Plan:

For Project 2 we plan on creating a series of bar graphs correlating a given Trump tweet to the market price of a given market for that day The question we are trying to ask is to what degree different markets are impacted by the subject of Trump's tweets, or by extension, to what degree can a single entity have an immediate economic impact on investors views of the future? Though we are unclear as to the exact layout our visualization will take, we plan on displaying bars representing the market price of a given day, and upon selection of a given bar one can see the tweet(s) Trump wrote for that day. Moreover, we plan on having a drop down or way with which one can select a different market to see how it has been responding to these tweets over time. We haven't decided the exact timeline we wish to focus on but we will likely start several months before he became president-elect and show data up until the last month or so. Ideally we would have this visualization be constantly updated with live data, but before we consider doing that we plan on working on a fixed data set.

Regarding the implementation of this visualization we were hoping to use a combination of ReactJS and D3. D3 would be used for creating the bar graph itself, and ReactJS would assist with the dynamic components of the visualization, i.e scroll over bar for corresponding tweet, drop down to choose market, and maybe even a tweet searcher. That said, we are unsure if combining both frameworks could be problematic and any advice on this subject would be helpful.

With regards to preprocessing, there are few key steps we need to take. First, we need to collect all of Trump's tweets and parse them into a JSON with two main fields - tweet text and tweet date. Next, we need to extract the relevant market price data for each of the markets. Finally, an important component of our implementation will be scaling the market prices as a certain price change interval in the DOW might be a minor change in the S&P or vice versa. Our datasets are as follows:

Data:

Trump Tweet Data: https://github.com/bpb27/trump_tweet_data_archive
DOW https://fred.stlouisfed.org/series/DJIA
S&P 500: https://fred.stlouisfed.org/series/SP500
NASDAQ https://fred.stlouisfed.org/series/NASDAQCOM
Crude Oil: https://fred.stlouisfed.org/series/DCOILWTICO
10-Yr Treasury Rate: https://fred.stlouisfed.org/series/DGS10
US/Euro Exchange Rate: https://fred.stlouisfed.org/series/DEXUSEU
US/Yuan Exchange Rate: https://fred.stlouisfed.org/series/DEXCHUS
US/Yen Exchange Rate: https://fred.stlouisfed.org/series/DEXJPUS
CBOE Volatility Exchange Rate: https://fred.stlouisfed.org/series/VIXCLS