Special Issue

Advanced Studies in Machine Learning for Computational Biology

Message from the Guest Editors

The growth of high-throughput technologies has generated vast biological datasets, positioning computational biology as essential in deciphering complex biological systems. However, challenges remain in analyzing multidimensional data, modeling interactions, and predicting outcomes. Machine learning (ML) has emerged as a transformative tool, enabling pattern recognition, predictive modeling, and datadriven discovery across various scales. This Special Issue will showcase ML methodologies in computational biology, bridging the gap between algorithmic innovation and biological applications. Topics of interest include deep learning for omics analysis, interpretable ML for biomarker identification, and scalable algorithms for single-cell omics integration. Submissions may also address ethical considerations and reproducibility frameworks. By featuring interdisciplinary contributions, this Special Issue will provide a platform for reproducible, scalable ML strategies, fostering innovation and collaboration in computational biology, with a focus on clinical and biotechnological applications.

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Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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