Journal of Healthcare Engineering

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Special Issue on

Federated Learning Techniques in Public Healthcare and Medical Internet of Things Environments

CALL FOR PAPERS

Intelligent applications in distributed healthcare and medical systems have seen great growth in recent years due to the incorporation of numerous technologies such as the Internet of Things (IoT). In addition, heterogeneous federated learning provides data transmission, replica placement, and a reduction in throughput, resource management, and network load to enhance the accuracy, consistency, and service level agreement (SLA) factors of public health and medical systems.

The main aspects of federated learning provide a safe and secure architecture to improve the privacy and efficiency of heterogeneous information in public health records and medical systems. Federated learning is a distributed platform of intelligent techniques that improve the connectivity of intelligent systems with increased network capacity, supporting quality of service (QoS), network availability, and user experience.

The goal of this Special Issue is to bring forward recent advancements in evolutionary and heterogeneous techniques in federated learning, machine learning, and deep learning for public healthcare and medical systems in IoT environments. More specifically, we look for contributions in state-of-the-art approaches, methodologies, systems, and innovative uses of federated learning, machine learning, and deep learning for medical IoT (MIoT) applications, such as smart healthcare, smart surgery, smart medical systems, smart health transportation, and smart telemedicine. We welcome both original research and review articles.

Potential topics include but are not limited to the following:

- Federated learning for managing consistency in distributed medical systems with IoT
- Collaborative learning for smart healthcare and smart surgery
- Privacy, security, and trust in federated learning for distributed medical systems in IoT environments
- Federated-iterative learning methods for service management of medical systems
- Federated learning and machine learning for optimizing cloud-edge computing in medical IoT
- Analyzing QoS factors in federated learning-based resource management in MIoT
- Federated learning applications for energy-aware systems in heterogeneous medical systems
- Federated learning techniques for medical image processing in IoT environments
- Blockchain technology using federated learning methods in medical IoT environments
- Deep learning for MRI and X-ray in mobile medical IoT environments
- Robust machine learning models for smart healthcare in IoT environments

Authors can submit their manuscripts through the Manuscript Tracking System at https://review.hindawi.com/submit?specialIssue=709511.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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