

PREDICTING FOREX RATES WITH MACHINE LEARNING: EXPLORING THE IMPACT OF POLITICAL EVENTS

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1 Introduction

- Currency is crucial for an economy as it facilitates transactions and wealth transfer.
- Investing in currency can have benefits such as profit, but also risks due to political and economic instability.
- The forex market is the largest financial market globally and is used for trade, investment, speculation, and hedging.
- Traditional forecasting methods for forex rates include time series, fundamental, and technical analysis, but machine learning algorithms may be more effective due to the complexity of the market since they can process large amounts of data and continuously learn and adapt to changing conditions in the currency market.

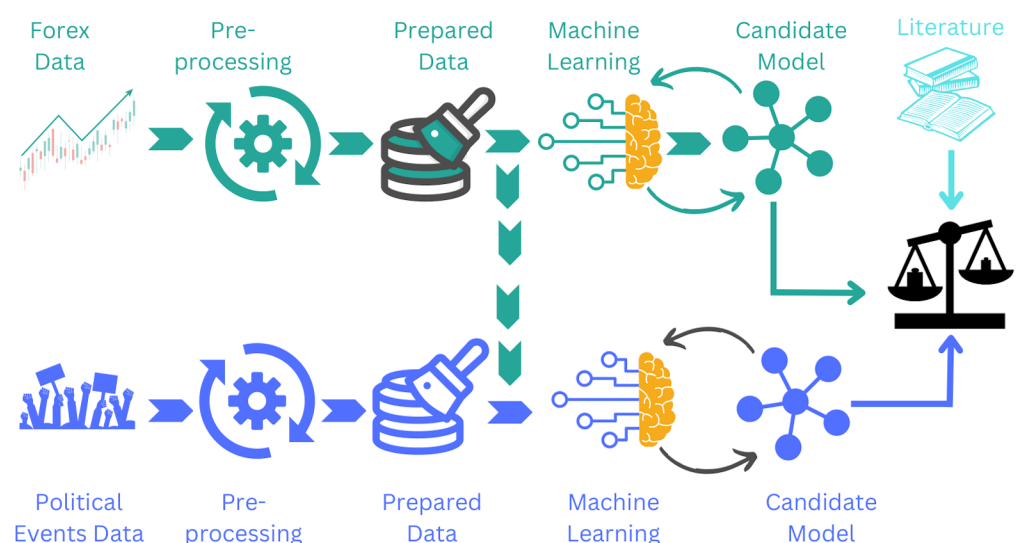
2 Research Questions

1. How do different machine learning algorithms perform in predicting forex rates?
2. How do political events impact the performance of machine learning models for predicting forex rates?
3. How do the findings from incorporating political events data into machine learning models for forex rate prediction compare to other related studies in the literature?

3 Literature Review

- Different machine learning techniques have been applied to predict forex rates.
- LSTM and GRU neural networks perform better than traditional RNNs in forecasting forex.
- Forex rates are nonstationary and difficult to model with only time series data.
- Twitter data and news articles have been incorporated to improve accuracy.
- Economic factors such as oil prices have also been considered for predictions.
- This research incorporates political events data to improve accuracy.

4 Methodology



5 Early Indications

- Deep learning algorithms outperform conventional machine learning algorithms in predicting forex rates.
- The incorporation of political events data into machine learning models for forex rate prediction can yield improvements in model accuracy.
- Machine learning accuracy for forex rate prediction is influenced by data quality, model parameters, and time horizon.
- Further Research on using natural language processing and sentiment analysis to quantify political events can improve machine learning models for forex rate prediction.

6 Next Steps

- Explore the potential for developing ensemble models that combine the predictions of multiple machine learning algorithms to improve the accuracy and reliability of forex rate predictions.
- Incorporate relevant economic indicators and crude oil prices as additional input features for the machine learning models and assess their impact on prediction accuracy.

Technologies



References

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