Share Marketing App

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Abstract:

Predicting stock market movements is a well-known problem of interest. Now-a-days social media is perfectly representing the public sentiment and opinion about current events. Especially, twitter has attracted a lot of attention from re-searchers for studying the public sentiments. Stock market prediction on the basis of natural language processing API provided by parallel dots has been an intriguing field of research. The thesis of this work is to observe how well the changes in stock prices of a company, the rises and falls, are correlated with the public opinions being expressed in news about that company. In this, we have applied sentiment analysis and Natural Language processing API provided by parallel dots. In an elaborate way, positive news in social media about a company would definitely encourage people to invest in the stocks of that company and as a result the stock price of that company would increase. At the end, it is shown that a strong correlation exists between the rise and falls in stock prices with the public sentiments.

Keywords: Sentiment Analysis, Stock market prediction.

1. INTRODUCTION

Earlier studies on stock market prediction are based on the historical stock prices. Later studies have debunked the approach of predicting stock market movements using historical prices. Stock market prices are largely fluctuating. The efficient market hypothesis (EMH) states that financial market movements depend on news, current events and product releases and all these factors will have a significant impact on a company's stock value. Because of the lying unpredictability in news and current events, stock market prices follow a random walk pattern and cannot be predicted with more than50% accuracy .With the advent of social media, the information about public feelings has become abundant. Social media is transforming like a perfect platform to share public emotions about any topic and has a significant impact on overall public opinion. Social media platform has received a lot of attention from researchers in the recent times. In this, we contribute to the field of sentiment analysis of data provided from news updates. Sentiment classification is the task of judging opinion in a percentage of sentiments like fear, sad, happy, excited. There are many studies involving natural processing as a major source for public-opinion analysis.

The main objectives of the proposed system are as follows:

1. The objective of the project is to provide the clear and accurate prediction to the user about buying or selling the stocks.

2. It helps a business to understand the social sentiment of their products, services and brands while monitoring the online conversations.

3. PROPOSED SYSTEM ARCHITECTURE

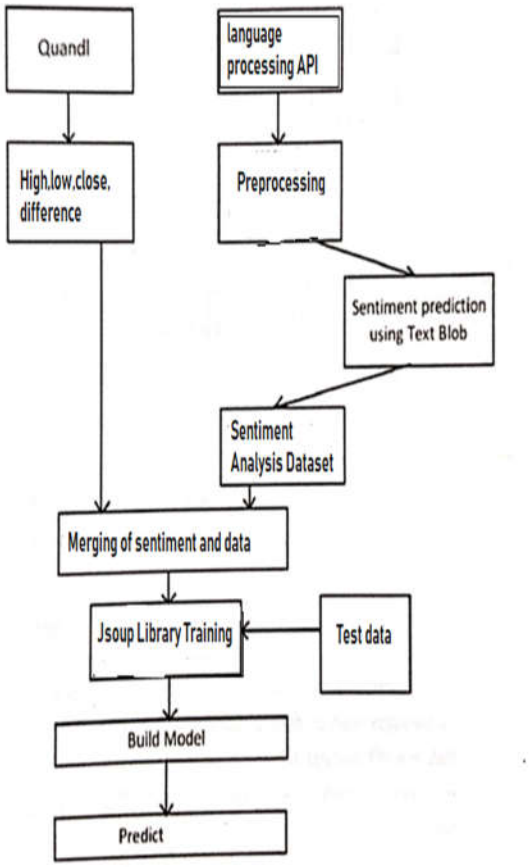

Fig1.System Architecture

A system architecture is a conceptual model that defines the structure, behavior and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structure and behavior of the system.

A system architecture can consist of components and the subsystems developed, that will work together to implement the overall system. They have been efforts to formalize languages to describe system architecture, collectively these are called architecture description.

Data Flow Diagram

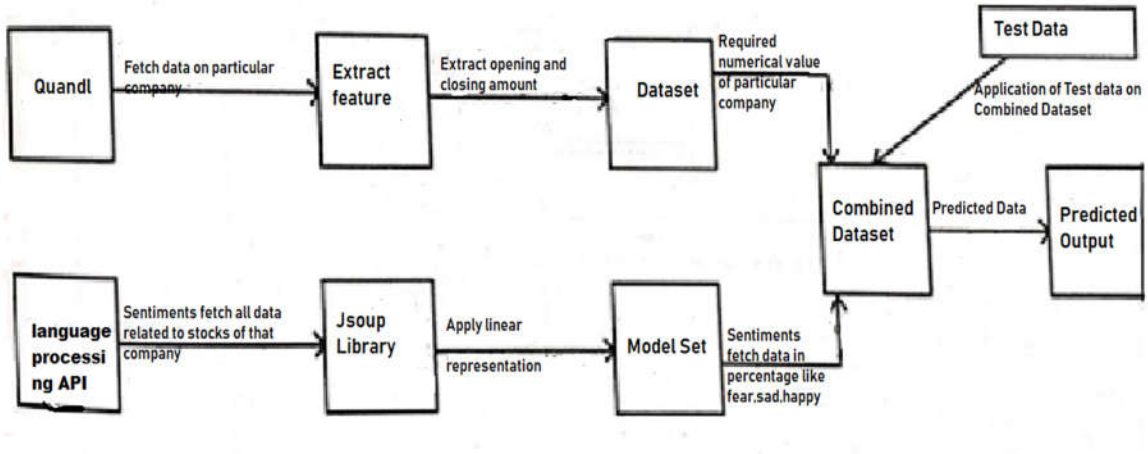

Fig2. Data Flow Diagram

The data flow diagram explains the working of the project. The data from quandl is fetched .After it the feature of extracted which results in the dataset required for training purpose. On this data preprocessing is done. By applying the Jsoup Libraries the model is prepared. Then both the data are combined. By using this dataset prediction is done for accurate result. Test data is applied on the model and prediction is done.

3.IMPLEMENTATION

App design:

The app is designed in Android Studio and JSON. The app should be dynamic in nature as the user should be able to access all company list, news update, sentiment analysis, refresh data, etc.

Working:

Firstly user has to install the app. Then signup the app using username and unique password. Your username and password will be saved in backend, so you can login using it for second time use. After login, you can search stocks of any company you want. Or there is option given all company list, there you can get list of all companies. After you choose a company, you will get all information about that company such as analyzed date, open prize, high prize, low prize, change, average prize, live prize, etc. Here you can refresh stock prizes for recent updates. We have given one tab called sentiment analysis.

You can insert random data based on buying shares of that company, analyzed data will provide you different percentages based on sentiments like fear, sad, angry, happy, excited. Based on this data you can decide to buy shares of that company or not. Also we have one window for stocks news, where you can get latest information about share market which will give you live data about share market.

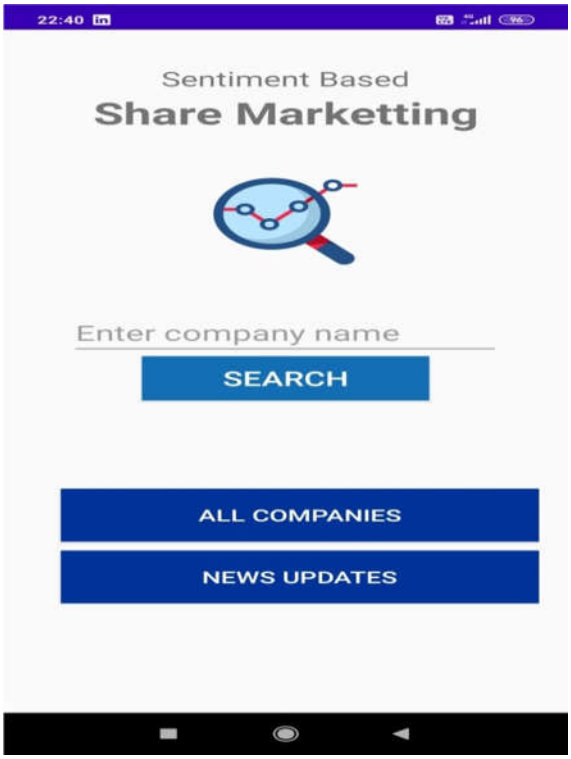

Fig3.Share Marketing App

This is page which comes after you login the app. Fig3 shows the tabs where you can type company name or all companies you can see. Different news updates are also available. After login, you can search stocks of any company you want. You can get list of all companies.

Fig4.Share Marketing App

Fig4. Shows all companies which are added in the app. Users can see different companies here. They can click on any company and get the information about that company. In fig4 you can see different companies such as Vodafone-IDEA, Reliance Industries Ltd, State Bank of India, Yes Bank

Ltd, Tata Consultancy Services Ltd, Bajaj Auto Ltd, Asian Paints Ltd, Infosys Ltd, Tech Mahindra Ltd, etc. About 15 to 17 companies we have added now in our app. In future we can add more companies; this is the scope of our project.

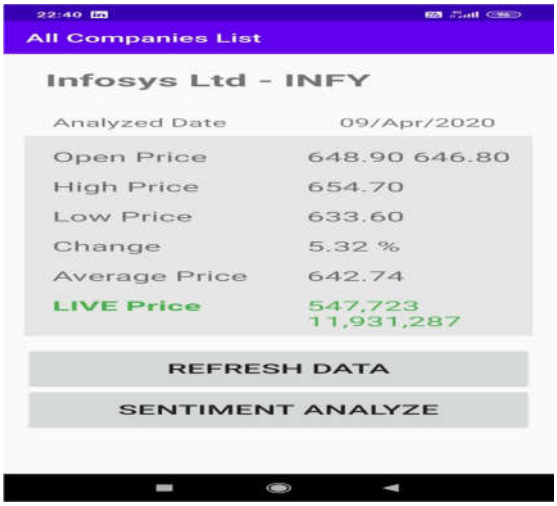

Fig5.Share Marketing App

When you click on particular company, you will get fig5. On this page we have provided stock prices of that company. After you choose a company, you will get all information about that company such as analyzed date, open prize, high prize, low prize, change, average prize, live prize, etc. Here you can refresh stock prizes for recent updates.

Fig6.Share Marketing App

On this page you can see sentimental analysis of data in the form of percentage and different sentiments like fear, sad, angry, happy, excited. You can insert random data based on buying shares of that company, analyzed data will provide you different percentages based on sentiments like fear, sad, angry, happy, excited. Based on this data you can decide to buy shares of that company or not. Also we have one window for stocks news, where you can get latest information about share market which will give you live data about share market

6. CONCLUSION

Basic share trading functionalities such as user can view the company portfolio. In module of a user this application facilities like see the share prizes of company, get latest and live data. The user can obviously not update any share price information by own.

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