

1. Record Nr.	UNINA9910830845703321
Titolo	Artificial intelligent techniques for wireless communication and networking // edited by R. Kanthavel, [and three others]
Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons, Inc., , [2022] ©2022
ISBN	1-119-82179-7 1-119-82180-0 1-119-82178-9
Descrizione fisica	1 online resource (330 pages)
Disciplina	621.382
Soggetti	Artificial intelligence - Computer programs Wireless communication systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- Table of Contents -- Title Page -- Copyright -- Preface -- 1 Comprehensive and Self-Contained Introduction to Deep Reinforcement Learning -- 1.1 Introduction -- 1.2 Comprehensive Study -- 1.3 Deep Reinforcement Learning: Value-Based and Policy-Based Learning -- 1.4 Applications and Challenges of Applying Reinforcement Learning to Real-World -- 1.5 Conclusion -- References -- 2 Impact of AI in 5G Wireless Technologies and Communication Systems -- 2.1 Introduction -- 2.2 Integrated Services of AI in 5G and 5G in AI -- 2.3 Artificial Intelligence and 5G in the Industrial Space -- 2.4 Future Research and Challenges of Artificial Intelligence in Mobile Networks -- 2.5 Conclusion -- References -- 3 Artificial Intelligence Revolution in Logistics and Supply Chain Management -- 3.1 Introduction -- 3.2 Theory-AI in Logistics and Supply Chain Market -- 3.3 Factors to Propel Business Into the Future Harnessing Automation -- 3.4 Conclusion -- References -- 4 An Empirical Study of Crop Yield Prediction Using Reinforcement Learning -- 4.1 Introduction -- 4.2 An Overview of Reinforcement Learning in Agriculture -- 4.3 Reinforcement Learning Startups for Crop Prediction -- 4.4 Conclusion -- References -- 5 Cost Optimization for Inventory Management in Blockchain and Cloud -- 5.1

Introduction -- 5.2 Blockchain: The Future of Inventory Management -- 5.3 Cost Optimization for Blockchain Inventory Management in Cloud -- 5.4 Cost Reduction Strategies in Blockchain Inventory Management in Cloud -- 5.5 Conclusion -- References -- 6 Review of Deep Learning Architectures Used for Identification and Classification of Plant Leaf Diseases -- 6.1 Introduction -- 6.2 Literature Review -- 6.3 Proposed Idea -- 6.4 Reference Gap -- 6.5 Conclusion -- References -- 7 Generating Art and Music Using Deep Neural Networks -- 7.1 Introduction -- 7.2 Related Works. 7.3 System Architecture -- 7.4 System Development -- 7.5 Algorithm-LSTM -- 7.6 Result -- 7.7 Conclusions -- References -- 8 Deep Learning Era for Future 6G Wireless Communications-Theory, Applications, and Challenges -- 8.1 Introduction -- 8.2 Study of Wireless Technology -- 8.3 Deep Learning Enabled 6G Wireless Communication -- 8.4 Applications and Future Research Directions -- Conclusion -- References -- 9 Robust Cooperative Spectrum Sensing Techniques for a Practical Framework Employing Cognitive Radios in 5G Networks -- 9.1 Introduction -- 9.2 Spectrum Sensing in Cognitive Radio Networks -- 9.3 Collaborative Spectrum Sensing for Opportunistic Access in Fading Environments -- 9.4 Cooperative Sensing Among Cognitive Radios -- 9.5 Cluster-Based Cooperative Spectrum Sensing for Cognitive Radio Systems -- 9.6 Spectrum Agile Radios: Utilization and Sensing Architectures -- 9.7 Some Fundamental Limits on Cognitive Radio -- 9.8 Cooperative Strategies and Capacity Theorems for Relay Networks -- 9.9 Research Challenges in Cooperative Communication -- 9.10 Conclusion -- References -- 10 Natural Language Processing -- 10.1 Introduction -- 10.2 Conclusions -- References -- 11 Class Level Multi-Feature Semantic Similarity-Based Efficient Multimedia Big Data Retrieval -- 11.1 Introduction -- 11.2 Literature Review -- 11.3 Class Level Semantic Similarity-Based Retrieval -- 11.4 Results and Discussion -- Conclusion -- References -- 12 Supervised Learning Approaches for Underwater Scalar Sensory Data Modeling With Diurnal Changes -- 12.1 Introduction -- 12.2 Literature Survey -- 12.3 Proposed Work -- 12.4 Results -- 12.5 Conclusion and Future Work -- References -- 13 Multi-Layer UAV Ad Hoc Network Architecture, Protocol and Simulation -- 13.1 Introduction -- 13.2 Background -- 13.3 Issues and Gap Identified -- 13.4 Main Focus of the Chapter -- 13.5 Mobility. 13.6 Routing Protocol -- 13.7 High Altitude Platforms (HAPs) -- 13.8 Connectivity Graph Metrics -- 13.9 Aerial Vehicle Network Simulator (AVENs) -- 13.10 Conclusion -- References -- 14 Artificial Intelligence in Logistics and Supply Chain -- 14.1 Introduction to Logistics and Supply Chain -- 14.2 Recent Research Avenues in Supply Chain -- 14.3 Importance and Impact of AI -- 14.4 Research Gap of AI-Based Supply Chain -- References -- 15 Hereditary Factor-Based Multi-Featured Algorithm for Early Diabetes Detection Using Machine Learning -- 15.1 Introduction -- 15.2 Literature Review -- 15.3 Objectives of the Proposed System -- 15.4 Proposed System -- 15.5 HIVE and R as Evaluation Tools -- 15.6 Decision Trees -- 15.7 Results and Discussions -- 15.8 Conclusion -- References -- 16 Adaptive and Intelligent Opportunistic Routing Using Enhanced Feedback Mechanism -- 16.1 Introduction -- 16.2 Related Study -- 16.3 System Model -- 16.4 Experiments and Results -- 16.5 Conclusion -- References -- 17 Enabling Artificial Intelligence and Cyber Security in Smart Manufacturing -- 17.1 Introduction -- 17.2 New Development of Artificial Intelligence -- 17.3 Artificial Intelligence Facilitates the Development of Intelligent Manufacturing -- 17.4 Current Status and Problems of Green Manufacturing -- 17.5 Artificial Intelligence for

Green Manufacturing -- 17.6 Detailed Description of Common Encryption Algorithms -- 17.6.1 Triple DES (3DES)-(Triple Data Encryption Standard) -- 17.7 Current and Future Works -- 17.8 Conclusion -- References -- 18 Deep Learning in 5G Networks -- 18.1 5G Networks -- 18.2 Artificial Intelligence and 5G Networks -- 18.3 Deep Learning in 5G Networks -- Conclusion -- References -- 19 EIDR Umpiring Security Models for Wireless Sensor Networks -- 19.1 Introduction -- 19.2 A Review of Various Routing Protocols -- 19.3 Scope of Chapter.  
19.4 Conclusions and Future Work -- References -- 20 Artificial Intelligence in Wireless Communication -- 20.1 Introduction -- 20.2 Artificial Intelligence: A Grand Jewel Mine -- 20.3 Wireless Communication: An Overview -- 20.4 Wireless Revolution -- 20.5 The Present Times -- 20.6 Artificial Intelligence in Wireless Communication -- 20.6.1 How the Two Worlds Collided -- 20.6.2 Cognitive Radios -- 20.7 Artificial Neural Network -- 20.8 The Deployment of 5G -- 20.9 Looking Into the Features of 5G -- 20.10 AI and the Internet of Things (IoT) -- 20.11 Artificial Intelligence in Software-Defined Networks (SDN) -- 20.12 Artificial Intelligence in Network Function Virtualization -- 20.13 Conclusion -- References -- Index -- Also of Interest -- End User License Agreement.

---

## Sommario/riassunto

**ARTIFICIAL INTELLIGENT TECHNIQUES FOR WIRELESS COMMUNICATION AND NETWORKING** The 20 chapters address AI principles and techniques used in wireless communication and networking and outline their benefit, function, and future role in the field. Wireless communication and networking based on AI concepts and techniques are explored in this book, specifically focusing on the current research in the field by highlighting empirical results along with theoretical concepts. The possibility of applying AI mechanisms towards security aspects in the communication domain is elaborated; also explored is the application side of integrated technologies that enhance AI-based innovations, insights, intelligent predictions, cost optimization, inventory management, identification processes, classification mechanisms, cooperative spectrum sensing techniques, ad-hoc network architecture, and protocol and simulation-based environments. Audience Researchers, industry IT engineers, and graduate students working on and implementing AI-based wireless sensor networks, 5G, IoT, deep learning, reinforcement learning, and robotics in WSN, and related technologies.

---