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.

Guest Editors

Dr. Muktar Beshir Ahmed
College of Medicine and Public Health, Flinders University, Adelaide, Australia

Dr. Mehdi Neshat
Faculty of Engineering and Information Technology, University of Technology Sydney, Sydney, Australia

Deadline for manuscript submissions

31 March 2026

About the Journal

Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Bioengineering* (ISSN 2306-5354). *Bioengineering* is published in open access format – research articles, reviews and other contents are released on the Internet immediately after acceptance. The scientific community and the general public have unlimited and free access to the content as soon as it is published. *Bioengineering* provides an advanced forum for the science and technology of bioengineering. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Anthony Guiseppi-Elie
Department of Biomedical Engineering, Texas A&M University, College Station, TX 77843, USA

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Biomedical) Rapid Publication: manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.2 days after submission; acceptance to publication is undertaken in 3.3 days (median values for papers published in this journal in the first half of 2025).

Recognition of Reviewers:

reviewers who provide timely, thorough peer-review reports receive vouchers entitling them to a discount on the APC of their next publication in any MDPI journal, in appreciation of the work done.