AI-Driven Smart Industrial Technologies

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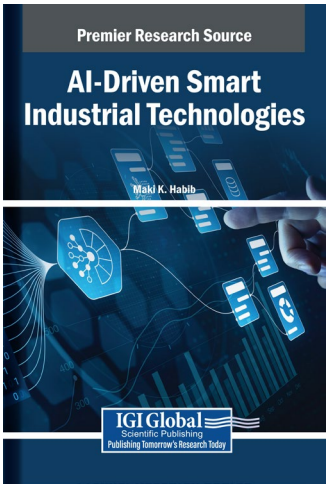

Description:

Industries are being revolutionized though smart connectivity, connecting machines and computers to enhance automation, safety, and efficiency. Through the adoption of smart industrial technologies, industries are progressing towards greater sustainability. The trends in artificial intelligence (AI)-driven technologies point to global advances in quality and productivity. However, challenges still exist in strengthening the collaboration between humans and machines for Industry 5.0, including enhancing human augmentation while still prioritizing employee well-being.

AI-Driven Smart Industrial Technologies examines the intersection of advanced technologies and sustainable practices in modern industries in different domains. It provides a distinct perspective on integrating AI, robotics, mechatronics, and Industries 4.0 and 5.0 principles, highlighting their collective impact on creating greener, more efficient, and smarter industrial processes. Covering topics such as 3D printing, human-machine collaboration, and cyber-physical systems, this book is an excellent resource for manufacturers, automation professionals, policymakers, technologists, engineers, computer scientists, environmental scientists, professionals, researchers, scholars, academicians, and more.

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Topics Covered:

- 3D Convolutional Neural Networks (CNNs)
- 3-Dimensional (3D) Printing
- Additive Manufacturing
- Artificial Intelligence (AI)
- Artificial Neural Networks (ANNs)
- Automation
- Bluetooth Technology
- Charge Sampling
- Cyber-Physical Systems
- Digital Twins
- Error And Attenuation Detection
- Human-Machine Collaboration
- Indoor Positioning
- Industrial Internet of Things (IIoT)
- Industry 4.0/5.0
- Multiscopic Topological Twin
- Precision Agriculture
- Predictive Maintenance
- Remote Sensing
- Smart Connectivity

Subject: Physical Sciences and Engineering
Readership Level: Advanced-Academic Level (Research Recommended)

Classification: Edited Reference
Research Suitable For: Advanced Undergraduate Students; Graduate Students; Researchers; Academicians; Professionals; Practitioners

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