Project 1 Proposal

**Group Name:**

First\_project = True

**Team Members:**

Keyur Patil

Scooter Smith

Katrina Smith

Sydney Robertson

James Williams

**Project Description/ Outline:**  
 Reviewing NASDAQ data for the Big 5 over the last 10 years, we want to find out which of the Big 5 are the best to invest in either short or long term and contrast their performance against the NASDAQ as a whole over the same time period.

* Big 5 stocks:
  + Amazon ('AMZN')
  + Apple ('AAPL')
  + Google ('GOOGL')
  + Microsoft ('MSFT')
  + Facebook ('FB')

**Research Questions to Answer:**

* Which of the big 5 was the best investment over the last 10 years (largest net change positive)
* Which of the big 5 was the worst investment over the last 10 years (largest net change negative)
* Most consistent of the big 5 over the last 10 years (lowest daily percent change averaged over 10 year period)
* Are there yearly events that contribute to stock volatility (identify reoccurring spikes and dips in stock prices throughout the year, major positive and negative changes)? Are these regularly reoccurring?
* Based on the potentiality of reoccurring events, is there general good times to buy and sell the big 5 throughout the calendar year?
* Did the big 5 outperform or underperform the NASDAQ composite as a whole over the 10 year period?
* Of all the shares bought in the big 5, who had the most shares bought over the last 10 years?
* What are the closing prices for the big 5 going to be on Aug 31st 2020 (LinReg)? How does the prediction compare to the actual prices they were this year?

**Datasets to be Used:**

https://www.kaggle.com/abdullahmu/big-five-stocks

**Tasks:**

* Clean Data
* Analyze Data and Build Dataframe for Analysis
* Build 10 year line graph plotting change year over year for big five + NASDAQ
* Build multiple line graphs showing open and close over 10 years for each of the big five + NASDAQ
* Build 10 year graph plotting avg change year over year for the big 5 as a whole vs the NASDAQ composite
* Build bar graph comparing % change average for 10 years
* Build Pie chart showing volume purchase of big 5 over the last 10 years
* Open vs Close daily difference candlestick chart