

Special Section

Advances in Machine Learning for Computational Economics

Eds.: Qin Xin
Vedika Gupta
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Aims and Scope

The integration of Machine Learning (ML) into computational economics is reshaping the way economists model, analyze, and forecast complex systems in today's data-driven knowledge economy. This special section aims to highlight trendy and impactful research at the intersection of ML and economics, focusing on how advanced algorithms can enhance economic modeling, market analysis, financial econometrics, and decision-making.

ML techniques offer powerful tools for analyzing large datasets, capturing nonlinear relationships, and making accurate predictions. Their application can significantly improve traditional economic models, leading to more precise forecasts and better-informed policy decisions.

As economies evolve with increasing reliance on information and technology, ML plays a crucial role in understanding and navigating these transformations. However, the adoption of ML also brings challenges related to data privacy, algorithmic bias, and model interpretability—raising important ethical considerations in economic practice.

This special section invites original contributions that apply ML methods to economic problems, assess their effectiveness, and address associated limitations.

Important Dates

1 December 2025

Paper Submission Deadline

1 February 2026

Author notification

15 April 2026

Revision due

1 July 2026

Final Decision

Guest Editors

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Topics of Interest

We welcome submissions that explore the implications of ML-driven insights for economic theory, policy, and practice, including (but not limited to):

- Machine learning models for economic forecasting
- Predictive analytics for market trends and economic indicators
- Time series analysis and forecasting using neural networks
- Reinforcement learning for optimal economic decision-making
- Applications of machine learning in game theory and strategic interactions
- Decision support systems in finance and economics
- Sentiment analysis and opinion mining in economic contexts
- Consumer behavior modeling using machine learning
- Market segmentation and targeting with clustering algorithms
- Machine learning techniques for risk management and financial stability
- Asset pricing models and portfolio optimization
- Fraud detection and anomaly detection in financial transactions
- Evaluating the impact of economic policies using machine learning
- Data-driven approaches to public policy and regulation
- Simulation and optimization of economic policies
- Handling and processing large-scale economic data
- Applications of big data analytics in economic research
- Data mining techniques for economic insights
- Machine learning in the analysis of innovation dynamics
- Knowledge diffusion and technological change
- Economic impact of digital transformation and AI
- Social network analysis and economic outcomes
- Agent-based modeling and simulation of economic systems
- Machine learning applications in labor economics and human capital