

Special Issue

Data-Driven Rehabilitation: Artificial Intelligence, Big Data, Robotics, and Digital Health

Message from the Guest Editors

AI, big data, cognitive computing, robotics, and digital health are transforming rehabilitation. Multimodal data from wearables, robots, imaging, EHRs, mHealth, and patient-reported outcomes enable personalized, adaptive, and evidence-based interventions. Advances in machine learning, deep learning, foundation models, IoT, digital twins, and cloud infrastructures support intelligent monitoring, assessment, prediction, decision support, and human-machine interaction. This Special Issue welcomes original research, reviews, and translational studies on AI-enabled physical, cognitive, and neurorehabilitation. Topics include AI and machine learning; big data and multimodal analytics; digital twins; foundation models and LLMs; personalized rehabilitation; cognitive assessment; digital biomarkers; rehabilitation robotics; human-robot interaction; wearables and IoT; computer vision; brain-computer interfaces; tele-rehabilitation; explainable AI; privacy-preserving learning; cloud platforms; and clinical validation. The Special Issue aims to foster interdisciplinary innovation and advance data-driven rehabilitation technologies.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

Big Data and Cognitive Computing (BDCC) is a scholarly online journal which provides a platform for big data theories with emerging technologies on smart clouds and exploring supercomputers with new cognitive applications. It is a peer-reviewed, open access journal that publishes high quality original articles, reviews and short communications. The primary aims of this journal are to encourage contributions of high quality scientific papers relating to data management and analytics in industry, such as manufacturing, healthcare, education, media and business, data mining, and cognitive science. There is no restriction on the maximum length of the papers.

Editor-in-Chief

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