

## Special Issue

# Machine Learning and Artificial Intelligence for Biostatistics

### Message from the Guest Editors

Recent advances in machine learning (ML) and artificial intelligence (AI) have opened new frontiers in the analysis of biomedical data. This Special Issue of *Bioengineering* will showcase how biostatistical thinking and AI methods can be integrated to address complex challenges in biomedical engineering. Specifically, we focus on computational tools and frameworks that enhance the analysis of medical imaging, biosignals (e.g., ECG, EEG), and high-throughput biological data (e.g., genomics, transcriptomics), where statistical rigor remains essential for clinical translation. We invite contributions that propose novel AI/ML approaches grounded in biostatistics for the processing, modeling, and interpretation of biomedical data. Applications may include—but are not limited to—automated image-based diagnosis, real-time physiological signal monitoring, precision medicine from omics data, and interpretable deep learning models for clinical decision support. This Special Issue aims to bridge AI innovation with biomedical data science, highlighting methods that are not only algorithmically powerful but also statistically sound and clinically meaningful.

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### Guest Editors

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### Editor-in-Chief

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