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   Nota di contenuto   Chapter 1. An Overview of Blockchain and 5G Networks -- Chapter 2. Deep Learning Approach for Interference Mitigation in FBMC/OQAM-MIMO Systems -- Chapter 3. Deep Learning in Non-Orthogonal Multiple Access for 5G and beyond Networks -- Chapter 4. Traffic Sign Detection: A Comparative Study between CNN and RNN -- Chapter 5. Merging Attack-Defense Tree and Game Theory to Analyze Vehicular Ad-Hoc Network Security -- Chapter 6. A Secure Vehicle to Everything (V2X) Communication Model for Intelligent Transportation System -- Chapter 7. A Novel Unsupervised Learning Method for Intrusion Detection in Software Defined Networks -- Chapter 8. Deep Reinforcement Learning Modeling of a V2V communication-based Bike Avoidance Protocol for Increased Vehicular Flow -- Chapter 9. Deep Learning-based Modeling for Pedestrian Perception and Decision Making in Refuge Island for Autonomous Driving -- Chapter 10.

Machine Learning for Hate Speech Detection in Arabic Social Media -- Chapter 11. PDDL Planning and Ontologies, a Tool for Automatic Composition of Intentional-Contextual Web Services -- Chapter 12. QSAR anti-HIV Feature Selection and Prediction for Drug Discovery using Genetic Algorithm and Machine Learning Algorithms -- Chapter 13. Mining Electronic Health Records of patient using Linked Data for Ranking Diseases -- Chapter 14. Deep Neural Networks based Delay Driving the Alpha Factors Ranking based Clustering: Exploring the COVID-19 Pandemic's Impact on the Economy and Markets -- Chapter 15. An Artificial Immune System for the Management of the Emergency Divisions.

Sommario/riassunto	This book focuses on the use of Artificial Intelligence and Machine Learning (AI/ML) based techniques to solve issues related to communication networks, their layers, as well as their applications. The book first offers an introduction to recent trends regarding communication networks. The authors then provide an overview of theoretical concepts of AI/ML, techniques and protocols used in different layers of communication. Furthermore, this book presents solutions that help analyze complex patterns in user data and ultimately improve productivity. Throughout, AI/ML-based solutions are provided, for topics such as signal detection, channel modeling, resource optimization, routing protocol design, transport layer optimization, user/application behavior prediction, software-defined networking, congestion control, communication network optimization, security, and anomaly detection. The book features chapters from a large spectrum of authors including researchers, students, as well as industrials involved in research and development. Presents Artificial Intelligence and Machine Learning (AI/ML) based techniques to solve communication networks related issues as well as real world applications; Provides a focus on how AI/ML can be applied in different layers of communication networks; Highlights solutions that help analyze complex patterns in user data and ultimately improve productivity.