

Special Issue

Next-Generation Imbalanced Learning: Trustworthiness, Scalability, and Representation: A Special Issue Dedicated to the Memory of Prof. Barbara Pes

Message from the Guest Editor

The aim of this Special Issue is to chart the path forward, gathering cutting-edge contributions that bridge the gap between theoretical novelty and industrial applicability.

We invite papers addressing the following key themes:

- **Advanced Representation and Feature Engineering:**
 - Novel strategies for dimensionality reduction and manifold learning in imbalanced spaces.
 - Feature selection and extraction techniques that are tailored for highly skewed datasets.
 - Representation learning and embeddings for minority class enhancement.
- **Trustworthy and Distributed AI:**
 - Explainability (XAI): Interpretability mechanisms for models trained on imbalanced data.
 - Federated Learning: Handling non-IID and imbalanced data in privacy-preserving, distributed environments.
- **Architectures and Methodologies:**
 - Deep Learning and Ensemble architectures for complex imbalance.
 - Hybrid data-level and algorithm-level strategies.
 - Learning from imbalanced data streams and concept drift adaptation.
 - Multi-label, multi-class, and noisy-label learning scenarios.
- **Applications:**
 - Industrial IoT monitoring.
 - Fraud and intrusion detection.
 - Radiomics and medical diagnostics.
 - Software defect prediction.
 - Social media behavior analysis.

Guest Editor

Dr. Andrea Loddo

01010
01010
01010

Information

an Open Access Journal
by MDPI

Impact Factor 4.3
CiteScore 8.2



mdpi.com/si/263472

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

[mdpi.com/journal/
information](https://mdpi.com/journal/information)



01010
01010
01010

Information

an Open Access Journal
by MDPI

Impact Factor 4.3
CiteScore 8.2



[mdpi.com/journal/
information](https://mdpi.com/journal/information)



About the Journal

Message from the Editor-in-Chief

The concept of *Information* is to disseminate scientific results achieved via experiments and theoretical results in depth. It is very important to enable researchers and practitioners to learn new technology and findings that enable development in the applied field.

Information is an online open access journal of information science and technology, data, knowledge and communication. It publishes reviews, regular research papers and short communications. We invite high quality work, and our review and publication processing is very efficient.

Editor-in-Chief

Prof. Dr. Willy Susilo

School of Computer Science and Software Engineering, University of Wollongong, Northfields Avenue, Wollongong, NSW 2522, Australia

Author Benefits

Open Access:

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

High Visibility:

indexed within Scopus, ESCI (Web of Science), Ei Compendex, dblp, and other databases.

Journal Rank:

JCR - Q2 (Computer Science, Information Systems) /
CiteScore - Q1 (Information Systems)