Special Issue

Symmetry/Asymmetry in Machine Learning and Data Science: Methods and Applications in Text Mining

Message from the Guest Editors

Symmetry and asymmetry are foundational principles in understanding and modeling the structure and behavior of complex systems. In machine learning and data science—particularly in the domain of text mining—these concepts are increasingly being recognized for their profound implications in representation learning, pattern recognition, and model robustness. Symmetrical structures underpin much of modern machine learning, from balanced neural architectures and data augmentation strategies to metric learning and clustering. Conversely, asymmetry often reflects the real-world heterogeneity found in linguistic data, hierarchical relationships, and task-specific imbalances. For example, text data commonly exhibit syntactic symmetry (e.g., parallel structures) and semantic asymmetry (e.g., cause–effect pairs), both of which challenge traditional modeling paradigms. This Special Issue aims to explore the theoretical foundations, algorithmic innovations, and practical implications of symmetry and asymmetry in machine learning and data science, with a focus on text mining. We invite high-quality contributions that examine these dimensions...

Guest Editors

Dr. Behnam Malmir

Department of Information Systems and Analytics, Parker College of Business, Georgia Southern University, Statesboro, GA, USA

Dr. Bahrini Aram

College of Business, University of Illinois Urbana-Champaign, Champaign, IL, USA

Deadline for manuscript submissions

31 January 2026

Symmetry

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 5.3

mdpi.com/si/242593

Symmetry
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
symmetry@mdpi.com

mdpi.com/journal/symmetry

Symmetry

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 5.3

mdpi.com/journal/symmetry

About the Journal

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

Editor-in-Chief

Prof. Dr. Sergei Odintsov
1. ICREA, 08010 Barcelona, Spain
2. Institute of Space Sciences (IEEC-CSIC), C. Can Magrans s/n, 08193 Barcelona, Spain

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within SCIE (Web of Science), Scopus, CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Multidisciplinary Sciences) / CiteScore - Q1 (General Mathematics)

MDPI