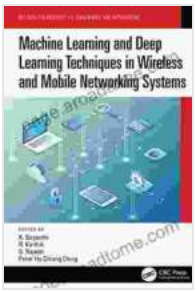
Machine Learning and Deep Learning Techniques in Wireless and Mobile Networking



Machine Learning and Deep Learning Techniques in Wireless and Mobile Networking Systems (Big Data for Industry 4.0) by Peter Ho Chiung Ching

★★★★★ 5 out of 5

Language : English
File size : 17423 KB
Print length : 274 pages

Unlocking the Power of Next-Generation Networks

As wireless and mobile networks continue their rapid evolution, Machine Learning (ML) and Deep Learning (DL) have emerged as key technologies to unlock their full potential. These cutting-edge techniques empower networks with the ability to learn, adapt, and optimize themselves based on real-time data analysis.

Our comprehensive book provides a comprehensive guide to the application of ML and DL in wireless and mobile networking. Delve into advanced techniques, case studies, and industry insights to gain a deep understanding of these technologies and their impact on network performance, security, and deployment.

Part 1: Fundamentals

- **Concepts and Principles:** An overview of ML and DL concepts, including supervised learning, unsupervised learning, and neural networks.
- **Data Preparation and Feature Engineering:** Techniques for cleaning, transforming, and engineering data to enhance model performance.
- **Model Training and Evaluation:** Best practices for training and evaluating ML and DL models, including hyperparameter tuning and metrics selection.

Part 2: Application to Wireless and Mobile Networks

- **Network Optimization:** Deploying ML to optimize network parameters, such as power allocation, routing, and resource allocation.
- **Performance Enhancement:** Leveraging DL to improve network throughput, latency, and reliability.
- **Security and Anomaly Detection:** Utilizing ML techniques to detect and prevent unauthorized access, intrusions, and malware.

Part 3: Case Studies and Applications

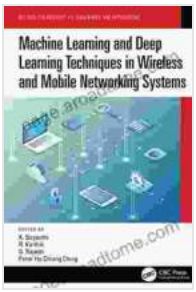
- **5G Network Optimization:** Real-world case study showcasing ML-driven optimization of 5G networks for enhanced performance.
- **IoT Device Management:** Application of ML for remote monitoring, fault detection, and configuration management of IoT devices.
- **Mobile Edge Computing:** Leveraging DL for efficient resource allocation and task offloading in mobile edge computing environments.

Machine Learning and Deep Learning are transforming the landscape of wireless and mobile networking, empowering network operators, service

providers, and businesses with unprecedented capabilities. Our book provides a comprehensive roadmap to harness these technologies and unlock the full potential of next-generation networks.

By adopting ML and DL techniques, you can gain a competitive edge in network performance, security, and scalability. Our book is an essential resource for anyone seeking to advance their knowledge and skills in this rapidly evolving field.
Free Download Your Copy Today!

Elevate your understanding of Machine Learning and Deep Learning in Wireless and Mobile Networking. Free Download your copy now and empower yourself with the knowledge and techniques to drive innovation and excellence in your network solutions!



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