Stocks and Trees by The Pipeliners

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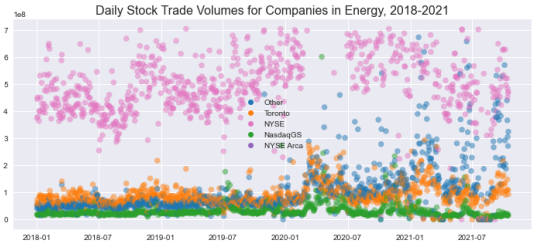
Goal

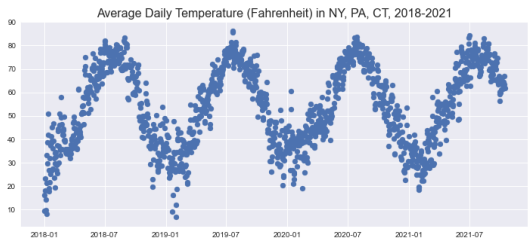
The stock market has always been a dynamic presentation of both economic activities and energy consumption across countries and economic sectors. Stock market activities are hence expected to have a significant effect on environment indicators such as CO2 emissions, greenhouse gas emissions etc. Many studies find that weather has a close relationship with human's mood and behavior. Hence, weather factors might also have an impact on stock return and trading volume.

We are interested in exploring how environment and weather indicators and stock markets are correlated and tied together. Our results can enable us to build models to predict risk events and discover investment opportunities based on environmental variations

Final Product

We created an interactive user interface that lets users choose environmental factors and industries to analyze. Then, by pulling corresponding data from the cloud database, the program will provide visualizations of pertinent information that communicates common trends between gas emissions or temperature and stock success by industry over the past 40 years.





What We Did

Our first order of things was to get used to the data set and research the problem. Once we had defined our hypothesis, we familiarized ourselves with the Snowflake platform and unload data to Python for analysis. Next, we cleaned data, performed EDA, and decided on visualizations. After that we proceeded to build the interactive programming tool. And we finally ended the competition with testing and writing the reports.

Insights

Through our process of creating the demo and analysis of the data, we found a need to be concise and decisive about our decisions every step of the way. We discovered as data scientists the importance of exploring the data to its fullest and the impact it makes. Along the way, we realized that we need not be bogged down by all of the data, nor feel the need to analyze every single piece. Instead, our goal is to provide the briefest summary of the data that fully realizes what the dataset is about. We hope that our small tool can help the people working on this dataset to explore the relations between Environment and the Stock market without being overwhelmed by the wealth of information contained in each of these datasets.

Future Work

We hope to add further compatibility with dynamic plotting in the user interface for more visualizations. We also want to account for a larger set of environmental factors, including precipitation, humidity, and particulate matter. The ultimate goal is to generate more specific correlation matrix metrics to provide specific variable insights to users.