1. Record Nr. UNINA9911019759603321

Autore	Avasthi Sandhya
Titolo	Decentralized Systems and Distributed Computing
Pubbl/distr/stampa	Newark : , : John Wiley & Sons, Incorporated, , 2024 ©2024
ISBN	9781394205127 1394205120 9781394205110 1394205112
Edizione	[1st ed.]
Descrizione fisica	1 online resource (401 pages)
Collana	Decentralized systems and next generation internet
Altri autori (Persone)	TripathiSuman Lata DhandaNamrata VermaSatya Bhushan
Disciplina	005.75/8
Soggetti	Electronic data processing - Distributed processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Cover -- Series Page -- Title Page -- Copyright Page -- Contents -- Preface -- Chapter 1 Introduction to Next-Generation Internet and Distributed Systems -- 1.1 Introduction -- 1.2 Traditional Network -- 1.3 Next-Generation Internet -- 1.3.1 Next-Generation Internet Protocol -- 1.3.1.1 IPv6 -- 1.3.1.2 Tunneling -- 1.3.2 Quality of Service (QoS) -- 1.4 Network Middleware -- 1.5 Software-Defined Network (SDN) -- 1.5.1 Necessity of Software-Defined Network -- 1.6 Edge Cloud-Based Next-Generation Internet -- 1.6.1 Edge Cloud -- 1.6.2 Content Distribution Networks (CDNs) -- 1.7 Network Architecture -- 1.7.1 Some Proposed Architectures -- 1.7.1.1 Security Architecture for Networked Enterprises (SANE) -- 1.7.1.2 Swarming Architecture -- 1.7.1.3 Flexible Internet Architecture (FlexNGIA) -- 1.7.1.4 Architecture for Mobility Support -- 1.7.1.5 The Data-Oriented Network Architecture (DONA) -- 1.7.1.6 MILSA (Mobility and Multihoming Supporting Identifier-Locator Split Architecture) -- 1.7.1.7 Delay/Disruption Tolerant Networks (DTN) and Related Architectures -- 1.7.2 Challenges for Architecture -- 1.7.2.1 Network Services -- 1.7.2.2 Network Management -- 1.7.2.3 Network Performance --

1.7.2.4 Diversity and Change -- 1.8 Security and Safety -- 1.9 Distributed Systems -- 1.9.1 Concept of Distributed System -- 1.9.2 Terminologies -- 1.9.2.1 Grouping of Autonomous Computer Components -- 1.9.2.2 Single Coherent System -- 1.10 Distributed System Design -- 1.10.1 Significance of a Certain Design -- 1.10.2 Scale and Scalability -- 1.10.2.1 Definition of Scale -- 1.10.2.2 Scalability Analysis -- 1.11 Distributed System Monitoring -- 1.11.1 Idea of Monitoring System -- 1.12 Security in Distributed Systems -- 1.12.1 Reasons for Not Using Encryption -- 1.12.2 Authorization -- 1.13 Blockchain and Distributed Systems -- 1.13.1 Decentralization. 1.13.2 Peer-to-Peer Networks (P2P) -- 1.14 Blockchain-Based Distributed Control Systems -- 1.14.1 Control System -- 1.14.1.1 To Handle Complicated Processes -- 1.14.1.2 Pre-Defined Function Blocks -- 1.14.1.3 Scalable Platform -- 1.15 Blockchain for Distributed System Security -- 1.15.1 Fault-Tolerant Consensus in a Distributed System -- 1.15.2 Complications while Using Blockchain for Distributed Computing -- 1.16 Conclusion and Future Scope -- References -- Chapter 2 Decentralized System in Education and Research -- 2.1 Introduction -- 2.2 History of Decentralization in the Education System -- 2.3 Advantages and Challenges of Decentralization of the Education System -- 2.3.1 Advantages -- 2.3.2 Challenges -- 2.4 Impact of Decentralization in Education and Research -- 2.5 Current Approaches -- 2.5.1 World Scenario -- 2.5.1.1 Finland Education System -- 2.5.1.2 Brazil, Federal Universities -- 2.5.1.3 The United States, National Science Foundation -- 2.5.1.4 Mexico, CONACYT -- 2.5.2 Indian Scenario -- 2.5.2.1 Kerala Model of Decentralization Implementation in Education and Research -- 2.6 Development Trend Towards Education and Research -- 2.7 Future Scope and Recommendations -- 2.8 Conclusion -- References -- Chapter 3 Architecture of Blockchain-Enabled Decentralized Systems -- 3.1 Introduction -- 3.2 What is a Decentralized System? -- 3.2.1 Centralized System vs. Decentralized System -- 3.2.2 Merits and Demerits of a Decentralized System -- 3.3 Blockchain -- 3.3.1 What is Blockchain? -- 3.3.2 Structure of Blockchain -- 3.3.3 Requirements of Blockchain -- 3.3.4 Merits and Demerits of Blockchain -- 3.4 Smart Contracts and Its Examples -- 3.5 Blockchain-Enabled Decentralized System -- 3.5.1 Role of Blockchain -- 3.5.2 Types of Decentralization in Blockchain -- 3.5.3 Types of Blockchain Architecture -- 3.5.4 Requirements -- 3.5.5 Pros and Cons. 3.6 Architecture for the Blockchain-Enabled Decentralized System -- 3.6.1 The Network -- 3.6.2 The Consensus Protocol -- 3.6.3 The Data Structure -- 3.7 Decentralized Todo App with Blockchain -- 3.8 Blockchain-Enabled Decentralized System Development and Challenges -- 3.9 Future of the Blockchain-Enabled Decentralized System -- 3.10 Conclusion -- References -- Chapter 4 Mobile Edge Computing for Decentralized Systems -- 4.1 Introduction -- 4.2 Edge Computing -- 4.3 Benefits of Edge Computing -- 4.4 Classification of Attacks in a 5G IoT System -- 4.5 Decentralized Dynamic Computation Offloading Method -- 4.6 Conclusion -- References -- Chapter 5 Blockchain in Education -- 5.1 Introduction -- 5.2 Benefits of Blockchain in Education -- 5.2.1 Blockchain Can Enhance Learner Data Privacy and Security, Allowing Learners to Maintain Control Over Their Personal Information -- 5.2.2 Blockchain Can Enable Lifelong Learning Tracking, Creating a Comprehensive and Immutable Record of a Learner's Achievements and Skills -- 5.2.2.1 Blockchain as a Distributed and Immutable Record-Keeping System -- 5.2.2.2 Benefits of Blockchain-Enabled Lifelong Learning Tracking -- 5.3 Challenges of Blockchain in Education -- 5.3.1 Concerns Related to Data Privacy, Security, and Compliance with Data Protection Regulations -- 5.3.1.1 Data Privacy

Concerns -- 5.3.1.2 Compliance with Data Protection Regulations -- 5.3.1.3 Security Concerns -- 5.3.1.4 Collaboration with Industry Experts and Auditors -- 5.3.2 Potential Resistance to Change and Adoption Barriers in the Education Sector -- 5.4 Use Cases of Blockchain in Education -- 5.5 Conclusion -- References -- Chapter 6 Pattern Recognition Applications in Distributed Systems and Distributed Machine Learning -- 6.1 Introduction -- 6.1.1 What is Pattern Recognition? -- 6.1.2 Distributed Computing Environment.
6.1.3 Basic Model of the Pattern Recognition System -- 6.2 Data Generation and Preprocessing -- 6.3 Feature Selection -- 6.3.1 What is Feature Selection? -- 6.3.2 Filter Models of Feature Selection -- 6.3.3 Wrapper Models of Feature Selection -- 6.4 Design of Classifier -- 6.4.1 Conventional Classifiers in Distributed Environment -- 6.4.2 Neural Network Classifiers in a Distributed Environment -- 6.5 Designing Machine Learning Models for Distributed Environment -- 6.6 Role of Distributed Computing in Pattern Recognition -- 6.7 Conclusion -- References -- Chapter 7 Next-Generation Distributed Computing for Cancer Detection -- 7.1 Introduction -- 7.2 Research Motivation -- 7.3 Cancer Statistics -- 7.4 Modern Cancer Diagnosis and Treatment Methods -- 7.5 Methodology -- 7.6 Technical Challenges -- 7.7 Future Directions -- 7.8 Conclusion -- References -- Chapter 8 Benefits and Challenges of Decentralization in Education for Resource Optimization and Improved Performance -- 8.1 Introduction -- 8.1.1 Decentralized Systems in Education and Research -- 8.1.2 Connect Between Democracy and Education -- 8.2 The Centralization and Decentralization Concepts -- 8.3 Decentralized Systems in Education and Research: Policies and Practices -- 8.3.1 Open Educational Resources (OER) Policy -- 8.3.2 Collaborative Research Networks -- 8.3.3 Self-Directed Learning -- 8.3.4 Peer Review -- 8.3.5 Open Data -- 8.3.6 Equity and Inclusion -- 8.3.7 Quality Assurance -- 8.4 Building Capacity Across and Between Levels Within Education Systems -- 8.5 Developing Accountability Measures and Systems in Implementing a Decentralized Education Policy -- 8.5.1 Establish Clear and Quantifiable Policy Objectives -- 8.5.2 Create Performance Indicators and Benchmarks -- 8.5.3 Assign Roles and Responsibilities -- 8.5.4 Build Effective Monitoring and Evaluation Systems.
8.5.5 Encourage Transparency and Involvement -- 8.5.6 Establish Redressal Mechanisms -- 8.6 Developing Local-Level Capacity Across All Education System Levels and Sectors -- 8.7 Education Policies in India to Achieve Decentralization in Education Systems -- 8.7.1 National Education Policy (NEP) 2020 -- 8.7.2 Rashtriya Madhyamik Shiksha Abhiyan (RMSA) -- 8.7.3 RUSA (Rashtriya Uchchatar Shiksha Abhiyan) -- 8.8 Research and Development Policies in India and Promoting Decentralization in R&amp -- D -- 8.8.1 Atal Innovation Mission (AIM) -- 8.8.2 The National Initiative for Developing and Harnessing Innovations (NIDHI) -- 8.8.3 National Science, Technology, and Innovation Policy (STI) 2020 -- 8.8.4 Council of Scientific and Industrial Research (CSIR) -- 8.8.5 Department of Science and Technology (DST) -- References -- Chapter 9 Blockchain in Data Security and Transparency in Business Transactions -- 9.1 Introduction -- 9.2 Dimensions and Requirements of Data Security -- 9.3 Security Issues in Conventional Data Security -- 9.4 Diversity of Attacks in Conventional Data Security -- 9.5 Blockchain: The Complete Solution -- 9.6 The Decentralized and Immutable Approach -- 9.7 Comparison of ECC and RSA -- 9.8 Digital Signature Algorithm -- 9.9 Blockchain Technology Ensures Transparency -- 9.10 Blockchain Solutions for Traditional Data Security -- 9.11 Blockchain Types -- 9.12 Conclusion -- References -- Chapter 10 A Comparative Study of Ad Hoc and

Wireless Sensor Networks -- 10.1 Introduction -- 10.2 Ad Hoc Network -- 10.2.1 Ad Hoc Network Types -- 10.2.2 Ad Hoc Routing Protocol -- 10.2.3 Ad Hoc Security Attack -- 10.3 Wireless Sensor and Network -- 10.3.1 Types of Wireless Network -- 10.3.2 Mobility in WSN -- 10.3.3 Routing Protocol -- 10.4 Challenges, Applications, and Limitations -- 10.5 Conclusion -- References.
Chapter 11 Content Filtering-Based Movie Recommendation System Using Deep Learning.

Sommario/riassunto

This book provides a comprehensive exploration of next-generation internet, distributed systems, and distributed computing, offering valuable insights into their impact on society and the future of technology. The use of distributed systems is a big step forward in IT and computer science. As the number of tasks that depend on each other grows, a single machine can no longer handle all of them. Distributed computing is better than traditional computer settings in several ways. Distributed systems reduce the risks of a single point of failure, making them more reliable and able to handle mistakes. Most modern distributed systems are made to be scalable, which means that processing power can be added on the fly to improve performance. The internet of the future is meant to give us freedom and choices, encourage diversity and decentralization, and make it easier for people to be creative and do research. By making the internet more three-dimensional and immersive, the metaverse could introduce more ways to use it. Some people have expressed negative things about the metaverse, and there is much uncertainty regarding its future. Analysts in the field have pondered if the metaverse will differ much from our current digital experiences, and if so, whether people will be willing to spend hours per day exploring virtual space while wearing a headset. This book will look at the different aspects of the next-generation internet, distributed systems, distributed computing, and their effects on society as a whole.

2. Record Nr. UNINA9910895538503321

Titolo	Kunst und Wissen / hrsg. vom Freien Deutschen Kulturbund in Grossbritannien
Pubbl/distr/stampa	London, : Freier Dt. Kulturbund in Grossbritannien, 1942-1946
Descrizione fisica	Online-Ressource
Classificazione	16.5
Disciplina	900
Soggetti	Deutsche Exil Zeitschrift Quelle Großbritannien
Lingua di pubblicazione	Tedesco
Formato	Materiale a stampa
Livello bibliografico	Periodico
Note generali	Gesehen am 14.09.2018