



Mathematical Foundations and Advances in Machine Learning and Data Mining

Guest Editor:

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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.**





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Message from the Editor-in-Chief

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