

1. Record Nr.	UNINA9910842399403321
Autore	Anand Rohit
Titolo	Meta-Heuristic Algorithms for Advanced Distributed Systems
Pubbl/distr/stampa	Newark : , : John Wiley & Sons, Incorporated, , 2024 ©2024
ISBN	1-394-18809-9 1-394-18807-2
Edizione	[1st ed.]
Descrizione fisica	1 online resource (460 pages)
Altri autori (Persone)	JunejaAbhinav PandeyDigvijay JunejaSapna SindhwaniNidhi
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Cover -- Title Page -- Copyright Page -- Contents -- About the Book -- About the Editors -- List of Contributors -- Preface -- 1 The Future of Business Management with the Power of Distributed Systems and Computing -- 1.1 Introduction -- 1.1.1 Distributed Systems in Business Management -- 1.2 Understanding Distributed Systems and Computing -- 1.2.1 Definition of Distributed Systems and Computing -- 1.2.2 Advantages for Business Management -- 1.2.3 Characteristics of Distributed Systems and Computing for Business Management -- 1.3 Applications of Distributed Systems and Computing in Business Management -- 1.3.1 Inventory Management and Supply Chain Optimization -- 1.3.2 Customer Relationship Management -- 1.3.3 Financial Management and Accounting -- 1.3.4 Data Analytics and Decision-Making -- 1.3.5 Collaboration and Communication Within and Across Organizations -- 1.4 Limitations of Distributed Systems in Business Management -- 1.4.1 Security and Privacy Concerns -- 1.4.2 Technical Issues and Maintenance -- 1.4.3 Organizational and Cultural Challenges -- 1.4.4 Legal and Regulatory Compliance -- 1.5 Future Developments and Opportunities -- 1.5.1 Potential Future Developments and their Implications for Business Management -- 1.5.2

Opportunities for Research and Innovation in the Field -- 1.6
Conclusion -- References -- 2 Applications of Optimized Distributed
Systems in Healthcare -- 2.1 Introduction -- 2.2 Literature Survey --
2.2.1 Need for Optimization of Distributed Systems -- 2.2.2
Performance Optimization of Distributed Systems -- 2.2.3
Characteristics of Optimized Distributed Systems in Healthcare -- 2.2.4
Applications of Optimized Distributed Systems in Healthcare -- 2.2.5
Technologies Being Used in Healthcare -- 2.2.5.1 Spark -- 2.2.5.2
Hadoop -- 2.3 Real Cases -- 2.4 Conclusion -- References.
3 The Impact of Distributed Computing on Data Analytics and Business
Insights -- 3.1 Introduction -- 3.1.1 Role of Distributed Computing
in Data Analytics -- 3.1.2 Importance of Business Insights in Decision-
Making -- 3.1.3 Overview of Distributed Computing and Data Analytics
-- 3.2 Distributed Computing and Data Analytics -- 3.2.1 Distributed
Computing -- 3.2.2 Overview of Data Analytics -- 3.2.3 Distributed
Computing in Data Analytics -- 3.3 Business Insights and Decision-
Making -- 3.3.1 Definition of Business Insights -- 3.3.2 Importance
of Business Insights in Decision-Making -- 3.3.3 Applications
of Business Insights and their Impact -- 3.4 Challenges and Limitations
-- 3.5 The Impact of Distributed Computing on Data Analytics -- 3.5.1
Distributed Computing in Improving Data Analytics -- 3.6 Conclusion
-- References -- 4 Machine Learning and Its Application in Educational
Area -- 4.1 Introduction -- 4.2 Previous Work -- 4.3 Technique --
4.3.1 Machine Learning -- 4.3.2 Supervised Learning -- 4.3.3
Unsupervised Learning -- 4.4 Analysis of Data -- 4.5 Educational Data
Mining -- 4.6 Hadoop Approach -- 4.7 Artificial Neural Network (ANN)
-- 4.8 Decision Tree -- 4.9 Results/Discussion -- 4.9.1 Personalized
Learning Through Adaptive Learning -- 4.10 Increasing Efficiency Using
Learning Analytics -- 4.11 Predictive Analysis for Better Assessment
Evaluation -- 4.12 Future Scope -- 4.13 Conclusion -- References -- 5
Approaches and Methodologies for Distributed Systems: Threats,
Challenges, and Future Directions -- 5.1 Introduction -- 5.2
Distributed Systems -- 5.3 Literature Review -- 5.4 Threats
to Distributed Systems Security -- 5.4.1 Hacking -- 5.4.2 Malware --
5.4.3 Denial of Service (DoS) Attacks -- 5.4.4 Man-in-the-Middle
(MitM) Attacks -- 5.4.5 Advanced Persistent Threats (APTs) -- 5.4.6
Insider Threats -- 5.4.7 Phishing -- 5.4.8 Ransomware.
5.5 Security Standards and Protocols -- 5.5.1 ISO/IEC 27001 -- 5.5.2
NIST SP 800-53 -- 5.5.3 SOC 2 -- 5.5.4 PCI DSS -- 5.5.5 IEC 62443 --
5.5.6 OWASP -- 5.5.7 Control Objectives for Information and Related
Technologies (COBIT) -- 5.6 Network Security -- 5.7 Access Control --
5.7.1 Role-based Access Control (RBAC) -- 5.7.2 Discretionary Access
Control (DAC) -- 5.7.3 Mandatory Access Control (MAC) -- 5.8
Authentication and Authorization -- 5.9 Privacy Concerns -- 5.10 Case
Studies -- 5.10.1 Equifax Data Breach -- 5.10.2 Target Data Breach --
5.10.3 WannaCry Ransomware Attack -- 5.11 Conclusion -- 5.12
Future Scope -- References -- 6 Efficient-driven Approaches Related
to Meta-Heuristic Algorithms using Machine Learning Techniques --
6.1 Introduction -- 6.2 Stochastic Optimization -- 6.2.1 Genetic
Algorithm -- 6.2.2 Particle Swarm Optimization -- 6.3 Heuristic Search
-- 6.3.1 Heuristic Search Techniques -- 6.4 Meta-Heuristic -- 6.4.1
Structures of Meta-Heuristic -- 6.5 Machine Learning -- 6.5.1
Applications of Meta-Heuristic -- References -- 7 Security and Privacy
Issues in Distributed Healthcare Systems - A Survey -- 7.1 Introduction
-- 7.1.1 Traditional Systems -- 7.1.2 Distributed Systems -- 7.2
Previous Study -- 7.2.1 Background and Definitions -- 7.3 Security and
Privacy Needs -- 7.4 Security and Privacy Goals -- 7.5 Type of Attacks
in Distributed Systems -- 7.5.1 Malicious Hardware -- 7.5.2 Malicious

Programs -- 7.6 Recommendations and Future Approaches -- 7.7 Conclusion -- References -- 8 Implementation and Analysis of the Proposed Model in a Distributed e-Healthcare System -- 8.1 Introduction -- 8.2 Outmoded Systems -- 8.3 Distributed Systems -- 8.3.1 Peer-to-Peer Architecture -- 8.4 Previous Work -- 8.5 Service-Oriented Architecture of e-Healthcare -- 8.6 Implementation of the Proposed Model -- 8.6.1 Speech Software. 8.7 Evaluation of the Proposed Model Performance -- 8.8 Conclusion and Future Work -- References -- 9 Leveraging Distributed Systems for Improved Educational Planning and Resource Allocation -- 9.1 Introduction -- 9.1.1 Overview of the Current State of Educational Planning and Resource Allocation -- 9.1.2 The Potential Benefits of Leveraging Distributed Systems in Education -- 9.2 Theoretical Framework -- 9.2.1 Overview of Distributed Systems and their Key Concepts -- 9.2.2 Theoretical Basis for the Use of Distributed Systems in Education -- 9.2.3 Comparison of Different Distributed Systems Architectures -- 9.3 Distribution System in Education -- 9.4 Technical Aspects of Distributed Systems in Education -- 9.4.1 Infrastructure Requirements for Implementing Distributed Systems in Education -- 9.4.2 Security and Privacy Concerns in Distributed Systems for Education -- 9.4.3 Data Management and Analysis in Distributed Systems for Education -- 9.5 Challenges and Limitations -- 9.5.1 Merits of Distributed Systems for Educational Planning and Resource Allocation -- 9.5.2 Demerits of Distributed Systems for Educational Planning and Resource Allocation -- 9.6 Discussion -- 9.7 Conclusion -- References -- 10 Advances in Education Policy Through the Integration of Distributed Computing Approaches -- 10.1 Introduction -- 10.1.1 Technology in Education Policy -- 10.1.2 Advances in Education Policy through Distributed Computing -- 10.2 Distributed Computing Approaches -- 10.2.1 Benefits of Education Policy -- 10.2.2 Types of Distributed Computing Approaches -- 10.3 Advances in Education Policy Through Distributed Computing Approaches -- 10.3.1 Significant Impact on Education Policy -- 10.3.2 Improved Access -- 10.3.3 Personalized Learning -- 10.3.4 Data-Driven Decision-Making -- 10.4 Challenges: Privacy Concerns -- 10.4.1 Technical Requirements. 10.4.2 Impact of Emerging Technologies and Use of Distributed Computing -- 10.5 Conclusion -- References -- 11 Revolutionizing Data Management and Security with the Power of Blockchain and Distributed System -- 11.1 Introduction -- 11.1.1 Importance of Data Management and Security -- 11.1.2 Current State of Data Management and Security -- 11.2 Blockchain Technology -- 11.2.1 Benefits of Using Blockchain for Data Management and Security -- 11.2.2 Limitations of Using Blockchain for Data Management and Security -- 11.3 Distributed System -- 11.3.1 Benefits of Using Distributed Systems for Data Management and Security -- 11.3.2 Limitations of Using Distributed Systems for Data Management and Security -- 11.4 Revolutionizing Data Management and Security with Blockchain and Distributed Systems -- 11.4.1 Blockchain and Distributed Systems Can Revolutionize Data Management and Security -- 11.4.2 Real-World Examples of Blockchain and Distributed Systems in Data Management and Security -- 11.5 Challenges of Using Blockchain and Distributed Systems -- 11.5.1 Limitations of Using Blockchain and Distributed Systems -- 11.6 Discussion -- 11.7 Conclusion -- References -- 12 Enhancing Business Development, Ethics, and Governance with the Adoption of Distributed Systems -- 12.1 Introduction -- 12.1.1 Distributed Systems for Business Development -- 12.2 Applications of Distributed Systems in Business Development -- 12.2.1 Characteristics

of Distributed Systems -- 12.2.2 Benefits of Distributed Systems in
Business Development -- 12.2.3 Applications in Business Development
-- 12.3 The Importance of Ethics in Distributed Systems -- 12.3.1
Ethics in Distributed Systems -- 12.3.2 Ethics to Business Development
and Governance -- 12.3.3 Distributed Systems in Promoting Ethical
Practices -- 12.4 Governance in Distributed Systems.
12.4.1 Importance of Governance in Distributed Systems.
