

Special Issue

Mathematical Foundations and Advances in Machine Learning and Data Mining

Message from the Guest Editor

Machine learning and data mining are critical areas in modern computational science, offering powerful tools for extracting knowledge from complex datasets and transforming domains including healthcare, finance, and social sciences. This Special Issue "**Mathematical Foundations and Advances in Machine Learning and Data Mining**" aims to bring together theoretical advances and applications of mathematical foundations in machine learning and data mining, fostering a comprehensive understanding of how mathematical principles drive progress in this dynamic field. Original research articles and reviews are welcome. Research areas may include (but are not limited to): **mathematical foundations of machine learning; algorithm development and optimization; statistical methods in data mining; big data analytics; advances in explainable AI; applications of machine learning in various domains (e.g., healthcare, finance, and engineering); neural networks and deep learning; pattern recognition; data preprocessing and feature selection; clustering and classification techniques; and predictive modeling and analytics.**

Guest Editor

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About the Journal

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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