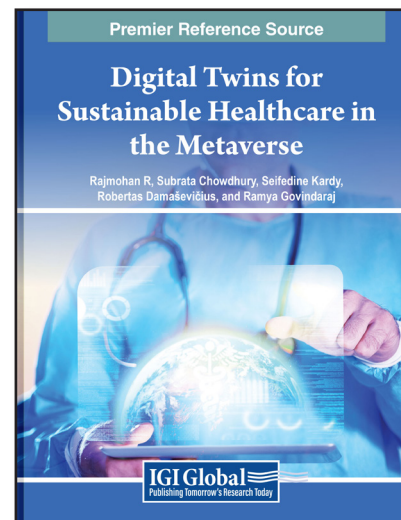# Digital Twins for Sustainable Healthcare in the Metaverse

Part of the Advances in Healthcare Information Systems and Administration Book Series

Rajmohan.R (SRM Institute of Science and Technology, India), Subrata Chowdhury (Sreenivasa Institute of Technology and Management, India), Seifedine Kardy (Noroff University College, Norway), Robertas Damaševičius (Kaunas University of Technology, Lithuania) and Ramya Govindaraj (Vellore Institute of Technology, India)

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Digital Twins for Sustainable Healthcare in the Metaverse

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Description:

Digital transformation has brought about both unprecedented opportunities and complex challenges in the landscape of healthcare. As healthcare systems strive to meet the growing demands of an aging population and rising healthcare costs, they are confronted with issues of inefficiency, fragmented care delivery, and limited access to quality services. Moreover, the global COVID-19 pandemic has further exacerbated these challenges, highlighting the urgent need for innovative solutions to enhance healthcare delivery and sustainability.

Digital Twins for Sustainable Healthcare in the Metaverse emerges as a solution to these pressing challenges, offering a forward-thinking approach to revolutionize healthcare delivery. By exploring the integration of digital twin (DT) technology with the consumer health metaverse (MCH), alongside artificial intelligence (AI), machine learning (ML), and other cutting-edge innovations, this book provides a roadmap for transforming healthcare systems and processes. From enhancing data management and visualization techniques to leveraging blockchain technology for data privacy, each chapter offers actionable insights to address the complexities of modern healthcare delivery.

With its interdisciplinary approach and focus on practical applications, this book serves as a comprehensive guide for healthcare professionals, researchers, policymakers, and students alike. By bridging the gap between theory and practice, the book empowers readers to harness the full potential of DT-enabled healthcare solutions to create a more efficient, effective, and sustainable healthcare ecosystem. Ultimately, this book is poised to drive innovation, improve patient outcomes, and shape the future of healthcare delivery in the digital age.

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Topics Covered:

- Artificial Intelligence (AI)
- Blockchain Technology
- Consumer Health Metaverse (MCH)
- Data Management
- Digital Twins (DT)
- Healthcare Delivery
- Machine Learning (ML)
- Medical Data Management
- Multimodal Data
- Prognostics
- Sustainable Healthcare
- Telemedicine
- Visualization Techniques

Subject: Medicine & Healthacre

Classification: Edited Reference

Readership Level: Advanced-Academic Level (Research Recommended)

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