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A Review on Algorithmic Trading

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ABSTRACT: Stock prediction is one of the most popular. Research extensively and challenge glitches that behave as such Many academics and industry experts in many fields business and economics, arithmetic and computer science. Predicting the stock market Simple tasks mostly as orders of magnitude near random walks Stock time series behaviour. millions of people around the world Globus invests in the stock market daily. good stock price Predictive models help investors, management and decision making Empower decision makers to make correct and effective decisions. In this paper. We review research on supervised machine learning models. Stock market forecast. Research discussed under supervision Apply machine learning techniques to improve accuracy. Stock market forecast. A support vector machine (SVM) is Emerged as the most commonly used technique in stock price setting Prediction with its superior performance and accuracy. Others Artificial Neural Networks (ANN), K-Nearest and other techniques. Neighbour (KNN), Naive Bayes, Random Forest, LinearRegression and support vector regression (SVR) were also displayed.Promising prediction results.

KEYWORDS: Stock Market Prediction, Supervised Machine Learning, Classification, Regression, Support Vector Machine (SVM), Artificial Neural Network (ANN).

I. INTRODUCTION

Stock prediction is one of the most comprehensive.Challenging Obstacles Researched That Attract Some With researchers in various fields including economics, Business Administration, Arithmetic, Computer Science. Share Price predictions can fall apart, so that they've been in the spotlight for yearssignificant profit. Predicting the stock market is not the easy Abandonment mainly as a result of walking almost at random Equity time series behaviour [1].

stock market forecast Due to its volatility, it is one of the most tedious tasks. Or The stock market forecasting task is very productive, Slight increase in predictions from new model About huge profits. The stock price is an important part of that. prediction. The financial sector has grown rapidly in recent yearsThe market opens up new horizons for investors and at the same time Brings new challenges to the efforts of financial analysts Make effective decisions and reduce investment risk. Since then, the stock market has become a highly dynamic and complex system.There are many interacting factors that influence thisfuture price. Researchers have worked very hard toRecognize that financial markets are predictable. When Technological advancement and availability, stock market Easier access for investors. have different models Suggested to stocks by both industry and academia Market forecasting from machine learning to data Mining, to statistical models

II. RELATED WORK

In this work, we provide systematic review of fundamental and technical analysis of stock market predictions andmainly hinges on their market economies and stock-price, with the financial market being the pivot (Nassirtoussi et al. 2014 Gocken et al. 2016). Thus, it is essential and vital to study and learn about the financial market extensively [1]

Market prediction using machine learning was observed that the application of machine learning techniques to stock market prediction is being undertaken thoroughly throughout the world. Machine Learning techniques are proving to be much more accurate and faster as compared to contemporary prediction techniques.[2]

A novel hybrid model with the strength of fractional order derivative is presented with their dynamical features of deep learning, long-short term memory (LSTM) networks, to predict the abrupt stochastic variation of the financial market. Stock market prices are dynamic, highly sensitive, nonlinear and chaotic.[3]

In a financially volatile market, as the stock market, it is important to have a very precise prediction of a future trend. Because of the financial crisis and scoring profits, it is mandatory to have a secure prediction of the values of the stocks. Predicting a non-linear signal requires advanced algorithms of machine learning.[4]

This paper, we review studies on supervised machine learning models in stock market predictions. The study discussed how supervised machine learning techniques are applied to improve accuracy of stock market predictions. Support Vector Machine (SVM) was found to be the most frequently used technique for stock price prediction due to its good performance and accuracy. [5]

In the application of machine learning techniques to stock market prediction is being undertaken thoroughly throughout the world. Machine Learning techniques are proving to be much more accurate and faster as compared to contemporary prediction techniques.[6]

In this paper, we predict the stock prices of five companies listed on India's National Stock Exchange (NSE) using two models- the Long Short-Term Memory (LSTM) model and the Generative Adversarial Network (GAN) model with LSTM as the generator and a simple dense neural network as the discriminant.[7]

III.EXISTING SYSTEM/OPEN ISSUES

This method of stock market analysis has become common in recent years, with the introduction of data mining techniques. Many studies have used the fundamental analysis for stock prediction. but in their work titled "Text Mining-Techniques Applications and Issues", they argue that quite several problems are associated with the text mining process which turns to affect the effectiveness and efficacy of decision making. Another critical issue is a multi-lingual text minor change dependency that creates problems

IV. CONCLUSION

The results revealed that ANN and SVM are usually used machine-learning algorithms for stock prediction. However, a lot of research work to improve stock prediction accuracy are ongoing using hybrid ensemble machine-learning method. It was noticed that, considering internal and more external factors could provide a more precise and accurate prediction. Besides, a deficient percentage of market prediction has been made on the African market, despite the volume of articles on stock-prediction

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