Project Scope

Purpose: Display popular public stocks and compare their daily value to the respective day’s overall sentiment of related tweets.

Key Features:

* Stock Price Chart/Graph
* Sentiment Score Chart/Graph
* Comparison Chart with both graphs
* UI to search stock or view top 10 stock
* UI to search hashtag or lookup selected stock as a hashtag

Bonus Features:

* Customize graph colors
* Expand time frame
* Find maximum and minimum values within time frame
* Use algorithm to find what days the max profit could have been

Libraries/APIs:

* Stock data – yfinance (python library)
* Twitter data – Twitter API (dev account, python)
* Sentiment analysis – TextBlob (python)
* Graph – Plotly (javascript)
* UI Components – React (javascript)

Technical Constraints:

* Twitter API fetch limit
* Sentiment analysis is computationally heavy.
* Consider fetching less tweets unless needed for a long historical trend.
* Store sentiment of popular stocks in DB to prevent repetitive computation

Target Audience:

* Traders wanting a general sense of the stock and what people think
* People interested in my dev skills

Boundaries:

* General Sentiment
* Popular Stocks, limited search of stocks
* 5yr, 1yr, month, week, day of stock and sentiment trends
* 1 graph on a single page, with customizable features
  + Change color
  + Change x-axis (time) scale
* Default to looking up hashtag of company name
* Single about page to show describe details of the web and link to my LinkedIn

Success:

* User is able to select from popular stocks and search database for a stock
* User is able to view the sentiment of the stock along with the stock on the same graph
* User is able to change the graph to just the stock or the sentiment
* One graph is displayed
* User is able to customize legend and scale the x and y axis
* User is able to view the about page and go back to their graph

Future:

* User will be able to lookup hashtag of interest
* Support for more stocks
* More details on stocks
  + Able to view stats on when the best window was to make profit on the stock
  + Stats from algos to show trends of best buying times and sell times