Special Issue

AI-Driven Insights from Biomedical Data for Advanced Disease Diagnosis and Prognosis

Message from the Guest Editor

The rapid development of artificial intelligence (AI) in conjunction with the exponential growth of biomedical data has shaped a new era in healthcare, allowing valuable insights from complex biological data to be obtained in order to enhance disease diagnosis, prognosis, and treatment. However, significant challenges still need to be addressed. Namely, the integration of multidisciplinary teams, the development of robust AI models that can be generalized across populations, the incorporation of explainable AI techniques, and a thorough clinical validation are essential to ensuring the reliability and, thus, the adoption of AI-driven healthcare solutions. This Special Issue welcomes high-quality original research papers on the following areas:

- Medical diagnosis and prognosis;
- Medical deep learning;
- Pervasive AI in healthcare;
- Large language models for interpretable medical decision-making;
- Medical image analysis;
- Clinical decision support;
- Explainable AI for healthcare;
- Translational medicine;
- Clinical validity of AI systems.

I look forward to receiving your insightful contributions.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 21.5 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).