

Special Issue

New Advances in Statistical Machine Learning

Message from the Guest Editors

Statistical advances have greatly improved machine learning, driving progress in Bayesian neural networks, variational inference, regularization, and ensemble methods like bagging and boosting. Optimization algorithms, deep learning, and transfer learning have also advanced significantly. Deep learning, revolutionizing fields like computer vision and natural language processing, was enabled by innovations such as ReLUs and normalized residuals, replacing earlier activation functions. Transfer learning, leveraging pre-trained models for smaller datasets, has become a key tool, while reinforcement learning has propelled advancements in game playing and robotics.

The purpose of this Special Issue is to collect articles that demonstrate new advances in statistical machine learning in both methodology development and applications. We invite specialists in all areas of statistical machine learning to contribute their research for publication in this Special Issue. Methodological papers, computational methods, and applications of statistical machine learning techniques in various domains are all welcome.

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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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