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Project Proposal: Stock Prediction

The preliminary premise for our term project is the prediction of the stock for a specific company given data obtained about the selected corporation. This stock prediction will be followed by analysis of twitter sentiments individuals have recently been sharing on twitter. Finally, the stock predictions will be outputted back to the user by means of a website. We intend to use Vue as our platform to develop our frontend for the final project. The expected results shown to the users would consist of overall sentiment analysis of what is being said about the chosen corporation, the prediction for the chosen company in the next week, the most recent tweet about the chosen company and how accurate we expect our prediction to be.

The above stock predictions is to be executed using various machine learning algorithms discussed in class such as logistic regression, and support vector machines. We plan to apply the LR and SVM algorithm at the beginning then add additional algorithms based on what is most suited for the prediction of stocks.

The team's chosen development platform is Python as it contains a variety of libraries such as sklearn, pandas, numpy, pycache and others that facilitate an ease of machine learning algorithm implementation. Stock data sets will be obtained from Alpha Vantage at runtime. We will also be including the usage of the Twitter API to access recent tweets for sentiment analysis.

During project development the team will be actively looking for any open source code and data sets applicable to our project scope. Should any of the open source code prove integral to the project the team will attempt to incorporate it into the project. If need be, we will consider switching development platforms given an available open source project containing necessary procedures that we are unable to replicate in Python.

Our team will be meeting on a weekly basis to ensure that the project is coming along smoothly. The different aspects of the project will be divided evenly amongst all the groupmates. We plan to have weekly briefings in which we will review weekly progress and take any measures needed to improve our project.