

Forecasting Electricity Prices: A Data-Driven Approach for Enhanced Decision-making

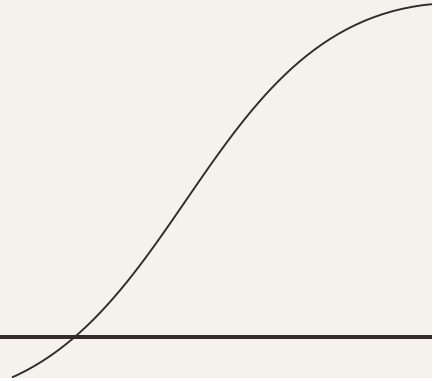
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WELCOME

Introduction



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Objective

Understand the **importance of accurate electricity price forecasting** and its impact on decision-making in the energy sector. Explore how a **data-driven approach** can enhance forecasting accuracy and provide valuable insights for businesses.

Challenges in Electricity Price Forecasting

Discuss the **complexity of electricity price dynamics** and the challenges faced in accurately predicting price fluctuations. Highlight the **impact of market factors**, weather conditions, and regulatory changes on electricity prices.



Data Collection and Analysis

Outline the **data collection process** for electricity price forecasting, including sources such as historical price data, weather data, and market indicators. Explain the importance of **data preprocessing** and **feature engineering** for accurate analysis.



Forecasting Models



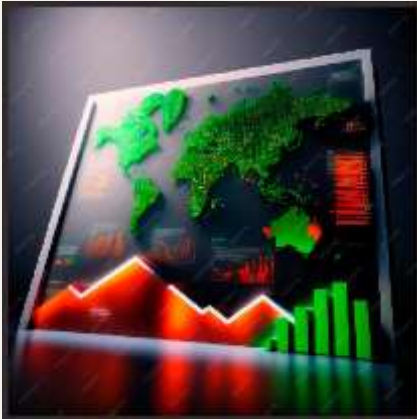
Explore different **forecasting models** commonly used in electricity price forecasting, such as **time series analysis**, **machine learning**, and **ensemble methods**. Discuss the pros and cons of each approach.

Evaluation Metrics



Introduce **evaluation metrics** used to assess the performance of electricity price forecasting models, including **mean absolute error (MAE)**, **root mean square error (RMSE)**, and **mean absolute percentage error (MAPE)**.

Case Studies



Present **real-world case studies** showcasing successful applications of data-driven electricity price forecasting. Highlight the benefits achieved, such as **cost savings, improved decision-making,** and **optimized resource allocation.**

Conclusion

Summarize the key points discussed, emphasizing the importance of **data-driven approaches** for accurate electricity price forecasting. Highlight the potential benefits of enhanced decision-making and improved resource management in the energy sector.



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Thanks!