

Department of Computing

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Executive Summary

In the dynamic landscape of trading, the abundance of raw data has become both a boon and a challenge for aspiring traders, whether individuals or brokers. The conventional presentation of historical data often falls short of providing actionable insights, necessitating a shift towards comprehensive data processing and extraction techniques. This report delves into the realm of data mining for trading, with a specific focus on the forex market, incorporating news and fundamental information, as well as generating novel insights through feature extraction from technical data.

Data Collection: Our primary data source for news and fundamental information is myfxbook, utilizing web scraping techniques to extract relevant data. This approach ensures a comprehensive collection of real-time, market-moving events that impact the forex market, offering a holistic view for traders.

Data Analysis: To make informed decisions, we employ machine learning algorithms, particularly focusing on time series analysis. By leveraging advanced models, we aim to discern patterns, trends, and potential market movements. This analytical framework empowers traders with predictive capabilities, enhancing their ability to act proactively in the face of market uncertainties.

Data Presentation (Visualization): The extracted insights are presented through a user-friendly interface, utilizing Python's Matplotlib and Plotly Express (px). These visualization tools are instrumental in transforming complex data into clear, actionable information, facilitating a more intuitive understanding of market dynamics.

Competitor Analysis: In addition to individual trading strategies, our report explores the competitive landscape by mining data from various providers. Through classification algorithms, we aim to categorize competitors into specific industries within the trading domain. This intelligence can aid traders in benchmarking their strategies against industry trends and competitor performance.

Conclusion:

By synthesizing news, fundamental, and technical data through advanced data mining techniques, this report advocates for a more nuanced and informed approach to trading. The integration of machine learning models, coupled with robust visualization tools, not only empowers traders with predictive capabilities but also facilitates a comprehensive understanding of the competitive landscape. As the forex market continues to evolve, leveraging data mining becomes imperative for staying ahead in the dynamic world of trading.

1. Data collection in Forex Trading
   1. Value of Data

Fundamental Data: Economic indicators, central bank announcements, and geopolitical events can significantly impact currency movements

Technical Data: Price and volume data, as well as technical indicators, provide valuable insights for trading strategies

* 1. Data Sources:

Source: Myfx provides access to forex data that can be used for analysis and strategy development.

Data Extraction: Use appropriate tools and libraries to extract and process the data, such as TA-Lib for generating technical indicators

* 1. Data Storage:

Initial Storage: Utilize CSV files for initial data storage and analysis.

Transition to RDBMS: Consider transitioning to a robust solution like PostgreSQL to ensure data integrity and scalability

References

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