

IEEE JOURNAL OF BIOMEDICAL AND HEALTH INFORMATICS

J-BHI Special Issue on “AI-empowered Internet of Things for Data-Driven Psychophysiological Computing”

Psychophysiological computing focuses on the quantification, fusion, analysis and mining of multi-source physiological data (such as brain imaging, EEG, body electricity, heart rate, respiration, body temperature, etc.) to reversely derive the complex physiological-psychological mapping relationship and achieve a more comprehensive and objective quantitative perception and reasoning calculation of different mental states. One of the key enablers for Psychophysiological computing is the Internet of Things (IoT), which can exploit state-of-the-art communication technologies to support advanced services. Meanwhile, Artificial Intelligence (AI) has recently emerged as a powerful weapon that supports very implement efficient data analysis and make accurate decisions on service provisions in various kinds. Combining IoT with advanced AI technology can greatly benefit Psychophysiological computing. AI-empowered solutions, such as deep learning and reinforcement learning, can better process the vast amounts of real-time data that stream from IoT devices to support intelligent medical services.

This special issue will cover comprehensively algorithms, frameworks, and technologies for data-driven Psychophysiological computing. It aims to provide a venue to cover comprehensively algorithms, frameworks, technologies, and applications of AI-empowered Internet of Things for Psychophysiological computing.

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

- Intelligent mental assessment systems
- IoT system architectures in Psychophysiological computing
- Intelligent communications for health sensor data
- Smart sensing for Psychophysiological computing
- Depression assessment by multimode data
- Medical signal processing for Psychophysiological computing
- AI-enabled IoMT for Psychophysiological computing
- Real-time analysis for Psychophysiological computing
- Machine learning and data mining for Psychophysiological computing
- Security, trust and privacy computing for Psychophysiological computing
- Explainable AI for Psychophysiological computing
- Real-world applications of AI and IoT for Psychophysiological computing

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