***S&P500 vs FAANG***

**Business task:**

Follow and compare the price movement for S&P500 AND FAANG companies historically and display mathematical modeling to show the health of the stock and determine possible opportunities for buying or shorting.

The purpose of the graphs is also to cover a gap in information where there are no real sources of the FAANG price history as a unit, although it is said that these companies are leading the growth of the market. It is my belief that they deserve to be studied as a hole to shine a light on possible investment strategies that are not similar to the “buy it all” employed with the S&P500.

**Steps of analysis:**

1. Use Yahoo finance to pull data on the SP500 and the five companies.

**2-** Store the data online: Create a stand-alone program housed in GitHub, to pull the data daily and check for integrity using Python code.

**3-** Perform mathematical and statistical analysis of the data: upper limit, lower limit, moving averages 50,200, volume, volatility, R ratio, and possibly correlation using Python.

**4-** Shape the data and clean it eliminating NULL values by replacing with previous day value and make data ready for plotting. Make sure each date has a price point

**5-** Point Tableau to the data and create an interactive dashboard, that displays informative charts on the past and current state of the stocks and possibly the health of and investment.

**6-** Prepare and train an ML model to predict the price change of the socks and display on the same dashboard.

**7-** write documentation of the analysis process.

**Flow chart:**