# Project Title: Using News to predict stocks

## Team Members:

Alex Burch. Martin Hrbac. Roderick Reynolds. Rodney Kirkendoll. Serena Leung. Sunil Joshi

### Project Description and Outline:

We want to examine whether there is a relationship between price movement of stocks by industry and Fridays as well as the day before the market closures for the holidays.

### Research Questions to Answer:

Do weekends and holidays actually affect the market? Does it affect industries differently?

**Hypotheses:**

Null Hypothesis: Weekends and holidays have no impact on the stock market

Alternative Hypothesis: Weekends and holidays will cause the market to have a fluctuation (up or down) right before the weekend or the holiday

### Datasets to be used:

Kaggle Huge Stock Market Dataset: See [link](https://www.kaggle.com/borismarjanovic/price-volume-data-for-all-us-stocks-etfs).

Yahoo finance API. [Link](https://finance.yahoo.com/quote/%5EGSPC/history?period1=946702800&period2=1563595200&interval=1d&filter=history&frequency=1d)

Federal Holidays USA: <https://www.kaggle.com/gsnehaa21/federal-holidays-usa-19662020>

### Rough breakout of tasks:

1. Gather data
2. Python/Pandas/Jupyter Notebook coding
   1. Clean data
   2. Descriptive statistics
   3. Visualizations
   4. Correlation analysis
   5. Linear regression model
3. PowerPoint summary