Special Issue

Machine Learning and the Renewable Energy Transition

Message from the Guest Editors

This Special Issue focuses on how advanced algorithms and data-driven insights can accelerate the shift toward sustainable energy systems at the junction of ML and renewable energy transition. It thereby addresses a wide scope of topics, from the optimization of renewable energy sources, predictive maintenance for energy infrastructure, and energy demand forecasting to the integration of distributed energy resources. This Special Issue is an attempt to give a comprehensive overview of current research in cutting-edge work and applications of machine learning in the renewable energy sector. Second, it tries to fill gaps in the literature through the selected innovative methodologies and case studies that give vivid depictions of the practical impact of ML on improving energy efficiency and reliability. Moreover, this Special Issue will form a kind of bridge between the artificial intelligence and sustainable energy communities, thus promoting cross-disciplinary collaboration and motivating further research.

Guest Editors

Dr. Esposito Luca

Dr. Annamaria Nese

Dr. Anna Parziale

Dr. Xihui Chen

Deadline for manuscript submissions

31 March 2026



Big Data and Cognitive Computing

an Open Access Journal by MDPI

Impact Factor 4.4 CiteScore 9.8



mdpi.com/si/216574

Big Data and Cognitive Computing Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 bdcc@mdpi.com

mdpi.com/journal/ BDCC





Big Data and Cognitive Computing

an Open Access Journal by MDPI

Impact Factor 4.4 CiteScore 9.8



About the Journal

Message from the Editor-in-Chief

Big Data and Cognitive Computing (BDCC) is a scholarly online journal which provides a platform for big data theories with emerging technologies on smart clouds and exploring supercomputers with new cognitive applications. It is a peer-reviewed, open access journal that publishes high quality original articles, reviews and short communications. The primary aims of this journal are to encourage contributions of high quality scientific papers relating to data management and analytics in industry, such as manufacturing, healthcare, education, media and business, data mining, and cognitive science. There is no restriction on the maximum length of the papers.

Editor-in-Chief

Prof. Dr. Min Chen

School of Computer Science and Engineering, South China University of Technology, Guangzhou 510641, China

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), dblp, Inspec, Ei Compendex, and other databases.

Journal Rank:

JCR - Q1 (Computer Science, Theory and Methods) / CiteScore - Q1 (Computer Science Applications)

