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Recent Trends and Best Practices in Industry 4.0

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Description:

The aim of this book is to provide detailed insights into the state of art techniques in AI, IoT, Blockchain technology and associated technologies which play a vital role in the implementation of a successful project for upcoming and practicing engineers. Industry 4.0 is used interchangeably with the fourth industrial revolution and represents a new stage in the organization and control of the industrial value chain.

Cyber-physical systems form the basis of Industry 4.0 (e.g., 'smart machines'). They use modern control systems, have embedded software systems, can be addressed via IoT (the Internet of Things), and may use extensive data analytics and/or artificial intelligence systems to operate autonomously.

Owing to its multidisciplinary nature, Industry 4.0 is not a single topic but a combination of a multitude of technologies from different domains. Keeping this in mind the book includes the following topics:

- Artificial intelligence
- Internet of things
- Blockchain technology
- Digital manufacturing
- Robotics
- Cybersecurity.

The book will be a comprehensive guide to academicians, engineers who want to align with recent trends of fourth industrial revolution.

Keywords: Edge Computing, Smart Agriculture, Digital Chemical Industry, Digital Manufacturing Processes, Vehicular Adhoc Network, Robotics, Autonomous Vehicles, WSN