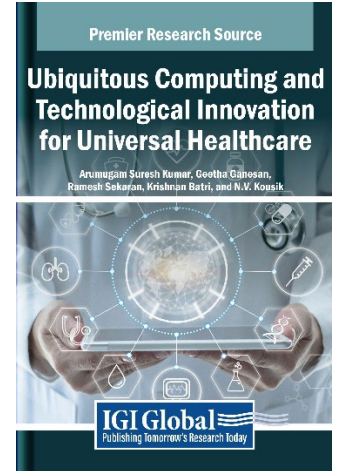


Ubiquitous Computing and Technological Innovation for Universal Healthcare

Part of Advances in Medical Technologies and Clinical Practice

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Description:

The current healthcare system faces complications including data acquisition, interpretation, and delivery challenges, particularly in out-of-hospital scenarios. The shortage of medical resources intensifies the demand for efficient information gathering and processing. Moreover, the potential of pervasive computing still needs to be explored in healthcare, limiting the industry's ability to leverage innovations like artificial intelligence, augmented reality, and virtual reality.

Ubiquitous Computing and Technological Innovation for Universal Healthcare addresses the medical field's critical challenges. It presents innovative solutions grounded in the marriage of Unmanned Aerial Vehicles (UAV), pervasive computing, and metaverse intelligence. It outlines how these UAVs redefine out-of-hospital care, addressing the pressing need for efficient data collection and interpretation amid a global medical shortage. Integrating cognitive algorithms is explored to automate diagnosis and enhance healthcare systems' emergency responsiveness. The book explains how pervasive computing, an emerging paradigm, revolutionary concept envisions a society seamlessly connected through low-cost sensors, processors, and digital communication, creating an environment where computational and physical infrastructures harmoniously coexist. Thousands of sensor devices populate this environment, ushering in novel functionalities and specialized services that enhance user interaction and experience. The exploration then extends into metaverse healthcare analysis, a valuable tool converging artificial intelligence, augmented reality, and virtual reality. The book examines the potential of this analysis in delivering cost-effective treatment, improving patient outcomes, and influencing the future of medical practice. The book revolves around developing and integrating treatment programs leveraging UAV communication. Topics such as artificial intelligence, telemedicine, blockchain, digital twins, augmented reality, and virtual reality are delved into for their role in creating intelligent healthcare systems. The focus on rapid identification of underlying health issues, real-time monitoring in the metaverse, and the economic, social, and environmental impact of these systems adds depth to the discourse. Structured as a vital resource for researchers, academicians, industry professionals, policy-makers, and system designers, this book bridges the gap between theory and application.

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Topics Covered:

Artificial Intelligence	Metaverse Analysis
Augmented Reality	Pervasive Healthcare
Blockchain in Healthcare	Smart Healthcare Systems
Cognitive Algorithms	Ubiquitous Computing
Digital Twins	Unmanned Aerial Vehicles
Healthcare Technology Trends	Virtual Reality
Internet of Things in Healthcare	Wireless Communication

Subject: Medicine and Healthcare

Readership Level: Advanced-Academic Level (Research Recommended)

Classification: Edited Reference

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

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