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One of the major challenges faced during implementation of this project was finding a reliable API that provided free and clean stock market data. Many APIs either required payment or had complex data structures that made it difficult to extract meaningful correlations. As a result, we had to change our research topic multiple times before discovering Alpaca, which proved to be the most user-friendly and accessible option. One aspect that was easier than expected was asking the user to pick the format they wanted the merged data set in. We were able to use if and else statements along with the to_fileformat (to_csv) function to convert the data set into the required format.

Aside from finding a suitable API, another challenge was making sure the data was consistent. The COVID-19 dataset required significant cleaning, as column names were inconsistent and some values were missing, to guarantee proper alignment of data points. In addition, handling date formats across different sources required careful adjustments to ensure proper merging.

Given that there seemed to be a negative correlation between the data in the CSV file (about covid cases) and the data fetched from the API (about stock prices for an airline), this is very useful information for people wishing to invest in companies during uncontrollable situations, such as the COVID-19 pandemic. There are many more types of stocks to invest in and also catastrophes that can arise at any given moment, so people seeking to invest in specific companies can conduct their own data projects to determine if they will be experiencing negative or positive returns.