**Capital Market Forecast**

We would like to inform you that we have completed next day market prediction and sentiment analysis of previous data using R.

Things we have achieved:

**UI**

* A dynamic HTML page through which user will enter the Stock TICKER of the Company of which he wants to obtain the Previous Trends and Future Stock Prices.
* Through JavaScript, previous Years Stock data is downloaded and pipelined to the R-Scripts.

**Prediction in R**

1. Exponential Moving Average Algorithm (EMA)
2. Simple Moving Average Algorithm (SMA)
3. Support Vector Machine Algorithm (SVM)
4. r-Part Algorithm
5. Boosted Trees Algorithm
6. K-nearest neighbour Algorithm (kNN)

We trained our dataset using these 6 algorithms and tested these algorithms on test data set and eventually found out kNN to be best suitable for our data set as it gave the highest precision and accuracy.

**Factors Involved**

We used **Open Price, Close Price & Volume** of the data set and predicted the polarity of the next day by analysing the trends of last 5 years data.

**Sentiment Analysis**

We performed the sentiment analysis of a particular company to calculate market sentiment of the company and performed

* Calculated **Mean sentiment score**
* Plotted **graphs** for frequency of positive and negative words and
* Created a **Wordcloud**.

**Final Output :-**

* R-Scripts at backend produce graphs and Predicted Stock Price for the next day.
* These outputs are stored on the server.
* These outputs are fetched and shown on the webpage.

**Useful links:**

1. <https://github.com/rohan2970/CapitalMarket>

2. <https://trello.com/b/VTvCSyki/capital-forecast-analysis>

Thanking You

Rohan Srivastava (Intern, Xebia)

Jatin Kinra (Intern, Xebia)