Intelligent Finance Portfolio Assistance

Pruthvi raj N[1] Sohan Dsouza[2] Swagath[3] Swastik ijari[4] Shamshekhar S Patil[5]

[1,2,3,4]U.G Student [5]Associate Professor

[1,2,3,4,5]Department of Computer Science & Engineering

[1,2,3,4,5]Dr. Ambedkar Institute of Technology, Bangalore, Karnataka, India

Abstract:- Intelligent Finance Portfolio Assistance is financial planning that is process of defining your financial goals, such as knowing when you will need to use your money, and what you will be using it for, and then designing plan of action with specific procedures that user needs to take to achieve those financial tasks. Our goal is to develop application that analyzes previous stock data of certain company parameters, with help of certain constraint that affect stock value. We are going to implement these values in machine learning algorithms. This will also help us to determine the values that particular stock will have in near future. We will determine the Month's High and Low with help of machine learning algorithms. The user chooses his platform for the investment and he will provided with a series of question along with options, where each option has different credit points. The average value of credit points are calculated based on some requirement factors which are chosen by user. User can suggested by some companies where he has to invest and machine learning algorithms are performed based on his selection. Algorithms analysis the previous value and show its predication which is to be displayed on the graph. The graph shows how he will be benefitted for his future financial improvements.

Keywords:- Portfolio Management, Machine Learning.

I. INTRODUCTION

A stock market, equity market or share market is the place where the buyers and sellers communicates to invest money which represent ownership claims on businesses; these may consist companies listed on a public stock market, as well as stock that is only secretly traded . Examples that include shares of private companies which are sold to investors through equity investing platforms. Stock exchanges list shares of common equity as well as other investing assets, e.g. corporate bonds etc.

A user who has a percentage of the share has the ownership of the corporation proportional to his share. The shares form stock. The stock of a corporation is divided into shares, the total of which are stated at the time of business formation. Additional shares may sequentially be authorized by the existing shareholders and issued by the company. In some jurisdictions, each share of stock has its own certain value, which is a existing accounting value used to represent the equity on the balance sheet of the company or firm. In other controls, however, shares of stock may be issued without associated value.

Portfolio management is the art and science of calibrating decisions about investing policies and matching investments to financial goals, asset assignment for users and institutions, and balancing risk against performance. Portfolio management is all about analyzing strengths, weaknesses, threats and opportunities in the choice of debt vs. equity, domestic vs. international, growth vs. safety, and many other business experience in the attempt to maximize return at a given appetite for risk. Portfolio management can by either active or passive, in the case of mutual and exchange-traded funds (ETFs). Passive management simply monitors a market index, commonly referred to as indexing or index investing.

II. RELATED WORK

In todays world money has utmost importance.Money is the way to earn extra money.The exising financial porfolio management systems is present in the form of web application. There many applications which performs financial portfolio management like betterment, WiseBanyan, WealthFront etc. Basic principle in this web application is to ask several question to user and create porfolio for the user which consists of different investing platfors like stocks, shares, bomds, equity, mutula funds, real estate etc.

Proposed System

In our project we have used mobile application interface to provide solution for the financial planning .It consists of a series of question to user and user need to anwer all the question based on the answerr risk factor is calculated according to user benefits. Then answers are sent to back end system where a machine learning model is deployed whose work is to get the company code from yahoo finance and perform prediction on the respect to company stock price .The predicted values will be sent to database and from database the data are sent to mobile application where the porfolio for the user is created and displaye in the form of graph ie. Piechart.

In this application we have added event change that cause change in stock value like political effects ,natural calamities, Pharmaceutical effect.

III. METHODOLOGY AND IMPLEMENTATION

As user wants to enter into the activity , they has to get login into the activity. If the user who wants login into activity is new, he has to get register or sign up for the activity with the certain details provided to them and they will get confirmation to their mail to which they has registered and they has to set password according to rules provided to them. If the user is already existing he has to get login to the activity. If they had forgot the password, they has to get register to email to which they had registered at time of registration or sign up. Based on this they will get confirmation to their mail where password can set for the further process. As soon as the user gets login the main activity is displayed, they will provided with set of option where he has to invest money for the further improvement of his future for income. As the user chooses either of the option for investment there will certain information about the platform of investment before proceeding directly.
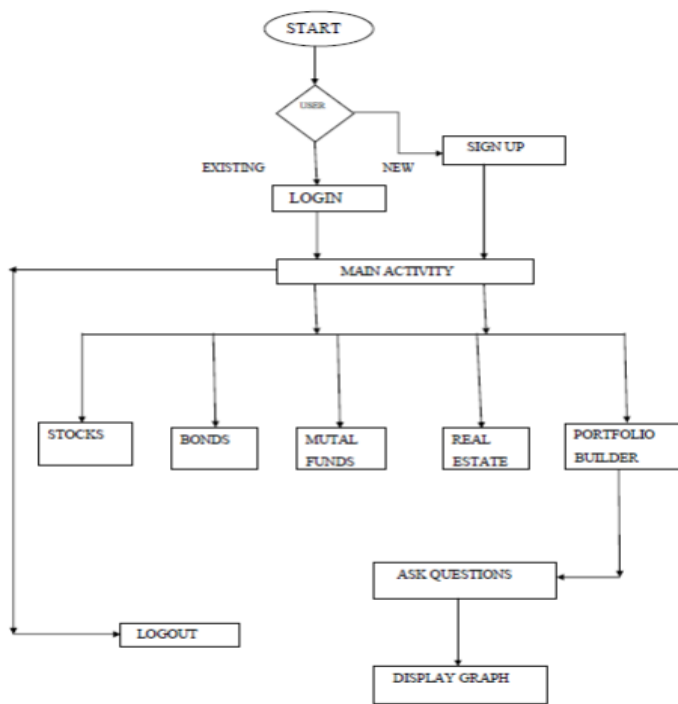

Fig 1:- Flow Diagram

As the user login into activity and chooses his platform for investment, as this activity is completed, it moves to next activity. This activity is provided with series of questions with different options for the user future improvement. Each option is provided with different point. The average points are calculated which are provided to different options of a question based on user input.
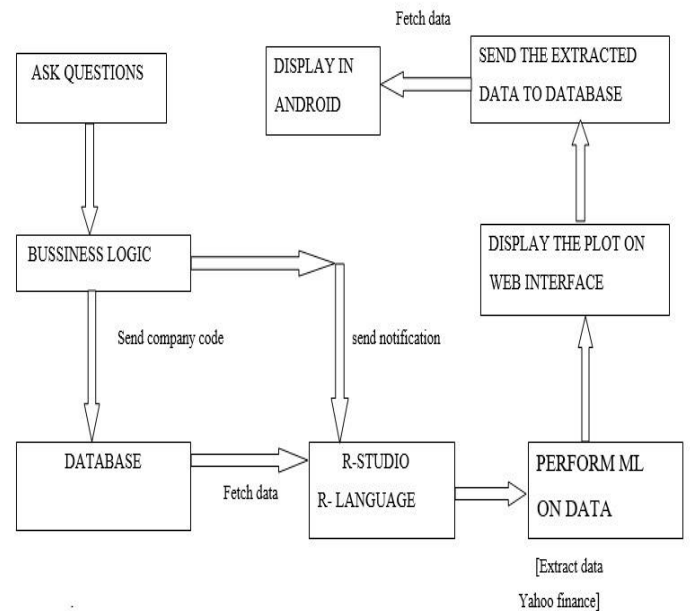

Fig 2:- Sequence Diagram

After calculating average point based on users requirement, it again directly access to business logic where it contains different number of platform where user as to invest money for his beneficial improvement based on his requirement. As it access business logic it sends notification to database to fetch the data for further process and it send notification R studio and R programming language. R-Studio is available in different platforms like windows,mac,Dos accessing R-Studio using a web browser. The R language is widely used among statisticians and data miners for developing non dynamic software and data analysis. Data mining surveys which enables the developer to let users choose input parameters using user friendly controls like sliders, drop-down menus, and text fields, which will then influence any number of outputs like plots, tables, and summaries. As access again to database it fetch the data of investing platform where user wants to invest and send fetched data to the R-programming and R- studio. As once data is fetched from database and received notifications from business investing platform, it will perform machine learning operations which uses autoregressive integrated moving average (ARIMA) model for its operations. Machine learning algorithms predicts the stock value of different investing companies, in order to make predictions or decisions without being explicitly programmed to achieve the task. The model is fitted to time series data either to better understand the data or to predict future points in the series (forecasting). After performing machine learning operations on data which is fetched from database, the predicted value will be displayed on the graph. The graph will show the stock price predicted value based on the requirement provided by user and shows how user will be benefited.
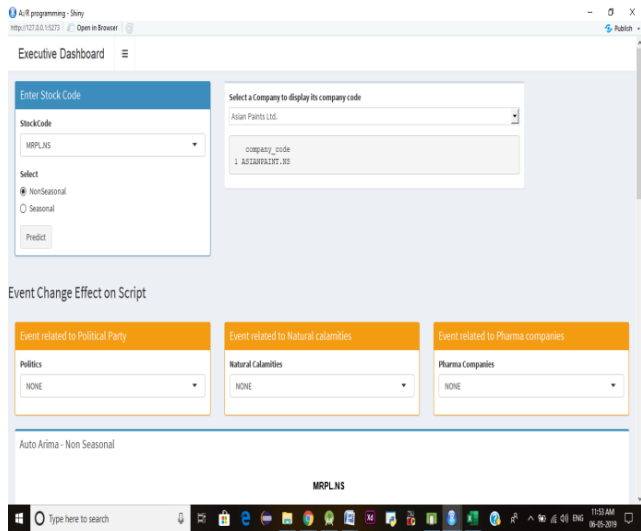
IV. EXPERIMENTAL RESULTS AND OUTCOME

Fig 3:- Non seasonal stock prices of Asian paints

This is a sample dashboard of intelligence finance Assistance application. This dashboard contains Stock code block, Company search block and some event change block which effect the prediction of stock price of the companies.
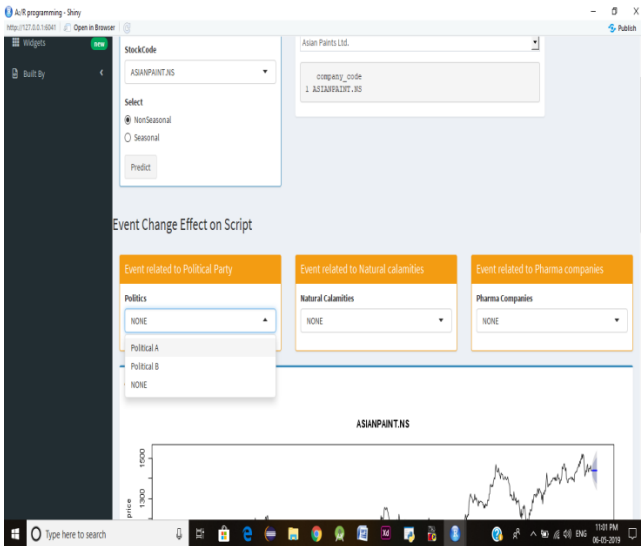

Fig 4:- Political effect on stocks

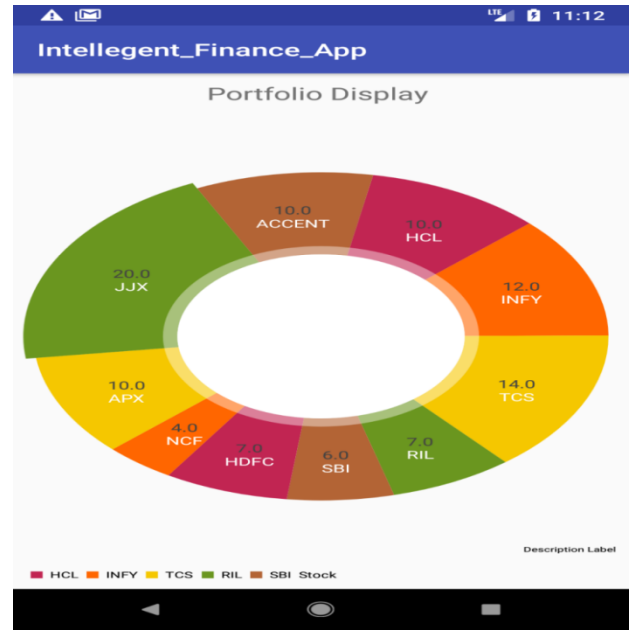Event effecting such as Political effect, Natural Calamities and Pharmas Companies on prediction script.

Fig 5:- Pie chart representing stock value of different companies.

This is a pie chart which shows different investable market or platform based on user requirements.

V. CONCLUSION

With the help of this given project investors get variety of schemes to invest their money with proper guidance. Which also helps in reducing the risk factor in investing the money and also suggests the best possible investment for that particular investor.

The stocks price may vary because of reasons like natural calamities , season , or even politics which we have included in our project. Which will predict the stock price considering all these factors ie; few pharmaceuticals may have high business during rainy season , because of projects of political parties few company might have a good business or even natural calamities which will drastically effect the market.

ACKNOWLEDGMENT

REFERENCES

[1]. Gareth James , Daniela Witten , Trevor Hastie and Robert Tibshirani "An Introduction to Statistical Learning"

[2]. Box,G.E.P ., Jenkiens,G.M.,1987. Time Series analysis, Forecasting and Control. 2nd ur.SanFranscisco:Holden-Days

[3]. Ho,S.L., 1998. The use of ARIMA MODELS For realiablity forecasting and analyses. Computer and Engineering, 35(1-2),213-216

[4]. http://finance.yahoo.com/