MANIPAL INSTITUTE OF TECHNOLOGY

(A constituent Institute of Manipal University)

MANIPAL - 576 104, KARNATAKA, INDIA

MARCH 2017

**PREDICTION OF STOCK PRICE USING REGRESSION**

*By*

**L.Vamsi Krishna (130911300)**

**Ch.Anand (140911308)**

*Under the Guidance of*

*ANJU.R*

1. **INTRODUCTION**

The stock market is an ever-changing space with highly irregular changes in patterns and its behavior. Analyzing stock market behavior is an important economic need. The process applied here, in predicting stock market price using regression. This will help in easy understanding of stock market and predicting and evaluating the patterns occurring in the stock market. Subsequently, leading to a better understanding how the stock market works and how the stock prices changes.

1. **PROBLEM DEFINITION**

The Aim is to find feasible time to invest on company depending on previous profits , stack and reputation of the company .The shareholders can hold good amount on specific company depending on these parameters. As we had very details info about the previous stocks it is much easier to find and analyze changes in price change of stocks.Stock market fully depends on the both the pysical or economic values.

1. **OBJECTIVE**

We ﬁrst fetch the data from datasource then make a preprocessing to the data , after we feed it into the k-means algorithm to ﬁnd anomalies. We can then make predictions according to the position of the anomalies and evaluate the result.

Pre-processing in data mining played essential role for enhancing data quality. The basic concept behind is that , learning with accurate and high quality data may provide more efﬁcient classiﬁcation results as compared to learning with poor quality of data.

Data mining is an approach to ﬁnd the meaningful patterns from data.This meaningful content may helpful for decision making, classiﬁcation and large scale data analysis. In data mining the main and basic element is data. Mining of data and information recovery is directly depends upon data.Therefore , learning process of a data mining algorithm is majorly depends upon the type of data and quality of data. We are reading the data from CSV ﬁle which initially contains only DATE,OPENPRICE CLOSEPRICE, VOLUME. We process the data to get change in open and close price for all the entries in the data ﬁle.we used the python libraries to read the data from CSV ﬁle.

1. **SCOPE/IMPORTANCE OF PROJECT**

As the stock market is consists ever changing trends, it is difficult to predict the price of stocks. It is also difficult to analyze the previous year’s data and predict the data at the user level. This project solves above mentioned difficulties and predicts the price of particular stock analyzing previous year’s data.

1. **METHODOLOGY**

We collected the data from yahoo stock blog. We applied basic cleaning techniques in xsl sheet (fill to columns, identify blank values, remove duplicates, etc).We applied linear regression taking opening price high and low price of the day as the input variables or independent variables. Closing price is taken as dependent variable and is predicted by using linear regression on independent variables mentioned above.

We compare the given stock price and the predicted price and try to identify the change in trend.

1. **RESULTS**

The final result of this project contains an output csv file and two graphs (one given prices vs. date other predicted price vs. date).

1. **CONCLUSION**

We predicted the price based on previous years price changes. We then compared predicted value to the given value. We plotted graph of both predicted and given values and which helps the investor to have an idea about trends in stock prices.

1. **REFERENCES**

**Base paper**:

<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?reload=true&arnumber=7310722>

**Plotting graphs:**

**https://www.youtube.com/watch?v=kMOJMSIWj4Y**