Technologies for Sustainable Healthcare Development

Part of the Advances in Medical Technologies and Clinical Practice Book Series

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Description:

In contemporary healthcare, Industry 5.0 technologies present a paradoxical challenge and opportunity. The rapid integration of Cyber Physical Systems, Cloud Computing, Internet of Things, Artificial Intelligence, Smart Factories, and Cognitive Computing has ushered in unprecedented transformations, yet it has concurrently given rise to critical vulnerabilities within healthcare systems. As sensitive patient data becomes increasingly digitized, the specter of cybersecurity threats looms larger than ever. The book, titled "Technologies for Sustainable Healthcare Development," undertakes the crucial task of addressing this pressing concern. Focused on Cybersecurity and Data Science Innovations in Industry 5.0 Technologies for Sustainable Healthcare, it serves as an indispensable guide for professionals, researchers, and policymakers aiming to fortify healthcare systems against unauthorized access and cyber threats while unlocking the potential of transformative technologies.

The overarching objective of **Technologies for Sustainable Healthcare Development** is to dissect the challenges posed by the convergence of cybersecurity, data science, and Industry 5.0 in healthcare. This timely publication delves into the evolution of cybersecurity and data science, providing insights into their symbiotic relationship and the implications for healthcare. Through its exploration of cutting-edge research, innovative solutions, and practical applications, the book becomes a beacon for those seeking to navigate the evolving landscape of secure healthcare development. It does not merely dissect problems but endeavors to provide sustainable development strategies, contributing to the advancement of robust and efficient healthcare systems.

Designed to cater to a diverse audience of academicians, researchers, technology developers, IT specialists, and healthcare professionals, this book transcends disciplinary boundaries. By demystifying topics such as machine learning, artificial intelligence, big data analytics, and the Internet of Things, **Technologies for Sustainable Healthcare Development** equips its readers with the knowledge and tools necessary to champion evidence-based decision-making, personalized patient care, and predictive healthcare models. As the healthcare industry stands at the crossroads of technological innovation and security challenges, this book emerges as a crucial resource for anyone invested in the sustainable future of healthcare.

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Topics Covered:

- AI-Driven Cybersecurity in Healthcare
- Analytics and ML for Healthcare Decision Support
- Blockchain for Healthcare Data Security
- Challenges in Implementing Industry 5.0 in Healthcare
- Cloud Computing in Healthcare Data Management
- Cognitive Computing in Healthcare Systems
- Cyber Threats in Connected Medical Devices
- Cybersecurity Compliance in Healthcare
- Cybersecurity Risk Management in Connected Healthcare
- Data Breach Detection and Response in Healthcare
- Data Governance in Healthcare Organizations
- Ethical Considerations in Industry 5.0 Healthcare
- Evolution of Cybersecurity and Data Science in Healthcare
- Frameworks for Protecting Healthcare Infrastructure

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