The following is an outline for your final project write-up. In addition to the write up, I will also grade your actual visualization for level of effort and creativity. You will need to submit all your code/workbooks/data that you used to create the visualization. If any of these are not available (such as your data is too large to upload or is privately maintained) that is fine, just note that somewhere in the write-up.

Visualizing the Effect of SARS-COV-2 on the American, European, and Asian Stock Equities

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## Introduction/Background

As 2020, SARS-COV-2 or more commonly known as the Novel Coronavirus 2019 has devastated equities across all global markets. From affecting airlines in China, region lockdowns, frozen supply chains to mass hysteria. Coronavirus has affected the global markets nearly as hard as the 2008 crisis as corporations and companies alike scramble to refit to remote operation. Loss of productivity and consumers worldwide as practice of social distancing enacts in almost all regions.

The purpose of the visualization is to pinpoint key events along the Coronavirus’s timeline to pinpoint correlations of key shutdowns, country announcements, and key news headlines effect onto stock market indices such as the Dow Jones Industrial Average(DJI) for the representation of American markets, Nikkei 225 (NI225) for the Japanese Market, Financial Times Stock Exchange (FTSE) for the London markets. By tracking region specific headlines, and their effects on their correspondent stock exchange alike with their effects on neighboring or global stock exchanges as well.

## Audience/Purpose of Work

The purpose and targeted audience of this visualization is the general public or any who are interested in viewing the timeline of the global stock exchanges in correlation to the timeline of the global pandemic in a concise and organized manner. With many key federal actions such as reduction of the federal interest rate to news of potential lockdown of New York City, any of these headlines will be summarized alongside for anyone interested in seeing how the pandemic crisis escalated and mass hysteria drives a freefall of stock trading.

## Dataset(s)

All historical data for the stock indices will be downloaded off of Yahoo! Finance. An example URL for the DJI data is as follows, the formatted Data includes 7 columns and n rows, n being the amount of days to be tracked. <https://finance.yahoo.com/quote/%5EDJI/history?p=%5EDJI>

|  |  |
| --- | --- |
| Column Name | Description |
| Date | The date of each day, important to viewing relative time throughout the data |
| Open | The price at stock market open |
| High | The highest price during the trading period |
| Low | The lowest price during the trading period |
| Close | The price at stock market close, important as this is the main indicator of the price of the index |
| Adjusted Close | The price at stock market close, adjusted to account for dividends and splits |
| Volume | The amount of shares being exchanged within an index, important for gauging stock market activity |

## Visualization Methods

This section should describe the types of charts that were used in your visualization and why you chose them (why were they good options to show what you were trying to show for that chart). Here you can also mention other charts that would have been good options as well, but you decided not to use (either because of personal preference or because of technical difficulties). This section should also describe the software platform(s) that you used (Tableau, R, Python, JS, etc…)

## Results

Here is where you describe your visualization and how to operate it. Think of it as a mini user guide. I am your user and I am your grader, so you should try to describe it in enough detail such that I can work it. Pictures of proper navigation would be useful. You MUST include how I am to access your visualization (URL or Workbook etc…). If you have developed a website, but do not have a place to host it, that is fine, just write instructions on anything special (other than starting a local server) that I need to do to view it on my own machine. I have a Macbook, Windows and Linux computer at home so I can run it on any platform you require, just tell me which one.

## Discussion/Future Work/Complications

Here, record any last thoughts on your visualization. Include any future work that you wanted to do or will do in the future. Also include any complications that you ran into. This is the opportunity for you to explain why your visualization does not match up with what you proposed or why it is broken or incomplete.

## Work Cited

Use any reasonable format for these. Cite any picture that you use that is not your own (just the website will do). Also cite any text you borrow from other sources throughout

Figure 1. Credit: <https://playground.anychart.com/chart-types/choropleth-map>