TECHNICAL ANALYSIS OF STOCK MARKET

IBM MINI PROJECT

Submitted by

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CONTENTS

LIST OF FIGURES

ABSTRACT

In Stock Market Prediction, the aim is to predict the future value of the financial stocks of a company. The recent trend in stock market prediction technologies is the use of machine learning which makes predictions based on the values of current stock market indices by training on their previous values. Machine learning itself employs different models to make prediction easier and authentic. The paper focuses on the use of Regression based Machine learning to predict stock values. Factors considered are open, close, low, high and volume.

CHAPTER I

INTRODUCTION

1.1 Overview

Stock market consists of various buyers and sellers of stock. Stock market prediction means determining the future scope of market. A system is essential to be built which will work with maximum accuracy and it should consider all important factors that could influence the result. Various researches have already been done to predict stock market prices. The research is done over business and computer science domain. Sometime the stock market does well even when the economy is falling because there are various reasons for the profit or loss of a share. Predicting the performance of a stock market is tough as it takes into account various factors. The main aim is to identify the sentiments of investors. It is usually difficult as there must be rigorous analysis of national and international events. It is very important for an investor to know the current price and get a very close estimation of the future price.

CHAPTER II

LITERATURE SURVEY

2.1 Stock Market Forecasting Using Machine Learning Algorithms

The project mainly concentrated with support vector machine the advantages of using support vector machine it supports both linear and non-linear solutions using kernel trick. SVM handles outliers better than LR. And few disdvantages are the algorithm is not suitable for large data sets.

2.2 Predicting Stock Market Indicators Through Twitter "I hope it is not as bad as I fear"

The project use Decision Tree. Decision trees are able to handle both continuous and categorical variables. Decision trees are less appropriate for estimation tasks where the goal is to predict the value of a continuous attribute.

2.3 Analysis of stock market predictor variables using Linear Regression

Analysis of stock market predictor variables using Linear Regression uses Linear Regression Linear Regression is simple to implement and easier to interpret the output coefficients. On the other hand in linear regression technique outliers can have huge effects on the regression and boundaries are linear in this technique.

2.4 Stock Market Forecasting Using Machine Learning Algorithms

This survey uses another type of algorithm Decision making algorithm, requires Less data cleaning required but Decision tree often involves higher time to train the model.

2.5 Stock market predictor using prescriptive analytics

The project mainly concentrated with support vector machine the advantages of using support vector machine it supports both linear and non-linear solutions using kernel trick. SVM handles outliers better than LR. And few disdvantages are the algorithm is not suitable for large data sets.

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CHAPTER III

OBJECTIVE

Nowadays, Investing in stock are very common to most of us. regardless of age or experience everyone was qurious about investing. Many investers know how to handle the particular stock. They do fundamental analysis as well as technical analysis. Technical analysis includes analysing the stock with previous historic data. But only starring at that doesn't progress so make it easy to analysis a stock this also a method in technical analysis.

3.1 Scope:

Analysis of stocks using data mining will be useful for new investors to invest in stock market based on the various factors considered by the software.

Stock market includes daily activities like sensex calculation, exchange of shares. The exchange provides an efficient and transparent market for trading in equity, debt instruments and derivatives.

Our software will be analyzing sensex based on company's stock value. The stock values of company depend on many factors, some of them are:

1> Demand and Supply:

Demand and Supply of shares of a company is a major reason price change in stocks. When Demand Increase and Supply is less, price rises. and vice versa.

2> Corporate results: This will be regarding to the profits or progress of the company over a span of time say 3 months.

3> Popularity: Main Strength in hands of share buyer. Popularity of a company can effect on buyers. Like if any good news of a company, may result in rise of stock price. And a bad news may break dreams.

The stock value depends on other factors as well, but we are taking into consideration only these main factors.

CHAPTER IV

PROJECT PLAN

In the fields of stock market, predictions are very difficult. In older days even difficult to know about the history of the stock But time been that is very easy to know. Now we have plenty of data. To make use of all the data and to make profits using it we can use the data wisely. This also one of the way to make use of it. Many investers do technical analysis for the future stock prediction and for reference

It includes gathering data of the stock then preprocessing the data which includes removing the unwanted data clearing the null cells etc. Then partitioning the data to test and train. Creating the Linear Regression model, the model need to train for our data. After completing training our model saaahould be ready for testing. We need to suit it as the best model.

CHAPTER V

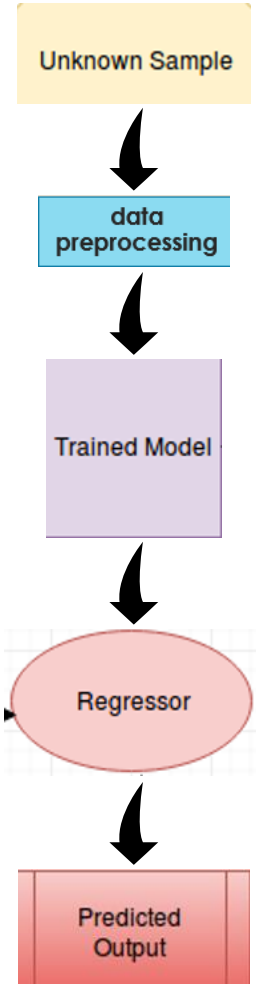
DATA MODEL

5.1 DATA SET DESCRIPTION

THE DATA SET USED FOR THE ANALYSIS OF THE STOCKS IS OF HINDUSTAN UNILEVER'S 2020,2021, WHICH CONSIST OF

- Open
- High
- Low
- Close
- Adj Close
- Volume.

But we used only Adj Close and Date from the dataset



The fig. 1:This figure explaines the data flow of our project.

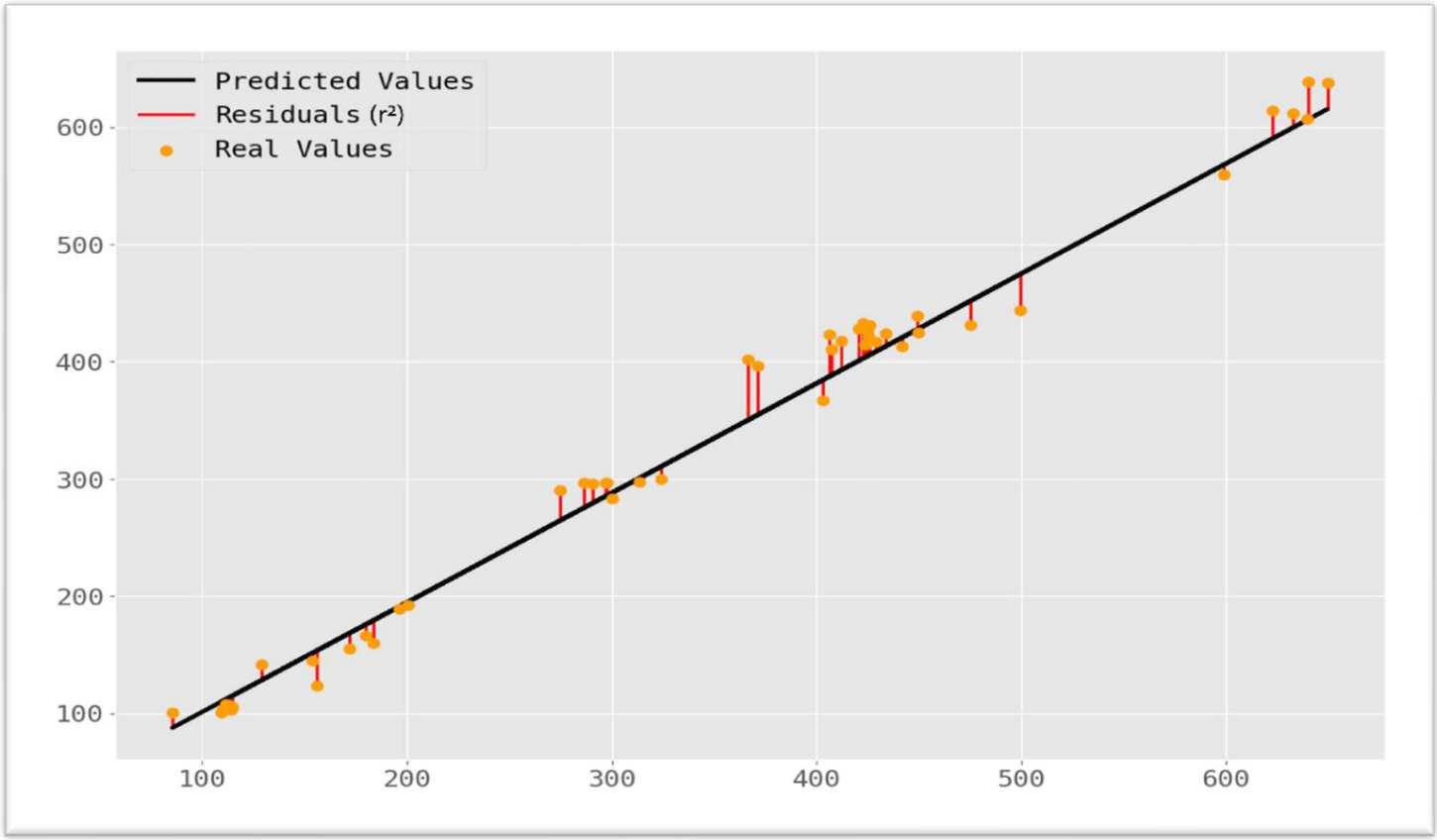
5.2 USE CASE ALGORITHM

- Linear regression models are used to show (or predict) the relationship between two variables or factors.
- The variable that the equation in your linear regression model is predicting is called the dependent variable. We call that one y. The variables that are being used to predict the dependent variable are called the independent variables. We call them X.

A linear regression line has an equation of the form

$Y = a + bX$

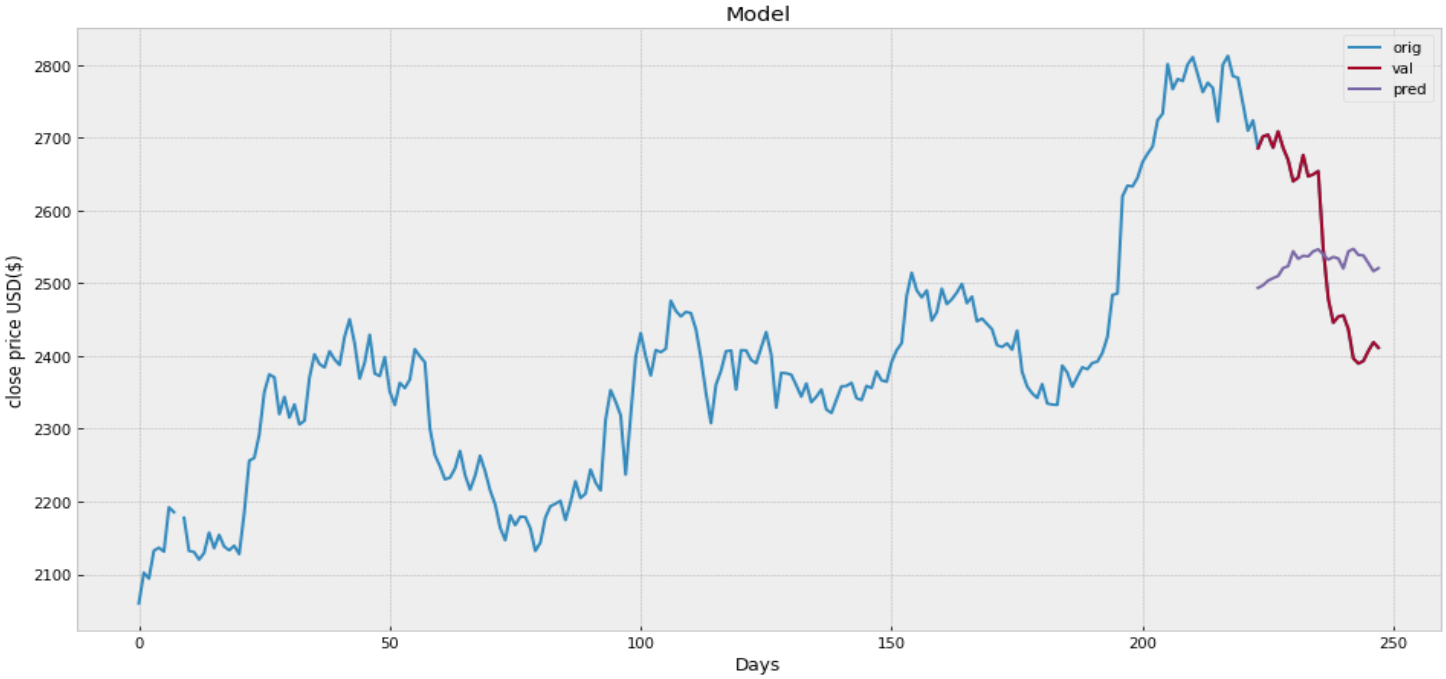
where X is the explanatory variable and Y is the dependent variable. The slope of the line is b, and a is the intercept (the value of y when x = 0).



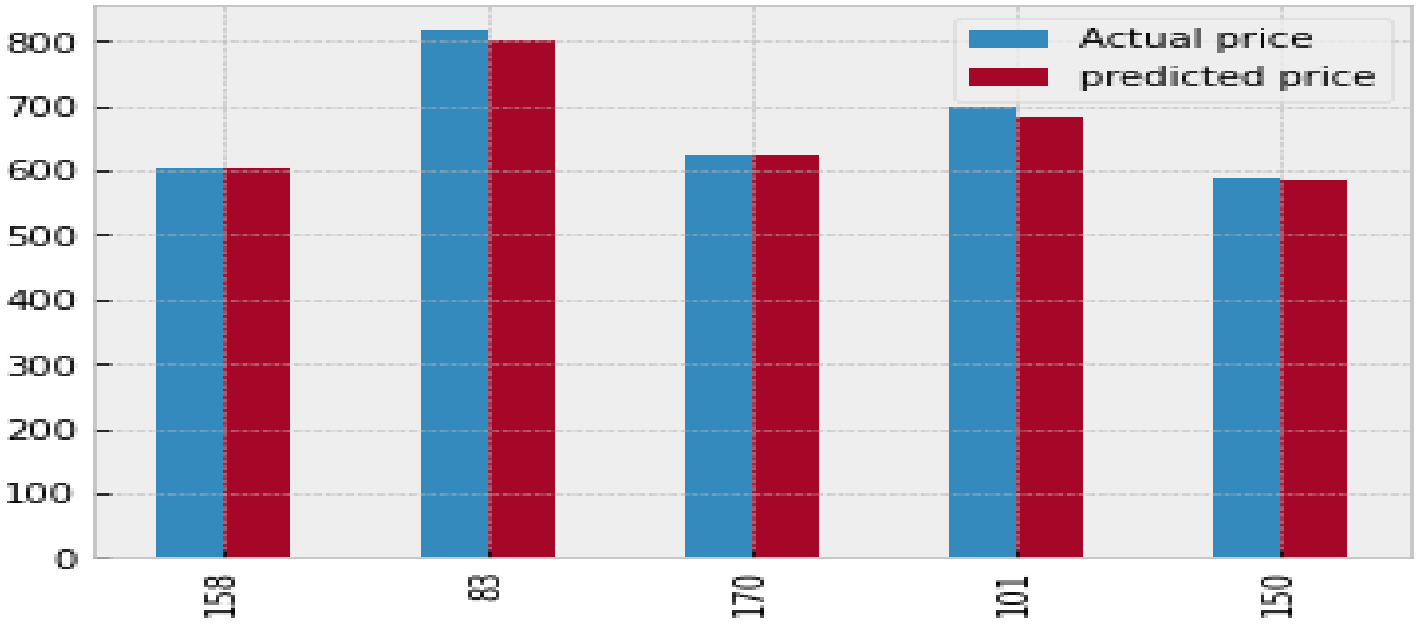
The fig. 2: Example Of Use Case Algorithm

CHAPTER VI

SIMULATION OUTPUTS



The fig. 3: Line Graph Of Simulation Outputs



The fig. 3: Bar Graph Of Simulation Output

CHAPTER VII

CONCLUSION

Only one technique have been utilized in this paper: Regression.Data set is from Yahoo finance. The technique have shown an improvement in the accuracy of predictions, thereby yielding positive results. Use of recently introduced machine learning techniques in the prediction of stocks have yielded promising results and thereby marked the use of them in profitable exchange schemes. It has led to the conclusion that it is possible to predict stock market with more accuracy and efficiency using machine learning techniques.

CHAPTER VIII

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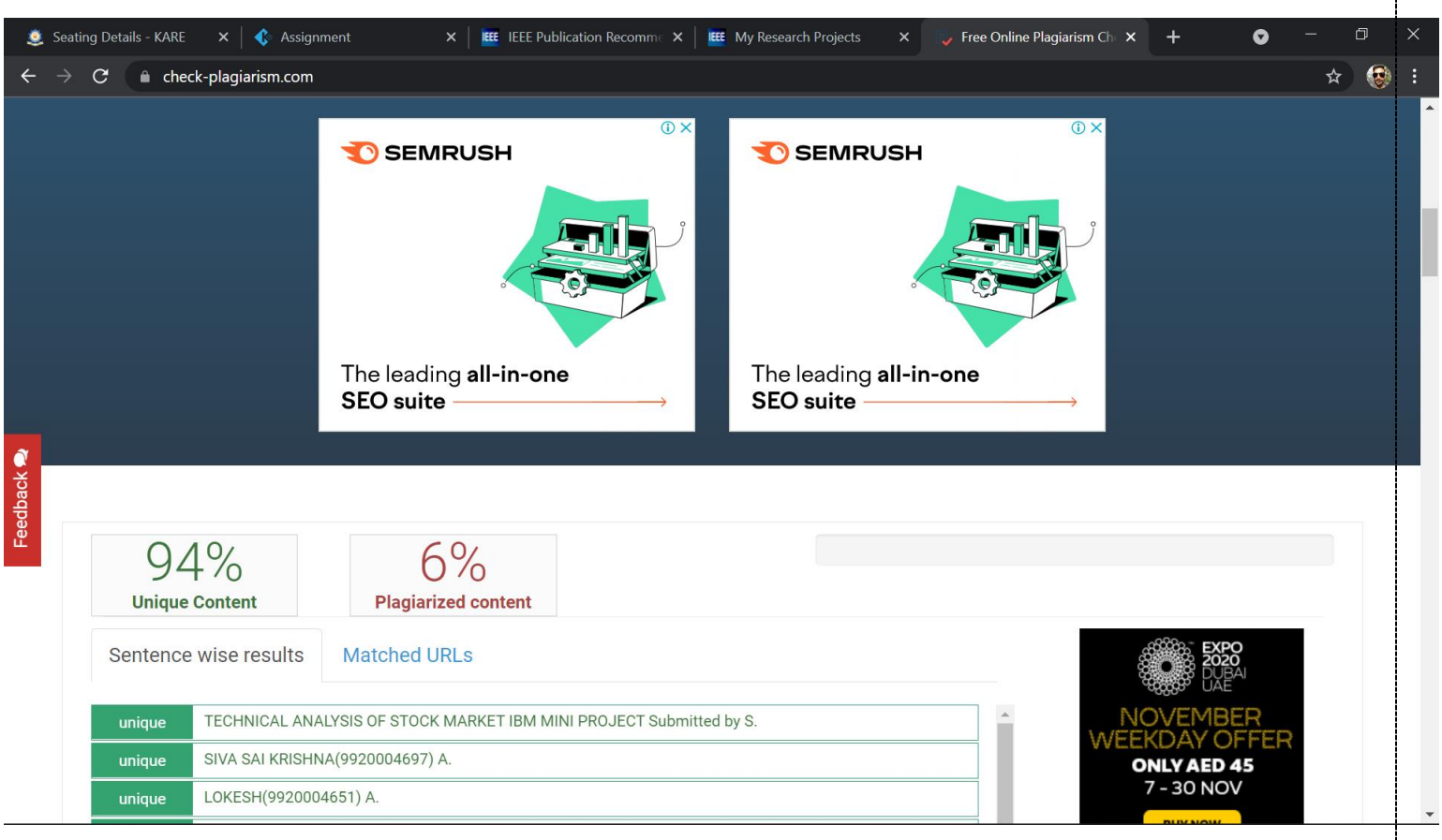
CHAPTER IX

STATUS OF THE PROJECT

S.NO	PROJECT PHASES	STATUS
1.	Preprocessing	COMPLETED
2.	Implementation of Algorithm	COMPLETED
3.	Segmentation Process	COMPLETED
4.	Comparison with existing techniques	COMPLETED
5.	Classification Process	COMPLETED
6.	Output	COMPLETED

PLAAGIARISM REPORT



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