1. ***Saiktishna, C., Sumanth, N. S. V., Rao, M. M. S., J, T., & 2022 6th International***

***Conference on Intelligent Computing and Control Systems (ICICCS) Madurai, India 2022 May 25 - 2022 May 27. (2022). 2022 6th international conference on intelligent computing and control systems (iciccs). In Historical analysis and time series forecasting of stock market***

***using fb prophet (pp. 1846–1851). essay, IEEE.***

***https://doi.org/10.1109/ICICCS53718.2022.9788231***

*Historical Analysis and Time Series Forecasting of Stock Market using FB Prophet - Summary:*

Their project as well as ours is aimed at making a prediction of a company’s share value in the future using time series forecasting techniques. Their dataset as well as ours is from YFinance, but our data is from Microsoft (Jan 2012 to August 2022). In our project we tested several algorithms (Random Forest, Rolling Mean, and ALMAIndicator). However, in their research they used only one algorithm (Facebook Prophet). FB Prophet is a notable algorithm because it can handle messy data, null values, and includes a feature to exclude holidays. Their project uses Plotly just like ours and also uses historical data from Yfinance to predict the data at a future time.

1. ***Kulshreshtha, S., & A, V. (2020). An arima- lstm hybrid model for stock market prediction using live data. Journal of Engineering Science & Technology Review, 13(4).***

*An ARIMA- LSTM Hybrid Model for Stock Market Prediction Using Live Data - Summary:*

Their project aims to predict future stock prices by using either ARIMA-LSTM hybrid algorithm or FB Prophet and compares the two algorithms for performance. ARIMA-LSTM hybrid combines neural networks with time forecasting series for capturing the linear and non-linear portion of the time series. ARIMA stands for Autoregressive Integrated Moving Average, three models together used to help capture the inherent trend in the market data. Whereas we use only the moving average (rolling mean) for one of our algorithms tested. Compared to ARIMA it is less efficient at predicting the conditional mean. Just like our project, their research also indicates that linear regression models are not suitable for predicting stock future data.

1. ***Li, A. W., & Bastos, G. S. (2020). Stock market forecasting using deep learning and technical analysis: a systematic review. Ieee Access, 8.***

[***https://doi.org/10.1109/ACCESS.2020.3030226***](https://doi.org/10.1109/ACCESS.2020.3030226)

*Stock Market Forecasting Using Deep Learning and Technical Analysis: A Systematic Review - Summary:*

This research focuses on Deep Learning techniques (DNN, Deep Neural Network and CNN, Convolutional Neural Network, LSTM, hybrid algorithms and others) to forecast prices in the stock market, highlighting the metrics used to validate the model and trading strategies adopted. Our project uses random forest, rolling mean, and ALMAIndicator instead. This research also did analysis on trading strategies and risk management based on previous studies. This research basically summarized the most widely used algorithms and datasets used based on previous studies by other colleagues in this space.

1. ***B. B. P. Maurya, A. Ray, A. Upadhyay, B. Gour and A. U. Khan, "Recursive Stock Price Prediction With Machine Learning And Web Scrapping For Specified Time Period," 2019 Sixteenth International Conference on Wireless and Optical Communication Networks (WOCN), 2019, pp. 1-3, doi: 10.1109/WOCN45266.2019.8995080.***

*Recursive Stock Price Prediction With Machine Learning And Web Scrapping For Specified Time Period - Summary:*

This research implements Random Forest Regression and web scrapping for historical stock data from the National Stock Exchange using BeautifulSoup. We also tested random forest in our project and gathered historical stock data from YFinance. This research basically summarizes all of the methodology we used in our research project. This paper was used as reference material for the libraries/methodologies we used in our project such as Sci-Kit Learn. To train the model moving average just like our project.

1. ***M. Nabipour, P. Nayyeri, H. Jabani, S. S. and A. Mosavi, "Predicting Stock Market Trends Using Machine Learning and Deep Learning Algorithms Via Continuous and Binary Data; a Comparative Analysis," in IEEE Access, vol. 8, pp. 150199-150212, 2020, doi:10.1109/ACCESS.2020.3015966.***

*Predicting Stock Market Trends Using Machine Learning and Deep Learning Algorithms Via Continuous and Binary Data; a Comparative Analysis - Summary:*

This study compares nine machine learning models (Decision Tree, Random Forest, Adaptive Boosting (Adaboost), eXtreme Gradient Boosting (XGBoost), Support Vector Classifier (SVC), Naïve Bayes, K-Nearest Neighbors (KNN), Logistic Regression and Artificial Neural Network (ANN)) and two powerful deep learning methods (Recurrent Neural Network (RNN) and Long short-term memory (LSTM). Our study compares three models as mentioned before. The results show RNN and LSTM outperform all the other aforementioned models. The inputs in their research is similar to ours as they employ binary and continuous data to investigate the effect of preprocessing. However, we used binary data by assigning -1 and 1 to upward and downward trends in the stock prices to help us calculate moving averages. They differ from our research in the train/test ratio used. We used a 75/25 ratio of train to test whereas they used a 70/30 ratio. Furthermore, another difference between their research and ours is that they utilized four stock market groups, namely diversified financials, petroleum, non-metallic minerals and basic metals, from the Tehran stock exchange.

1. ***Z. H. Kilimci and R. Duvar, "An Efficient Word Embedding and Deep Learning Based Model to Forecast the Direction of Stock Exchange Market Using Twitter and Financial News Sites: A Case of Istanbul Stock Exchange (BIST 100)," in IEEE Access, vol. 8, pp. 188186-188198, 2020, doi: 10.1109/ACCESS.2020.3029860.***

*An Efficient Word Embedding and Deep Learning Based Model to Forecast the Direction of Stock Exchange Market Using Twitter and Financial News Sites: A Case of Istanbul Stock Exchange (BIST 100) - Summary:*

This research implements deep learning techniques and word embedding methods to predict the direction of Turkish stocks and market. Long short-term memory networks, recurrent neural networks, convolutional neural networks as deep learning algorithms and Word2Vec, GloVe, and FastText as word embedding models are evaluated. To evaluate the model, four sources of Turkish news were collected: news articles about stocks from Public Disclosure Platform (KAP), text-based technical analysis of each stock from Bigpara, user comments from both Twitter and Mynet Finans platforms. Experiment results demonstrate that the combination of deep learning techniques and word embedding methods have a great potential to predict the direction of the BIST 100 Index(Istanbul Stock Exchange). While our research implemented machine learning models, we didn’t have the time to implement word embedding methods in our project and is definitely an added feature to be implemented in further studies.

1. ***M. R. Vargas, B. S. L. P. de Lima and A. G. Evsukoff, "Deep learning for stock market prediction from financial news articles," 2017 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications.***

***(CIVEMSA), 2017, pp. 60-65, doi: 10.1109/CIVEMSA.2017.7995302.***

*Deep learning for stock market prediction from financial news articles - Summary:*

This research implements Convolutional Neural Networks (CNN) and Recurrent Neural Networks (RNN), which have had good results in traditional Natural Language Processing tasks. Results indicate that CNN is better than RNN at catching semantic from texts and RNN is better at catching the context information and modeling complex temporal characteristics for stock market forecasting.This research is completely different from our project as we performed model training solely on stock market historical data, while their project completely relies on news sources and articles to train their models and perform their predictions.

1. ***T. W. A. Khairi, R. M. Zaki and W. A. Mahmood, "Stock Price Prediction using Technical, Fundamental and News based Approach," 2019 2nd Scientific Conference of Computer Sciences (SCCS), 2019, pp. 177-181, doi: 10.1109/SCCS.2019.8852599.***

*Stock Price Prediction using Technical, Fundamental and News based Approach - Summary:*

This study recognizes the shortcomings of using only technical data for stock market predictions as it can be accurate for short term decisions but not so much for long term decisions. In order to help with that, this study used fundamental data as well in addition to technical data and extract useful information. They also used a news-based system unlike us to avoid any major losses by text mining to extract news. Furthermore they used the J48 algorithm with bagging in conjunction with Rweka to reduce the effect of data over-fitting.