IEEE JOURNAL OF

BIOMEDICAL AND HEALTH INFORMATICS

J-BHI Special Issue on "AI driven Internet of Medical Things for Smart Healthcare Applications: Challenges, and Future Trends"

The Internet of Medical Things (IoMT) has evolved as one of the best promising eras of the Internet of Things (IoT) which attracts the researchers' attention due to its widespread applicability in Smart Healthcare systems (SHS). It is observed during the COVID-19 pandemic that it is highly unsafe for a patient to visit the hospital for every minor problem. However, with the help of IoMT devices, we can easily monitor our daily health records, and thus initial precautions can be taken on our own. An IoMT based smart healthcare system is a collection of several smart medical equipments including wearable devices and apps connected within the network to provide health information. In IoMT based smart healthcare systems, sensors and medical devices securely transmit medical data to the server nodes without human intervention. Further, medical devices remotely monitor patient health conditions to improve the quality and efficacy of patient medical treatment. Some of the major components of smart healthcare systems are IoMT, medical sensors, artificial intelligence (AI), 5G, big Data, edge computing, and cloud computing. The AI-driven internet of medical things healthcare system is a combination of IoT (used for periodic control) and AI (used for data analysis). This combination makes the healthcare system more intelligent over time. AI-driven IoMT system collects huge data generated by IoT and provides automated medical diagnostics to support inexpensive and superior personalized care based on complex analysis algorithms. AI can provide an enhanced user interface for real-time disease management and prevention. AI can further be utilized to provide security in IoMT via detecting network intrusion within the system, by detecting intermediary security attacks inside the IoMT, and web-based security assessment using IoMT enabled devices.

The main objective of this special issue is to bring together researchers to submit their innovative research outcomes related to the challenges, applications, architecture development, technologies, and future prospects of AI-driven IoMT for smart healthcare applications. Further, this special Issue will broadly cover the AI-driven IoMT security and privacy issues for clinical data processing and management

Topics of interest include, but are not limited to, the following:

- Artificial intelligence based IoMT for Smart healthcare
- IoMT based Health monitoring and Prediction
- Energy-efficient IoMT Architecture for Smart Healthcare
- IoMT security and Privacy
- Deep learning, transfer learning for smart healthcare
- Computational intelligence in smart healthcare
- Edge-IoMT-Based Smart healthcare System
- Data analytics in AI-IoMT
- Clinical data collection, integration, and analysis in IoMT
- Innovative IoMT solutions
- Wearable IoMT for smart healthcare

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Key Dates

Deadline for Submission:	30 June, 2023
First Reviews Due:	31 August, 2023
Revised Manuscript Due:	30 Sept, 2023
Final Decision:	01 Dec, 2023

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