

(Just kidding)

CRASH COURSE: FUNDAMENTALS OF TRADING

| | | | | | | | |
|-----|---------|---------|---------------|-----|--------|---------|---------------|
| TDM | 729.89 | 915.51 | 185.62▲25.43% | FLR | 660.27 | 745.28 | 85.01▲12.88% |
| HUM | 749.73 | 924.29 | 174.56▲23.28% | UVD | 155.59 | 181.57 | 25.98▲16.70% |
| DMW | 833.72 | 1004.01 | 170.29▲20.43% | QUV | 440.55 | 540.21 | 99.66▲22.62% |
| YZJ | 903.49 | 1127.46 | 223.97▲24.79% | HZT | 285.51 | 344.98 | 59.47▲20.83% |
| GLY | 982.07 | 1219.39 | 237.32▲24.17% | PCW | 811.44 | 1029.66 | 218.22▲26.89% |
| VDI | 1032.11 | 1304.1 | 29.67▲26.09% | AIK | 361.77 | 451.39 | 89.62▲24.77% |
| SVI | 488.88 | 604.1 | 67.33▲14.38% | ZJJ | 858.36 | 994.57 | 136.21▲15.87% |
| HJS | 545.49 | 659.05 | 113.56▲20.82% | RHJ | 894.79 | 1046.68 | 151.89▲16.97% |
| ECC | 550.86 | 664.69 | 97.73▲17.24% | VGV | 425.08 | 509.95 | 84.87▲19.97% |

| | | | | | | | |
|-----|---------|---------|---------------|-----|---------|---------|---------------|
| PPI | 912.63 | 1038.36 | 125.73▲13.78% | ZBK | 391.59 | 491.48 | 99.89▲25.51% |
| UAQ | 1309.55 | 1655.62 | 346.07▲26.43% | BNY | 969.21 | 1130.65 | 161.44▲16.66% |
| DAQ | 1295.17 | 1641.66 | 346.49▲26.75% | SDM | 735.44 | 913.39 | 177.95▲24.20% |
| PNR | 654.33 | 775.84 | 121.51▲18.57% | TQQ | 1323.91 | 1646.42 | 322.51▲24.36% |
| ZTM | 511.89 | 629.22 | 117.33▲22.90% | OIS | 543.42 | 667.24 | 123.82▲22.79% |
| STI | 1285.17 | 1623.91 | 338.74▲26.36% | | | | |



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- big_tech_companies.csv
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Big Tech Stock Price Dataset

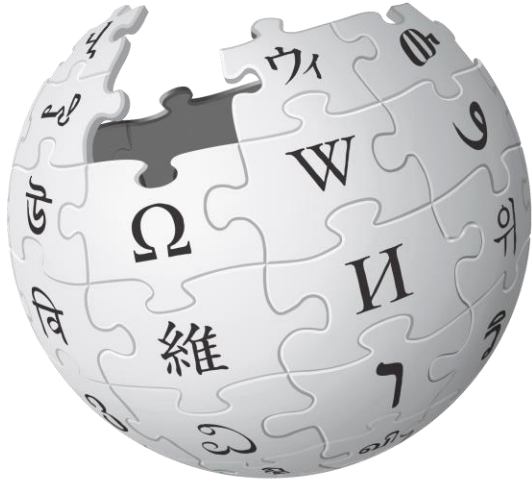
| Variable | Class | Description |
|--------------|-----------|--|
| stock_symbol | character | Stock symbol |
| date | double | Date |
| open | double | The price at market open |
| high | double | The highest price for that day |
| low | double | The lowest price for that day |
| close | double | The price at market close, adjusted for splits |
| adj_close | double | The closing price after adjustments for all applicable splits and dividend distributions. Data is adjusted using appropriate split and dividend multipliers, adhering to Center for Research in Security Prices (CRSP) standards |
| volume | double | The number of shares traded on that day |

Events Timeline Dataset (External)

| Variable | Class | Description |
|--------------|-----------|------------------------------------|
| stock_symbol | character | Stock symbol |
| date | date | Date |
| description | character | Short description of what happened |

DATASETS

HOW WE COLLECTED DATA MANUALLY



WIKIPEDIA
The Free Encyclopedia

Bloomberg

**The
Guardian**

The New York Times



WHAT ARE SOME **USEFUL**
INDICATORS THAT NEWBIES
MUST KNOW?

SMA (SIMPLE MOVING AVERAGE)

$$\text{SMA} = \frac{A_1 + A_2 + \dots + A_n}{n}$$

where:

A_n = the price of an asset at period n

n = the number of total periods

EMA (EXPONENTIAL MOVING AVERAGE)

$$EMA = \text{Price}(t) \times k + EMA(y) \times (1 - k)$$

where:

t = today

y = yesterday

N = number of days in EMA

$$k = 2 \div (N + 1)$$

BOLLINGER BANDS

$$BBands_i = x_i \pm \sigma_i * d$$

SMA of price for given period

of standard deviations away from mean (bandwidth / 2)

observed value for single period

standard deviation of SMA over a given period

α

TECHNIQUES

numpy - For numerical calculations

pandas - For data manipulation and analysis

plotly - For interactive data visualization

dash/jupyter_dash - For creating interactive web applications

ipywidgets - For interactive controls in Jupyter

Big Tech Stock Dashboard

Company:

AAPL

Technical Indicators

Simple Moving Averages:

- ☐ SMA 20
☐ SMA 50

Exponential Moving Averages:

- ☐ EMA 20
☐ EMA 50

Bollinger Bands:

- ☐ Show Bollinger Bands

AAPL Stock Price



Tech Stock Response to Major Events

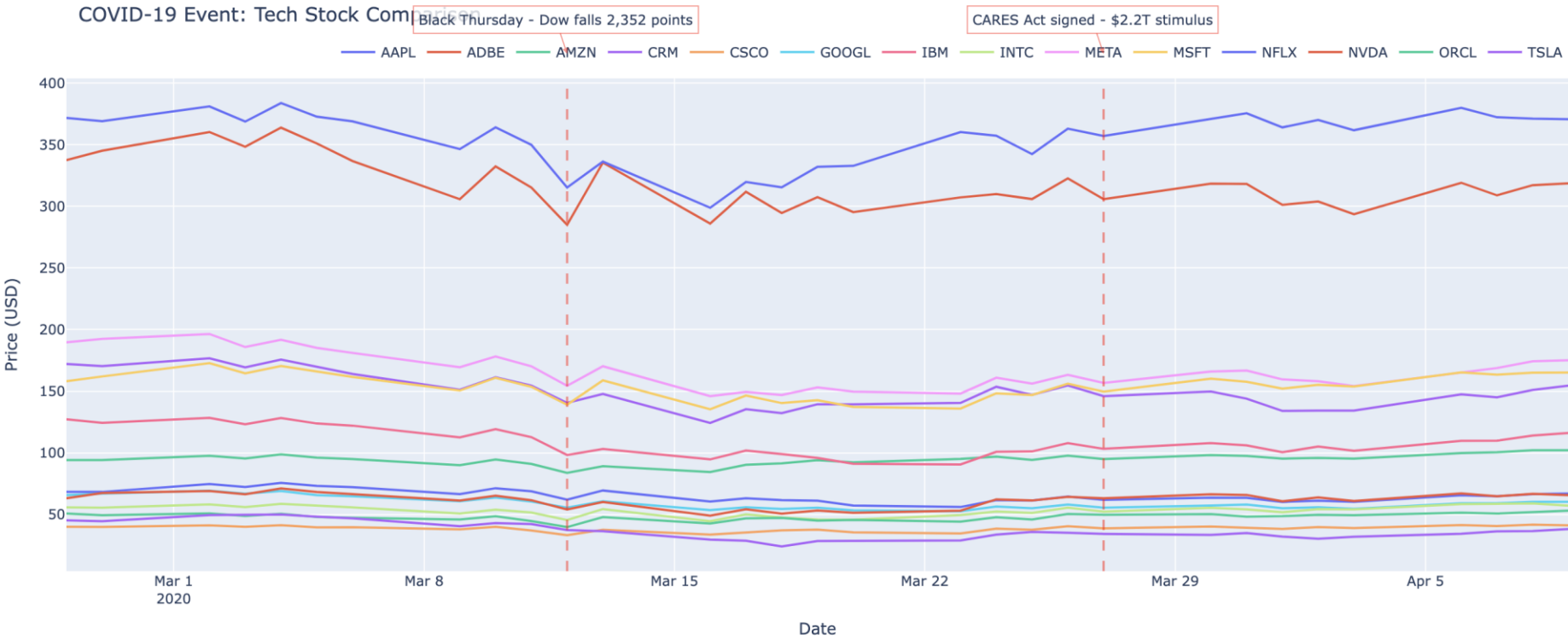
Select Event:

COVID-19

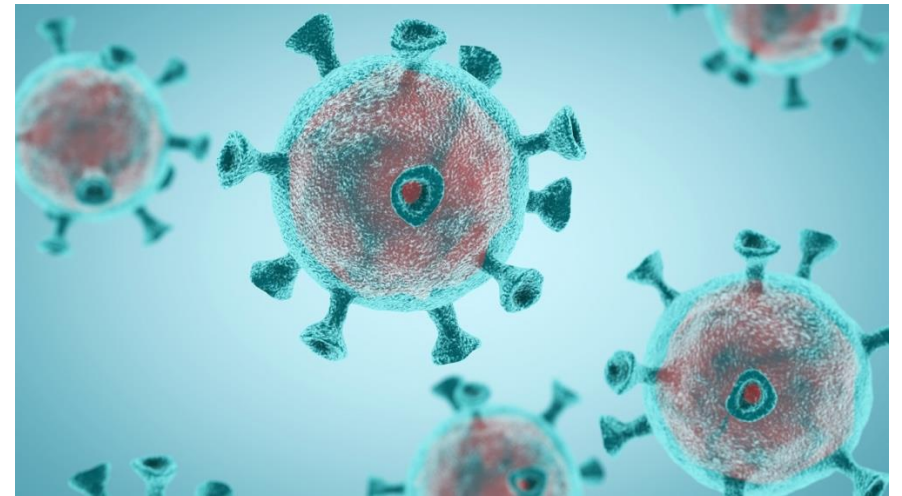
Normalize Prices:

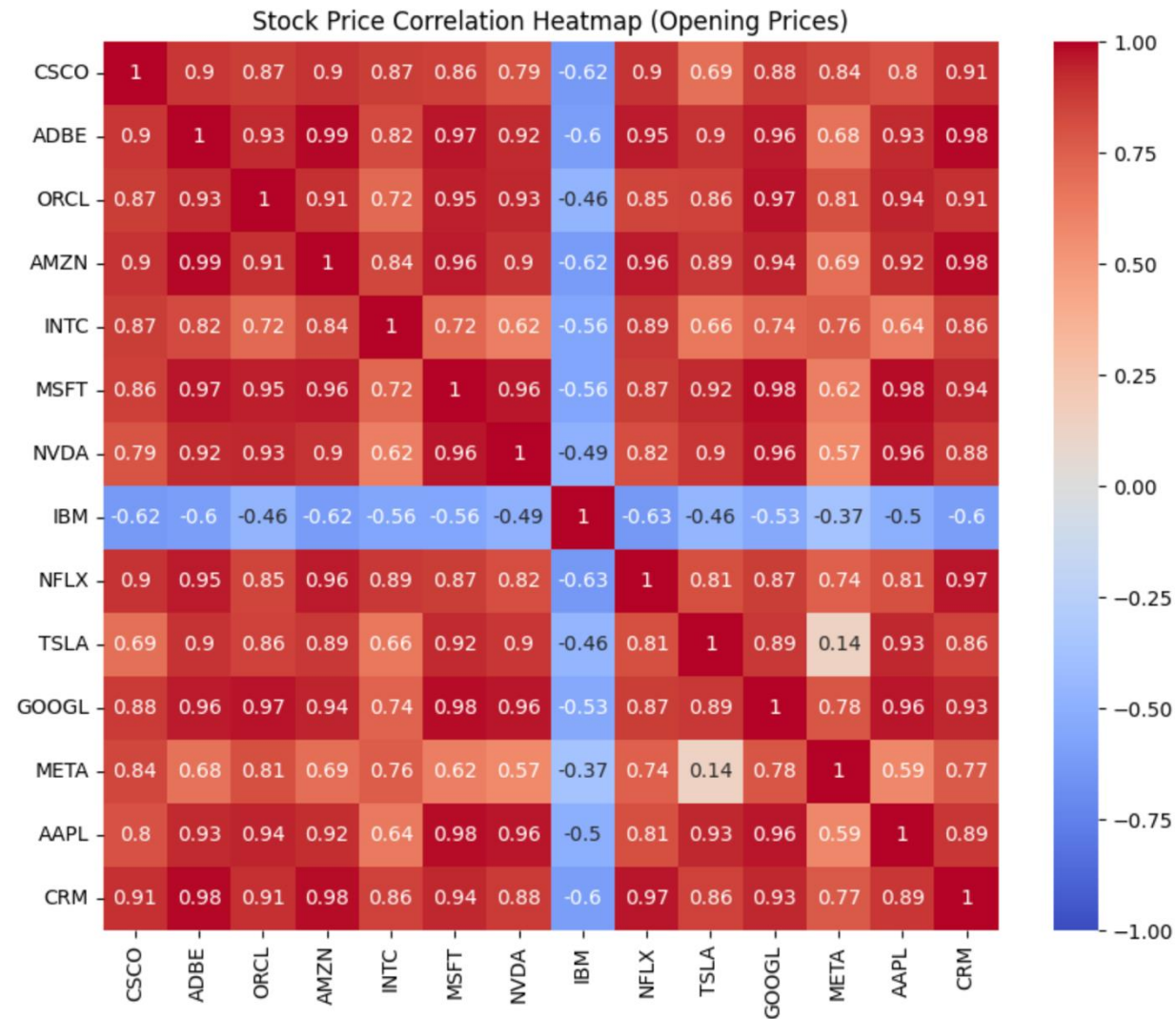
☒ Absolute Price

☐ Percentage Change



HOW DID **MAJOR**
ECONOMIC EVENTS (COVID-
19 PANDEMIC, THE RISE OF
LLMS) AFFECT DIFFERENT
TECH STOCKS?





QUESTION 3: CORRELATION OF BIG FIRMS

THANK YOU
FOR
LISTENING

