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Nota di contenuto	Artificial Intelligence – An Overview -- VLSI and Neural Networks Integration in Industry 4.0: A Comprehensive Approach -- AI/ML-Based Approaches in Healthcare: Transforming Diagnosis, Treatment, and Beyond -- Maintaining Electronic Health Records using ML and IoT techniques -- Sentiment Analysis During Covid-19 using Machine Learning Techniques -- Transforming Industry 4.0 with AI, ML, and IoT: An Overview of Emerging Trends -- Synergizing VLSI and Neural Networks: Unveiling the Nexus of Innovation in Industry 4.0 -- Securing E-Learning in the Era of Industry 4.0: A Data Mining Approach -- Channel Estimation in Beyond-5G Massive MIMO System Using Machine Learning -- Supervised Machine Learning Algorithms for

Retinal vessel detection in the Retinal Images-A Comprehensive Approach -- Signal Processing techniques and Data Collection through Sensors in Industry 4.0Application -- Design a Photonic Crystal Fiber based Biosensor using a thin metals layer for Industry 4.0 -- Detection and diagnosis of cervical cancer using machine learning models -- AI/ML based approaches in healthcare Industry -- Artificial Intelligence Techniques for Sentimental analysis during pandemic -- Precision Oncology: Innovations in Computational intelligent for Cancer Detection.

Sommario/riassunto

The book offers valuable insights into research related to Industry 4.0 applications that utilize artificial intelligence (AI), machine learning (ML), and the Industrial Internet of Things (IIoT). Industry 4.0, also known as the Fourth Industrial Revolution, includes disruptive technologies such as the Internet of Things (IoT), robotics, virtual reality (VR), VLSI architecture, and AI, all of which are transforming modern society and manufacturing practices. This book addresses various aspects of smart industrial application design strategies and their effects on next-generation systems, including quantum computing, edge computing, IoT, cybersecurity, nano-communications, and robotic automation. The application of AI, machine learning techniques, and IoT is anticipated to improve the performance of automated and controlled systems. Intended as a resource for academics, researchers, and professionals in the fields of AI and ML, the content also explores their applications within the industrial revolution and the influence of VLSI on the global market. Additionally, the book serves as a reference for developing sustainable engineering solutions to address various global industrial challenges.
