

# NASDAQ Stock Analysis & prediction

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# Intro

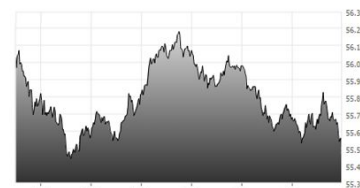
1. **High & Low** - highest and lowest prices at which stock has traded over past 52w
2. **Open** - opening price of the stock  
**Close** - last trading price recorded when market closed *on the day*
3. **Volume** - # of shares traded for the day

## Microsoft Corporation (MSFT)

\$55.35 ▲ 0.52 | 0.95% DL

4:15 PM Dec 22, 2015 EST  
Volume: 28,322,241

### Detailed Quote



|            |                       |             |                       |
|------------|-----------------------|-------------|-----------------------|
| Last       | 55.35                 | Volume      | 28.32m                |
| Change     | 0.52                  | Change %    | 0.95                  |
| Open       | 54.99                 | Prev Close  | 54.83                 |
| High       | 55.48                 | Low         | 54.50                 |
| Dividend   | 0.36 USD              | Yield       | 2.602                 |
| Div. Freq. | Q                     | Ex-Div Date | 2016-02-16            |
| Beta       | 0.94599               | VWAP        | 55.06231              |
| Year Low   | <a href="#">39.72</a> | Year High   | <a href="#">56.79</a> |
| Market Cap | 442.13b               | Shares Out  | 7.99b                 |
| PB Ratio   | 5.706                 | PE Ratio    | 36.30                 |
| EPS        | 1.51                  | Exchange    | NGS                   |

### News and Media

Tue Dec 22nd, 2015

|         |  |                 |
|---------|--|-----------------|
| 1:00pm  | <a href="#">Microsoft offers new certification for Linux on Azure</a>            | PR Newswire     |
| 10:32am | <a href="#">Is Microsoft Stock Still Worth Buying?</a>                           | Canada Newswire |
| 10:30am | <a href="#">How Many Stocks Should You Own? Remember Warren Buffett's Advice</a> | SeekingAlpha    |
| 10:10am | <a href="#">Stock Market News for December 22, 2015</a>                          | Business Wire   |

# Interesting findings:

## Data cleaning -

- Size: 1MB, 12,154 rows
- 1971-1984, volumes = 0
- Only after year-2000
- Number of rows after: 4,851

## Highest Closing day:

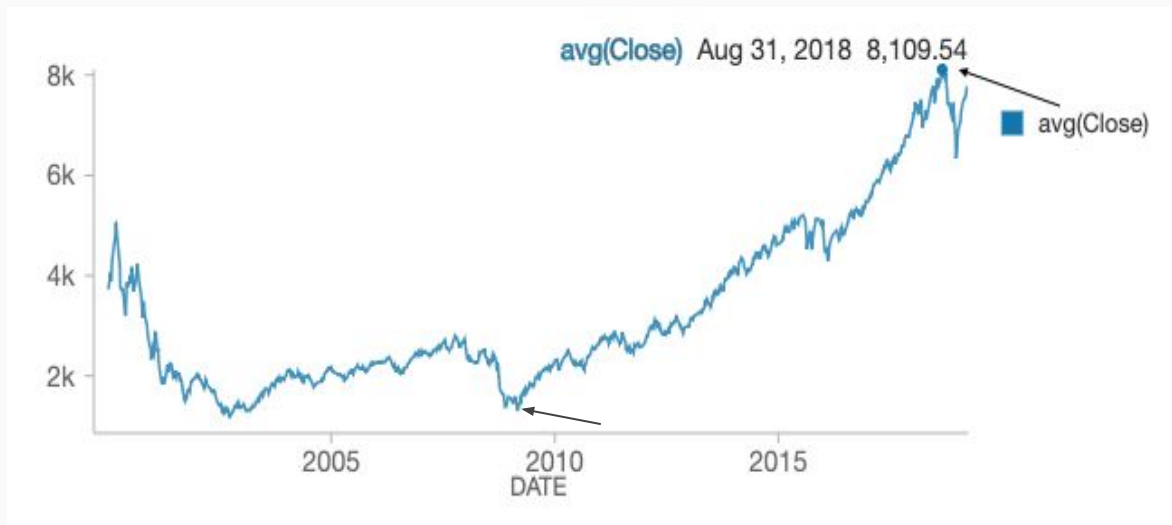
on Aug.31, 2018

With price of \$8,109.54

## Lowest Closing day:

May.05, 2009 with

Price of \$1,299.59



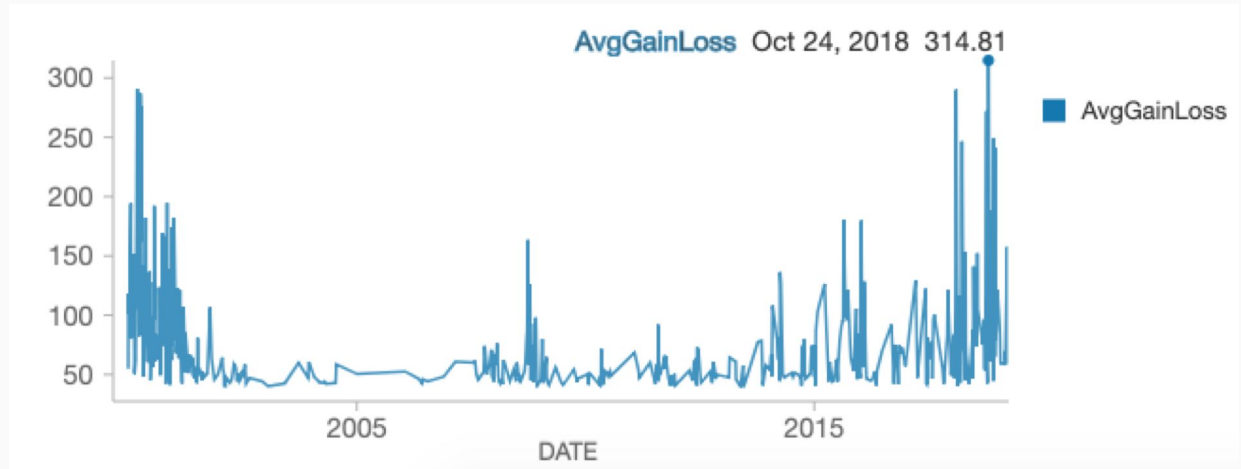
# Interesting findings:

## Highest Profitable day:

$\text{Avg}(\text{Open}) - \text{Avg}(\text{Close})$

On Oct.24, 2018

With profit of \$314.81





## Predict:

1. What would be the next highest **Closing Price**?
2. What would be the next highest amount of **Gain or Loss**?
3. When would be that **day**?

# ~1.2%

Used Linear Regression and Random Forest Regressor

- to predict Closing Price based on High, Low, Open and Year
  - Both models gave relatively same output

# Next:

1. Inflation
2. Try 1yr dataset
3. Decision Tree Model
4. Other variables (volume, year)

