

Social Media's Impact on the Stock Market and Price

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OVERVIEW:

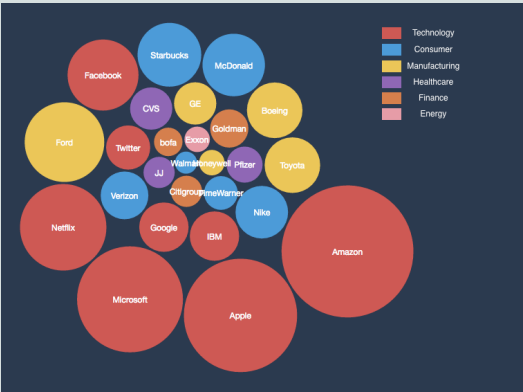
We are researching on effect of news article in social media of companies listed in stock market and whether or not the sentiment of articles and spread throughout the network is correlated with the performance of stock market prices.

MOTIVATION:

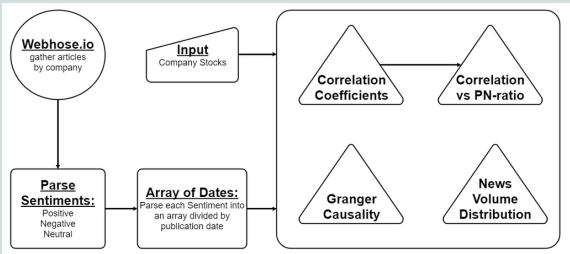
In an world dominated by the internet and social media, we wanted to determine what effect social media played in the stock market.

HYPOTHESIS:

There will be a positive correlation between positive news articles and the stock market price and a negative correlation between the stock market prices and the number of negative news articles



METHODOLOGY:



CORRELATIONS

- Identify how closely linked the following datasets are with each other
 - Positive articles & Negative articles
 - Positive articles & Stock prices
 - Negative articles & Stock prices

GRANGER CAUSALITY

- analyze 2 events over a period of time and determine if the first event can predict what the second event will do in the immediate future. (ex: If there is a large increase in Positive news articles, with the stocks rise the following day)

DATASETS:

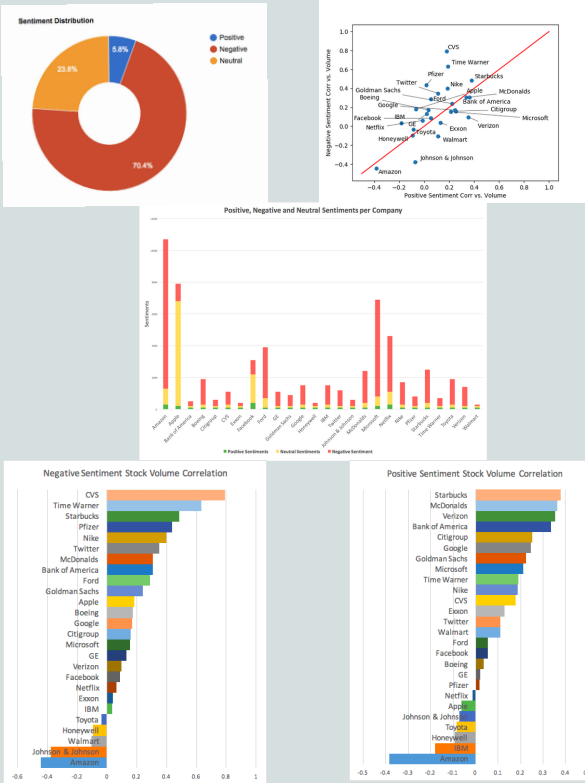
WEBHOSE.IO

- web scraping platform used to scrape news articles written about our target companies within the last 30 days.
- Over 60,000 news articles scraped

STOCK DATA

- we gathered publicly available stock data for our search of a correlation between stock prices and spikes in news coverage on the company

RESULTS & ANALYSIS



FUTURE WORK:

- Extending data for months rather than 30 days is another
- Twitter data for spread and diffusion.

RELATED WORK:

[1] Bollen, Johan, Huina Mao, and Xiaojun Zeng. "Twitter mood predicts the stock market." Journal of Computational Science 2.1 (2011): 1-8.
[2] C Castillo, M Mendoza, Barbara Poblete (2011). Information credibility on Twitter, Proceedings of the 20th international conference on World Wide Web., page 675-684
[3] Asur, Sitaram, and Bernardo A. Huberman. "Predicting the future with social media." Web Intelligence and Intelligent Agent Technology (WI-IAT), 2010 IEEE/WIC/ACM International Conference on. Vol. 1. IEEE, 2010.