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Stock Price Prediction System

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Abstract: In this project we attempt to implement a machine learning approach to predict stock prices. Forecasting of stock prices can be done effectively using Machine Learning. The main objective is to predict the stock prices such that we can make more informed and accurate investment decisions. Our proposed stock price prediction system integrates mathematical functions, machine learning, and other external factors. This can be used for the purpose of achieving better stock prediction accuracy and issuing profitable trades.
There are two types of stocks. You may know of intraday trading by the commonly used term "day trading." Intraday traders hold securities positions from at least one day to the next and often for several days to weeks or months. In order to store past information in the sequence prediction problems, LSTMs are more powerful. This is most important in our project because the previous price of a stock is crucial in predicting its future price. While predicting the actual price of a stock, we can build a model that will predict whether the price will go up or down.

Keywords: Stock Prediction, Trading, Machine Learning, Stock Price.

I. INTRODUCTION

The fiscal request is a dynamic and compound system where people can buy and vend currencies, stocks, equities and derivations over virtual platforms supported by brokers. The stock request allows investors to enjoy shares of public companies through trading either by exchange or over the counter requests. This request has given investors the chance of gaining plutocrat and having a prosperous life through investing small original quantities of plutocrat, low threat compared to the threat of opening new business or the need of high payment career. Stock requests are affected by numerous factors causing the query and high volatility in the request. Although humans can take orders and submit them to the request, automated trading systems (ATS) that are operated by the perpetration of computer programs can perform better and with advanced instigation in submitting orders than any mortal. Still, to estimate and control the performance of ATSs, the perpetration of threat strategies and safety measures applied grounded on mortal judgements are needed. Numerous factors are incorporated and considered when developing an ATS, for case, trading strategy to be espoused, complex fine functions that reflect the state of a specific stock, machine literacy algorithms that enable the vaticination of the unborn stock value, and specific news related to the stock being analysed.

II. LITERATURE SURVEY

"What other people think" has always been an important piece of information for most of us during the decision-making process. The Internet and the Web have now (among other effects) made it possible to find out about the opinions and gests of those in the vast pool of people that are neither our particular familiarity nor well- known professional critics — that is, people we've no way heard of. And again, further and further people are making their opinions available to non natives via the Internet. The interest that individual druggies show in online opinions about products and services, and the implicit influence similar opinions apply, is commodity that's driving force for this area of interest. And there are numerous challenges involved in this process which need to be walked each over in order to attain proper issues out of them. In this check we analysed introductory methodology that generally happens in this process and measures that are to be taken to overcome the challenges being faced.

III. EXISTING SYSTEM

The exploration work done by Mariam Moukalled Wassim El- Hajj Mohamad Jaber Computer Science Department American University of Beirut. Traditionally and in order to prognosticate request movement, investors used to assay the stock prices and stock pointers in addition to the news related to these stocks. Hence, the significance of news on the stock price movement. Utmost of the former work in this assiduity concentrated on either classifying the released request news as (positive, negative, neutral) and demonstrating their effect on the stock price or concentrated on the literal price movement and prognosticated their unborn movement. In this work, we propose an automated trading

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system that integrates fine functions, machine literacy, and other external factors similar as news ' sentiments for the purpose of achieving better stock vaticination delicacy and issuing profitable trades. Particularly, we aim to determine the price or the trend of a certain stock for the coming end- of- day considering the first several trading hours of the day. To achieve this thing, we trained traditional machine learning algorithms and created/ trained multiple deep literacy models taking into consideration the significance of the applicable news. Colourful trials were conducted, the loftiest delicacy (82.91) of which was achieved using SVM for AppleInc.(AAPL) stock.

IV. PROPOSED SYSTEM

Here, we are providing the userfriendly platform for the stock value prediction. The user first needs to select the stock file for which he/she wants to predict the opening value. We are providing many algorithms in our Interface. The user next needs to select the particular algorithm using which we would predict the opening value. Here, we are providing flexibility to user to choose multiple algorithms at a time. Next, the user needs to submit the selection. Finally, the user gets the both original opening value along with the predicted opening value for the selected algorithms. Here, if we have chosen a single algorithm the predicted values are generated only for that algorithm. But, if we have chosen multiple algorithms at a time, it gives the predicted values for all those algorithms separately. We can make comparisons among them.

A) Advantages of Proposed System:

- Platform for stock value prediction using multiple algorithms at a time.
- User friendly.
- Simple to use.
- Provides accurate results.

V. ARCHITECTURE

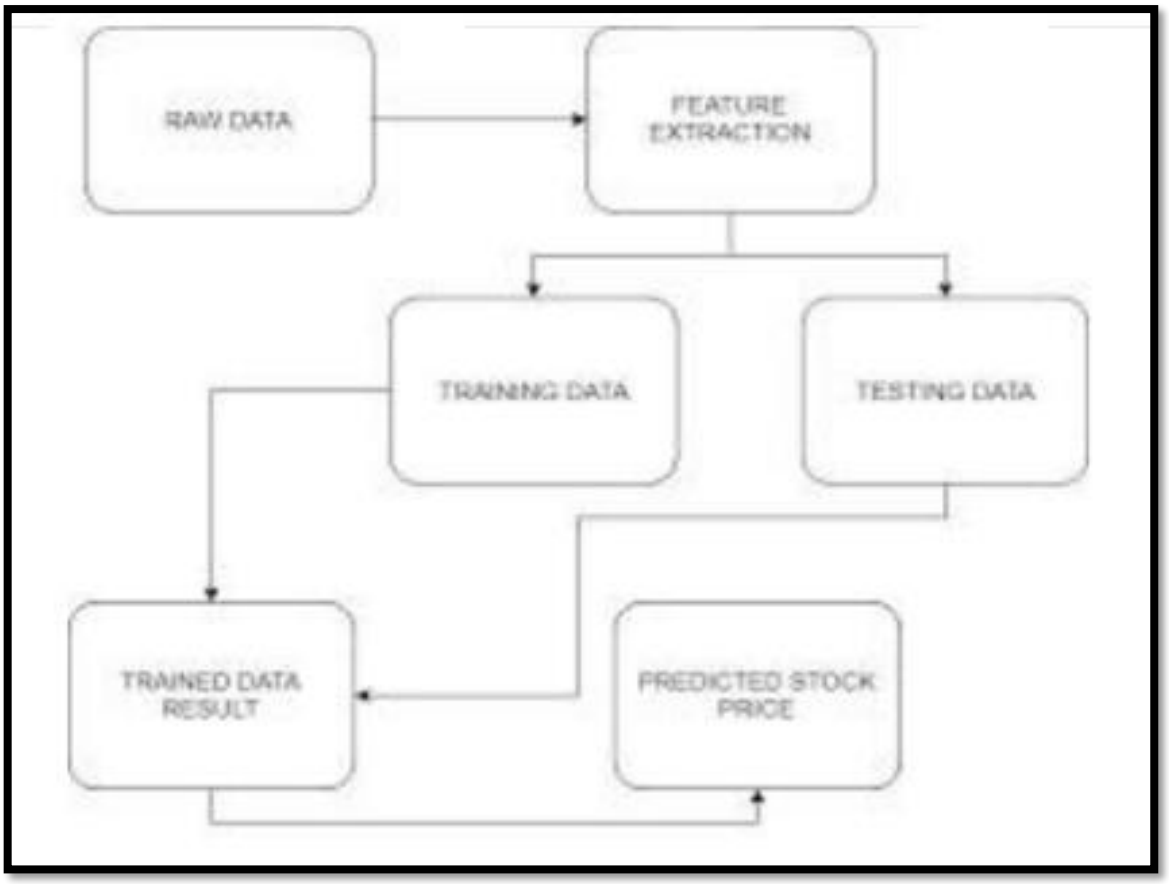

Fig. 1 Architecture of the System

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VI. OUTPUT SCREENS

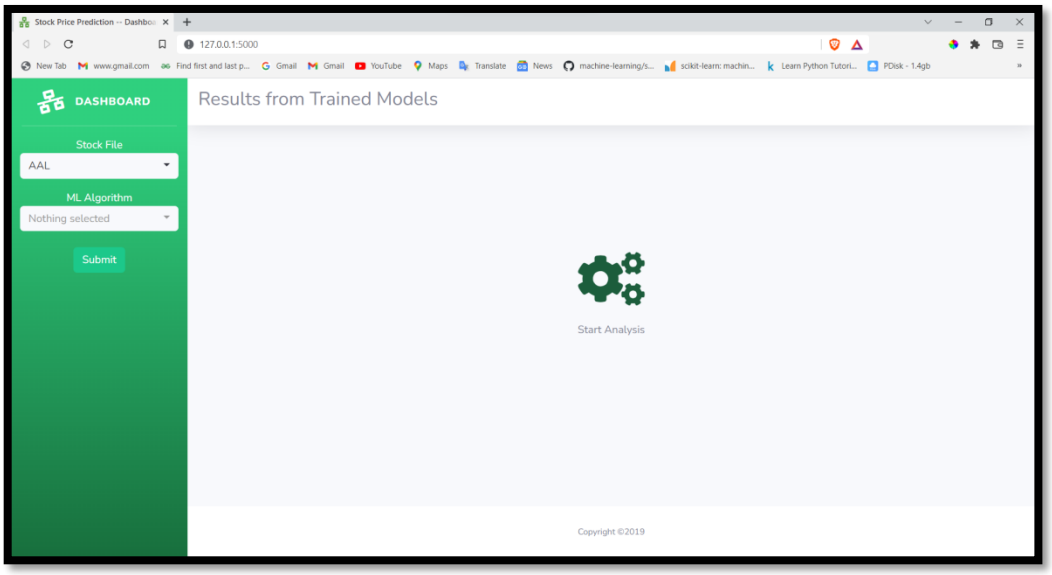

Fig. 2 Output Screen 1

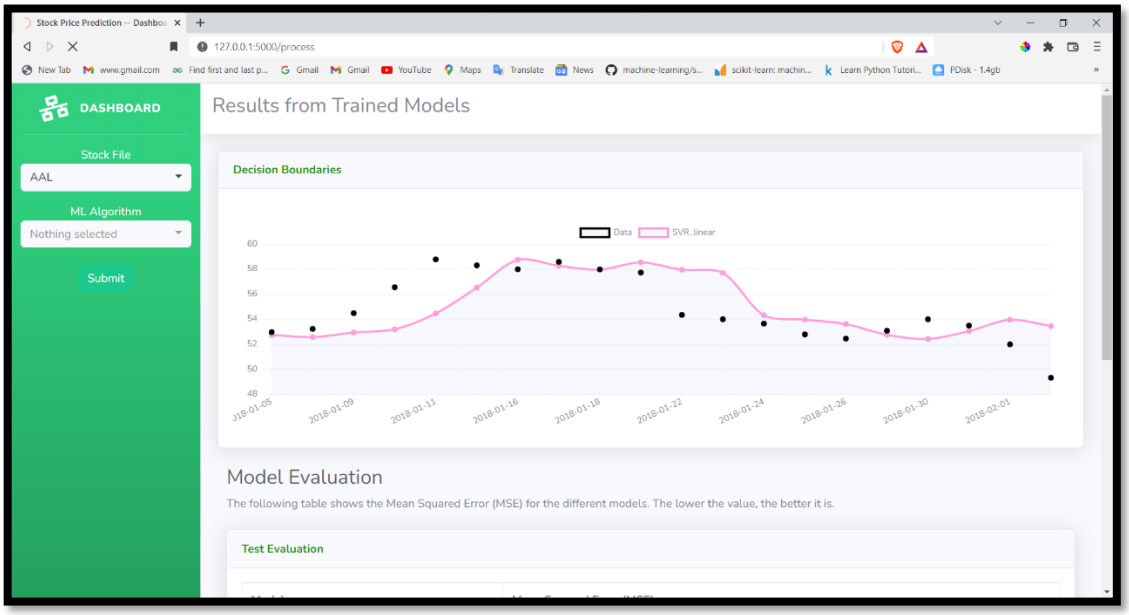

Fig. 3 Output Screen 2

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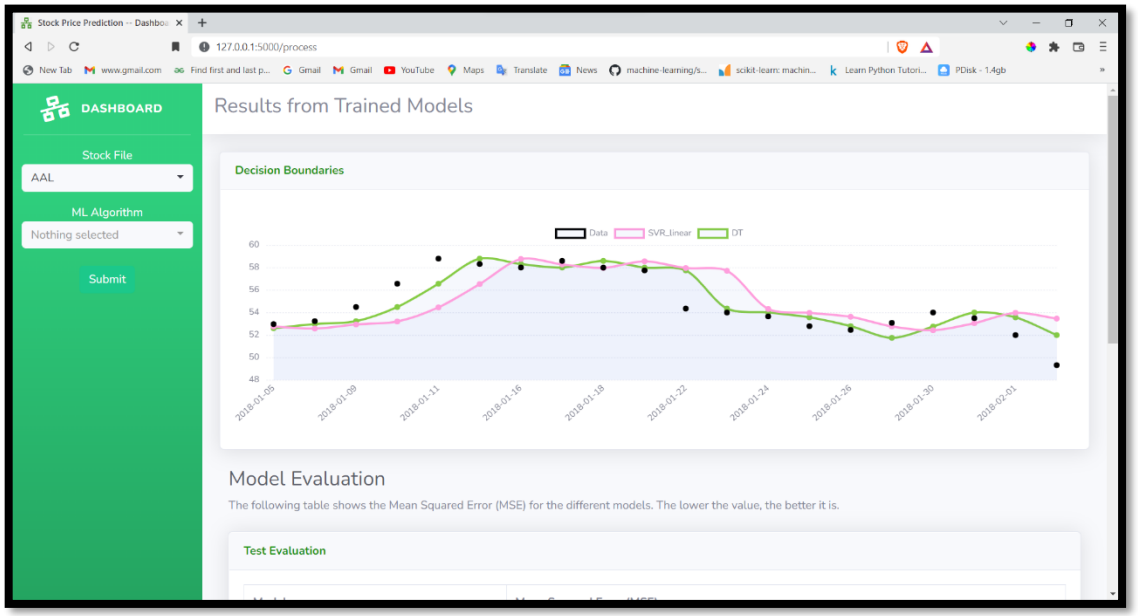

Fig. 4 Output Screen 3

VII. CONCLUSION AND FUTURE ENHANCEMENTS

This work is concerned with prediction of stock price. These techniques have been used in this proposed system which is Support vector machine, Logistic, KNN, LSTM and Linear regression have shown the improvement in accuracy of the prediction by using these two techniques. Thereby it leads to the positive result in the prediction. Using the proper algorithm is able to predict the stock price with more accuracy. Using machine learning that leads to positive prediction of the stock price. Thereby it leads to the promising result in the prediction. Therefore, this project leads to the conclusion that one can predict the stock market price with more accuracy using machine learning.

In the future the stock market prediction can be further improved by applying different algorithms to bring more accuracy. Use a real time dataset than the dataset available on a public repository that has been used in this work to predict. We want to extend this application for predicting crypto currency trading. We want to add sentiment analysis for better analysis.

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[9]. Asset Durmagambetov currently works at the mathematics, CNTFI. Asset does research in Theory of Computation and Computing in Mathematics, Natural Science, Engineering and Medicine. Their current project is 'The Riemann Hypothesis-Millennium Prize Problems' - stock market predictions.

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