Developments Towards Next Generation Intelligent Systems for Sustainable Development

Part of the Advances in Systems Analysis, Software Engineering, and High Performance Computing Book Series
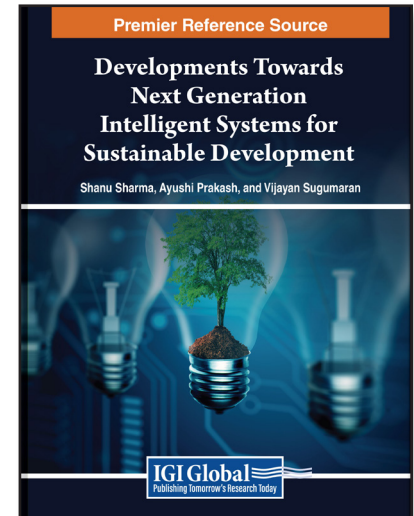
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Developments Towards Next Generation Intelligent Systems for Sustainable Development

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Description:

The rapid proliferation of connected devices in our daily lives, from smart homes to industrial sensors, has led to an explosion of data that requires processing before it is useful to experts. However, modern devices often have limited resources, making it challenging to decode and utilize this data effectively. Additionally, the need for real-time decision-making further complicates this issue, as traditional data processing methods take far too long to be able to keep up with the required volume and speed.

Developments Towards Next Generation Intelligent Systems for Sustainable Development offers a comprehensive solution to these challenges by integrating novel technologies such as AI, edge computing, federated learning, quantum computing, and more. The book shows how intelligent systems can maximize computing power by leveraging these technologies to process large volumes of data efficiently and autonomously and make real-time decisions. The proposed architectures and frameworks focus on real-time analysis, faster decision-making, enhanced privacy, and efficient data processing.

This book is essential for research scholars, academicians, and industry professionals developing optimized intelligent systems and intelligent data processing approaches. It covers a wide range of topics, including architecture and framework for intelligent systems, challenges and opportunities in autonomous systems, advancements in data processing, edge computing, cloud-based solutions, quantum processing, in-memory, and AI accelerators, real-time stream processing, privacy-preserving technologies, and the integration of data processing technologies. **Developments Towards Next Generation Intelligent Systems for Sustainable Development** is a valuable resource for those seeking to understand and implement cutting-edge technologies in intelligent systems.

ISBN: 9798369356432   **Pages:** 320   **Copyright:** 2025   **Release Date:** April, 2024

Hardcover: $385.00   **E-Book:** $385.00   **Hardcover + E-Book:** $465.00

Topics Covered:

- Applications of Intelligence Systems in Daily Life
- Architectural Applications
- Artificial Intelligence Accelerators
- Autonomous Systems
- Blockchain
- Cloud Computing
- Current Challenges
- Data Processing
- Edge Computing
- Federated Learning
- In-Memory
- Quantum Computing
- Real-Time Stream

Subject: Computer Science & Information Technology

Classification: Edited Reference

Readership Level: Advanced-Academic Level (Research Recommended)

Research Suitable for: Advanced Undergraduate Students; Graduate Students; Researchers; Academicians; Professionals; Practitioners

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