Implementation of AI Models for Energy Demand Forecasting

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Abstract

This study implements an AI-based approach for energy demand forecasting using models like AR, MA, ARMA, ARIMA, and LSTM. By incorporating factors such as historical load, weather conditions, and holidays, the models aim to improve prediction accuracy. Comparative analysis shows that LSTM performs best for capturing complex patterns and long-term dependencies. The results highlight the potential of AI in enhancing energy management and planning.

Keywords

AI & ML, Energy Forecasting, LSTM, Neural Networks.