Special Issue

Machine Learning for Advanced Healthcare: Bridging Innovation and Clinical Implementation

Message from the Guest Editors

This Special Issue aims to bridge the gap between ML advancements and their actual implementation in healthcare; specifically, it focuses on the development and application of interpretable ML frameworks in real-world clinical settings. We invite submissions presenting explainable AI strategies, multi-source data integration, and interpretable solutions to support early diagnosis, monitoring, and predictive modelling of disease progression. Studies addressing challenges in data integration, model interpretability, physician–AI interaction, and privacy-preserving approaches are highly encouraged. Potential topics include, but are not limited to:

- ML models to support early diagnosis and disease progression monitoring;
- Wearable technologies and sensor-based data analysis;
- Interpretable methods for sleep, motor, and cognitive assessments;
- Multimodal data integration and fusion;
- Explainable AI for clinical decision-making;
- ML for remote monitoring and telemedicine;
- Predictive models for personalized treatment;
- Federated learning and privacy-preserving ML;
- Big data in healthcare and e-Health;
- Generalizability, interpretability, and visualization in healthcare.

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About the Journal

Message from the Editor-in-Chief

Algorithms are the very core of Computer Science. The whole area has been considered from quite different perspectives, having led to the development of many sub-communities: Complexity theory (limitations), approximation or parameterized algorithms (types of problems), geometric algorithms (subject area), metaheuristics, algorithm engineering, medical imaging (applications), indicates the range of perspectives. Our journal welcomes submissions written from any of these perspectives, so that it may become a forum for exchange of ideas between the corresponding scientific subcommunities.

Editor-in-Chief

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