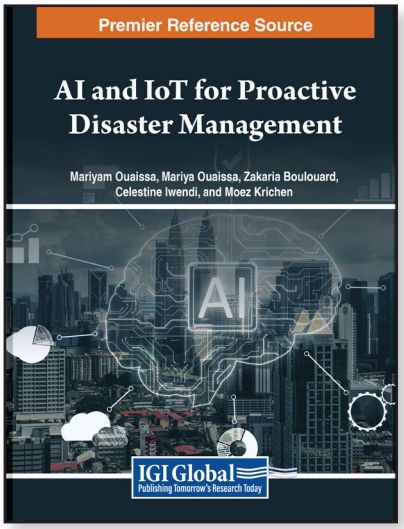
AI and IoT for Proactive Disaster Management



Part of the Advances in Computational Intelligence and Robotics Book Series

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Description:

In our rapidly evolving digital landscape, the threat of natural disasters looms large, necessitating innovative solutions for effective disaster management. Integrating Artificial Intelligence (AI) and the Internet of Things (IoT) presents a transformative approach to addressing these challenges. However, despite the potential benefits, the field needs more comprehensive resources that explore the full extent of AI and IoT applications in disaster management.

AI and IoT for Proactive Disaster Management fills that gap by examining how AI and IoT can revolutionize disaster preparedness, response, and recovery. It offers a deep dive into AI frameworks, IoT infrastructures, and the synergy of these technologies in predicting and managing natural disasters. By showcasing cutting-edge research and practical applications, this book equips readers with the knowledge and tools to harness AI and IoT for more efficient and effective disaster management strategies.

Targeted at undergraduate and postgraduate students, academicians, research scholars, industry professionals, and technology enthusiasts, this book serves as a comprehensive guide to understanding the intersection of AI, IoT, and disaster management. It offers insights into emerging trends, ethical considerations, and best practices, making it an essential resource for anyone interested in leveraging technology to mitigate the impact of natural disasters.

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Topics Covered:

- AI and Drone-Based Natural Disaster Management
- AI-Optimized Flood Forecasting and Mitigation
- AIoT in Disaster Management
- AIoT in Emergency Planning
- Blockchain-Enabled Model Applications
- Connected Vehicles and Natural Disaster Management
- Impact of Natural Disasters on Intelligent Systems
- Internet of Things (IoT) and Natural Disaster Management
- Machine Learning for Earthquakes Discrimination
- Machine Learning for Quarry Blasts Discrimination
- Neural Network Models
- River Flood Prevention with an Integrated AIoT Model
- SDN-Based Intelligent Networks for Disaster Management
- Security and Privacy Challenges of Participatory Sensing
- Unmanned Aerial Vehicle (UAV) Systems

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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