sup>+19</sup>, Hut17]. **Uniform** [Ger16]. **Union** [Gim16]. **Unit** [XLL<sup>+21</sup>]. **Unit-assisted** [XLL<sup>+21</sup>]. **United** [Uni14]. **Universal** [OO91, ZWX20a]. **Universally** [Dim20]. **Universe** [Wal18, Wal19]. **University** [CRS83]. **Unknown** [NPS<sup>+17</sup>]. **Unleashed** [LPSZ18]. **unlikely** [Cim19]. **Unlimited** [ZP17a]. **unmanned** [LGL<sup>+22</sup>, WLN<sup>+21</sup>]. **Unofficial** [Joh19]. **Unpacking** [DMH18m]. **Unraveling** [CXS<sup>+17</sup>]. **Unregulated** [ACM15, Ali15]. **unseen** [Far18a]. **Unsupervised** [MMT16a]. **until** [Ito18]. **Untraceable** [Cha81, Cha83]. **Untrusted** [WXR<sup>+16</sup>, SAL20, WLL<sup>+13</sup>]. **unusual** [DMR17a]. **Unverifiable** [KSAB<sup>+21</sup>]. **update** [Ano18l, HYL19, LL16, LL17a, YL20b]. **Updates** [BFS17, BFS18, SDK<sup>+17</sup>, ZLT<sup>+19</sup>]. **UpHaaS** [SPB<sup>+22</sup>]. **Upheaval** [Gev16]. **Urban** [JMK17]. **Urgent** [Ano18l]. **Ursa** [RZJ20]. **USA** [IKY05, Jue04, JLX21, Ün21]. **Usability** [KRL17, EBSC15]. **usable** [CAMS20]. **Usage** [KSCD16, AZR<sup>+20</sup>]. **USD** [HG15]. **Use** [BSB16, BK14, But19, CDZ<sup>+20</sup>, FRSU17, Hut17, IM16, KPP<sup>+20</sup>, KCD17, Koe17, KB14, KMB15, LSO<sup>+15</sup>, LD17, Nar19, PPW<sup>+15</sup>, VBC<sup>+17</sup>, WBK<sup>+17</sup>, WXH21, Zam19, BLMQ19, Fai19, FNP17, KFR17, Kug18, Raj18, SG21, DF17b, SG19]. **used** [DSN17, LP18c, LP18d]. **Useful** [KSAB<sup>+21</sup>]. **useless** [Ano18a]. **User** [AKR<sup>+13</sup>, ACC<sup>+17</sup>, BBBB15, CR17, Dre17k, GZH<sup>+14</sup>, KJGW17, NTKS17, Riz16, SVL17, PCC22, dAdSM<sup>+22</sup>]. **User-Centric** [ACC<sup>+17</sup>]. **Users** [Cim18b, DS15, GCL16, GDTP17, HBJB14, JMM14, JSKV16, MMR16, Nak18, RRM18, SK17, Son18, XCG<sup>+17</sup>, AABE20, Ano13b, Cim19, DMR17a, DMR18, DMR19a, Far18b, MBB<sup>+15</sup>, Pal18, Seg18]. **Uses** [BB14, MCF20]. **Ushare** [CR17]. **Using**



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