Capstone Project 2: Project Proposal

Customer/Client: Corporate Public Relations department

Problem Statement:

Gauge how change in company executive leadership is received by general public and investors.

How would this help the clients/customers?

Client will be able to determine if the decision to change the top leadership is perceived as a good step. In addition to gauging general negative, neutral or positive sentiment, looking at most commonly used words to describe the change in leadership, decide on future strategy on communicating (and portraying) the leadership.

Data set:

Dataset	URL	Format
Twitter – Full archive search and 30 day search	https://developer.twitter.com/en/docs/tweets/search/overview/enterprise	
News API	https://newsapi.org/	
Stock Price API	https://help.quandl.com/category/347-python-package	

Solution approach:

1.   Sentiment analysis using Twitter and News API feed – Classify content as Positive, Neutral or Negative.

     a.   There were changes in CEOs at Wells Fargo (new CEO announced 9/27/19), SAP (change in CEO 10/11/19) and WeWork (CEO resigns on 9/24).

     b.   Trend from 2-3 days before the announcement to 3-5 days after.

     c.   Trend of interest in the announcement – how many tweets and articles?

d.   Due to limitation in usage of the APIs, I may need to limit the number of tweets/articles – use sampling.

e.   What are the most common words that best describes how tweet/article feel about the change in CEOs.

2.   Trend analysis in stock price – 2-3 days before announcement to 3-5 days after.

a.   Is there a significant change in price after the announcement?

b.   Did it go up or down?

c.   Only applicable to Wells Fargo and SAP.

Deliverables:

1. Code
    1. Call APIs and extract relevant data into appropriate data types.
    2. Store the data in Excel or DBs.
    3. Exploratory data analysis
    4. Sentiment analysis

2. Slide deck: Introduce problem statement. Graphs and explanation of the solution.