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Data Mining Approaches for Smart Grids

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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:

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



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Special Issue



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Message from the Editor-in-Chief

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