Milestone One

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Topic: 🔗

Looking at historical price data on individual tickers to glean insight into how prices change.

Broad Questions:

1. What indicators predict price the best?
2. When a stock has earnings (e.g. reports how they did in the previous quarter), how does that affect stock price?
3. How can we best predict when a stock will change trends (e.g. go from an up trend to a down trend)

Reading in data

Setup

```
library(tidyverse)
library(ggplot2)
```

We have historical price data on all stocks in the Nasdaq. Each stock has its own ticker (e.g. 'AAPL'), and each has its own csv file with price data.

```
# Reading in price data for 'AAPL'
aapl <- read_csv("../data/nasdaq_prices/stocks/AAPL.csv")
```

```
tail(aapl)
```

```
# A tibble: 6 × 7
  Date        Open  High   Low Close `Adj Close`    Volume
  <date>     <dbl> <dbl> <dbl> <dbl>       <dbl>     <dbl>
1 2020-03-25  251.  258.  244.  246.        246.  75900500
2 2020-03-26  247.  259.  246.  258.        258.  63021800
3 2020-03-27  253.  256.  247.  248.        248.  51054200
4 2020-03-30  251.  256.  249.  255.        255.  41994100
5 2020-03-31  256.  262.  252   254.        254.  49250500
6 2020-04-01  246.  249.  239.  241.        241.  43956200
```

Codebook

1. Date

- A `date` object that lists the date in "YYYY-MM-DD" format

2. Open

- A double that gives the opening price of the stock each day

3. High

- A double that gives the high price of the stock each day

4. Low

- A double that gives the low price of the stock each day

5. Close

- A double that gives the closing price of the stock each day

6. Adj Close

- A double that gives the adjusted closing price of the stock each day (we will not be using this)

7. Volume

- A double that gives the amount of shares traded of the stock each day.

Next Steps

We can try to answer the first question: Which indicators predict price the best? An indicator is a technical analysis tool that uses price data to produce a numerical value that tells us some information about the price. Most indicators can be calculated from the data we have.