

Special Issue

Advanced Software and Machine Learning Techniques for System Architectures and Big Data

Message from the Guest Editors

The rapid growth of data and increasing system complexity challenge traditional architectures, while advances in software engineering and machine learning (ML) enable intelligent, adaptive systems. AI-driven design, monitoring, and optimization are critical for big data and distributed environments, shaping next-gen infrastructures like cloud/edge computing and autonomous platforms. This Special Issue explores the fusion of advanced software methods and ML in system architectures, emphasizing innovations in automated resource management, performance optimization, and scalable deployment. We seek theoretically novel and practically applicable contributions, particularly those bridging intelligent algorithms with real-world systems (e.g., cloud, edge, hybrid). Topics include ML-aided architecture design, intelligent data processing, adaptive distributed systems, AI/ML integration in cloud/edge, security in intelligent architectures, real-world applications, hybrid forecasting/anomaly detection models, time-series analysis, and ML-based anomaly detection in logs/network metrics. Original research and reviews are welcome.

Guest Editors

Dr. Yan Qiao

School of Computer Science and Information Engineering, Hefei University of Technology, Hefei, China.

Dr. Francesco Cauteruccio

Department of Information Engineering, Electrical Engineering and Applied Mathematics (DIEM), University of Salerno, Fisciano, Italy

Deadline for manuscript submissions

1 July 2026



Big Data and Cognitive Computing

an Open Access Journal
by MDPI

Impact Factor 4.4
CiteScore 9.8



mdpi.com/si/246177

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



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



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)