Special Issue

Data Mining Approaches for Smart Grids

Message from the Guest Editor

Data mining empowers Smart Grids to extract actionable insights from the vast volumes of data generated by grid sensors, meters, and devices. These insights enable grid operators to make informed decisions rapidly, optimize energy distribution, improve system efficiency, and strengthen overall grid sustainability. This Special Issue seeks to compile state-of-the-art research, methodologies, and innovative applications of data mining in the context of Smart Grids. We welcome submissions on a wide range of topics related to data mining and its contributions to the advancement of Smart Grid technologies, including but not limited to:

- Advanced data analytics for grid optimization.
- Energy demand and supply forecasting.
- Anomaly detection and fault diagnosis in Smart Grids.
- Cybersecurity measures employing data mining techniques.
- Customer engagement and demand response programs.
- Integration of renewable energy sources with data-driven solutions.
- Optimization and control strategies utilizing data mining.
- Grid asset management and predictive maintenance.
- Data-driven approaches for grid resilience.
- Data quality enhancement for smart grid datasets.

Guest Editor

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Deadline for manuscript submissions

20 August 2025

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/187105

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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