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# FINAL PROJECT

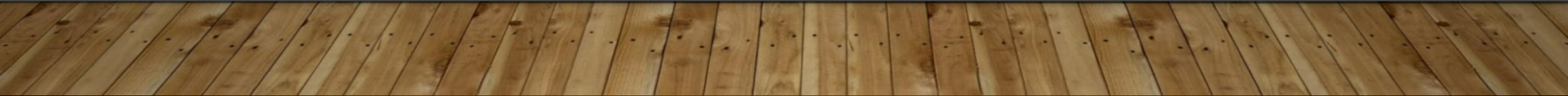
CS 181

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# HIT OF COVID 19 AND ITS IMPACT ON DIFFERENT ECONOMIES

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This project aims to identify the hit of Covid-19 and its impact on different economies. This involves comparing the GDP of different economies before and after the Covid-19. Various data sources are used to determine the behavior of different economies of the world due to the Covid-19.



# DATA SOURCES USED IN THE PROJECT

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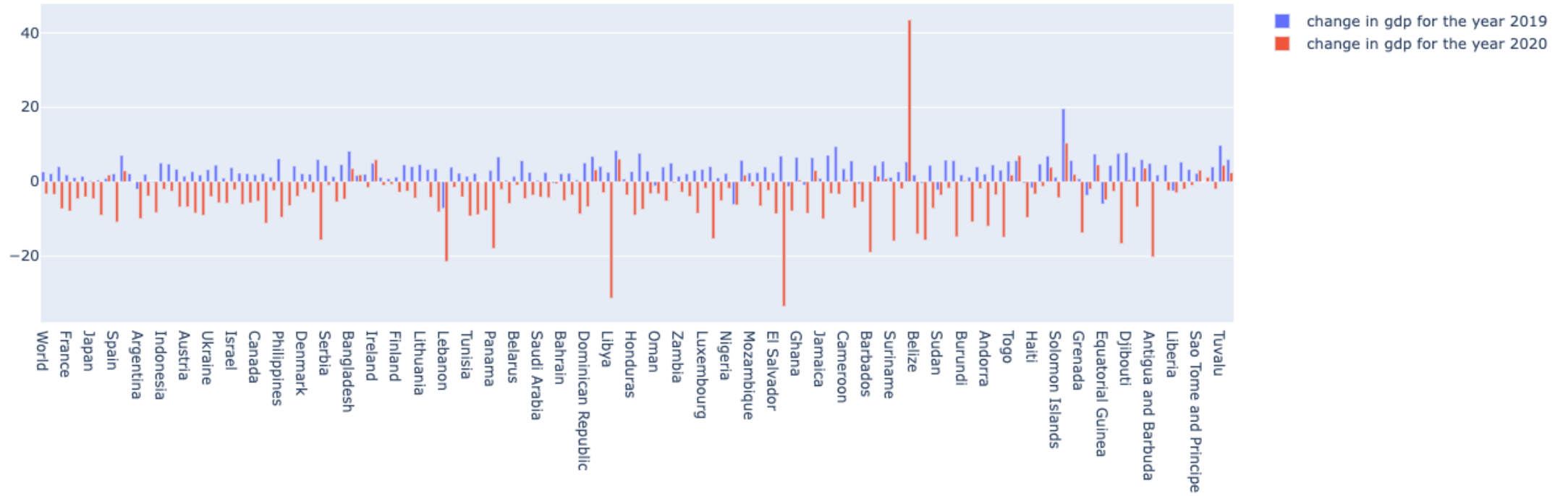
1. <https://www.worldometers.info/coronavirus/> : contains the cumulative cases of Covid-19 (worldwide) in a tabular form.
2. [https://raw.githubusercontent.com/hicala/gdp\\_python-data-mining/main/Per%20the%20World%20Bank%20\(2019\).csv](https://raw.githubusercontent.com/hicala/gdp_python-data-mining/main/Per%20the%20World%20Bank%20(2019).csv) : contains the GDP (US million) of 2019 (worldwide) in a CSV format.
3. [https://raw.githubusercontent.com/adamkissinger/world-gdp-change/main/gdp\\_growth.csv](https://raw.githubusercontent.com/adamkissinger/world-gdp-change/main/gdp_growth.csv): contains the GDP growth (worldwide) from 1960-2020 in a CSV format.

# CHALLENGES FACED DURING DATA ACQUISITION AND PROCESSING

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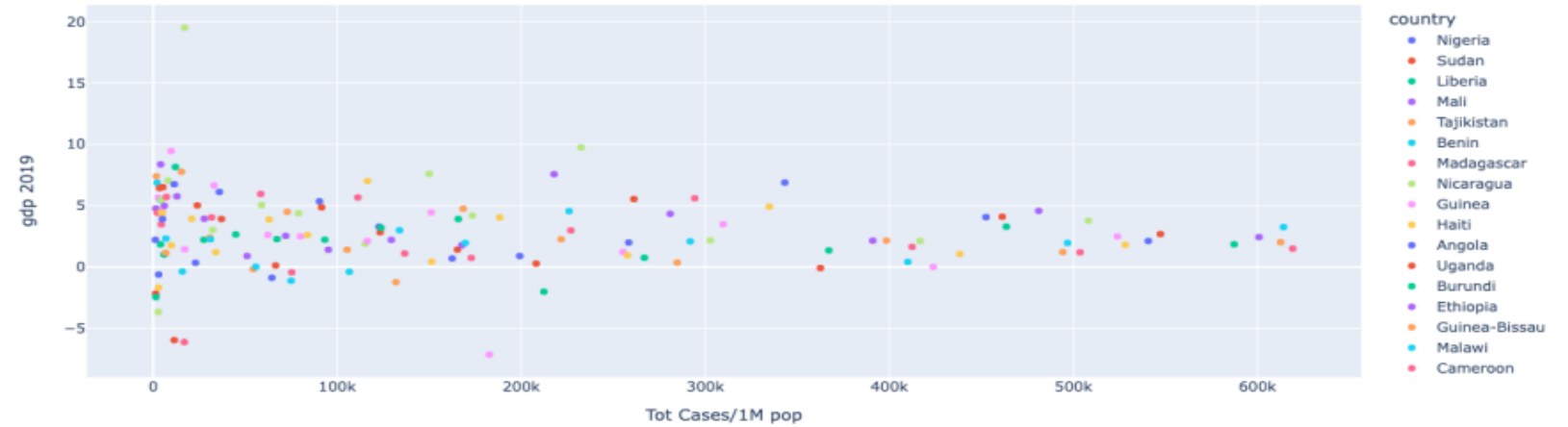
1. Websites would reject connections. Several webpages containing covid data rejected our connection request.
2. Special characters in the headers.
3. We had difficulties decoding raw data.
4. Plotly had a hard time displaying data.

# RESULTS

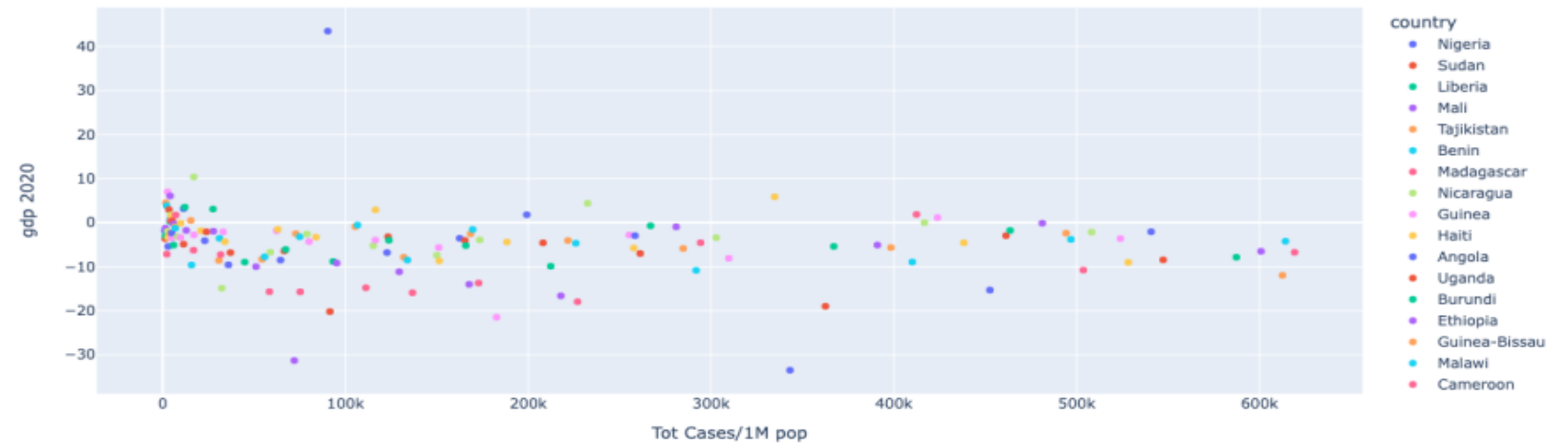


# CONTINUED

Total Cases (Covid)/1M Population against GDP of 2019



Total Cases (Covid)/1M Population against GDP of 2020





# ANALYSIS

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- The results of the scatter plot are surprising, to say the least. If there was a strong negative relationship between the number of COVID-19 cases and the change in GDP, the points in the scatter plot would form a line or curve that slopes downwards from left to right. This would indicate that countries with higher numbers of COVID-19 cases tend to have higher declines in GDP. However, there is no clear relationship between these two variables in the scatter plot; the points are scattered randomly without forming any clear pattern. This indicates that the number of COVID-19 cases does not have a significant effect on the change in GDP for the countries in this data.
- But, as we saw in the earlier bar graph, most countries definitely suffered an economic decline because of COVID-19. A scatter plot alone is not enough to determine the exact relationship between these two variables. One possible explanation for this is the spending in different economies during this time. Many countries, including the United States, increased their spending on goods, whether through welfare programs or the stock market. The stock exchange and financial markets were major factors that drove up investment during this time, which may have resulted in a relatively low decline in many economies, even though other sectors were heavily affected at the time. Other possible reasons include continuation of essential workers and services, as well as the growth of online services and remote work, which helped to support the economy and limit the decline in GDP during the Covid-19 pandemic.

# CONCLUSION

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- It is clear from the scatter plot that there is no strong relationship between the number of COVID-19 cases and the change in GDP for the countries in this data. This suggests that the number of COVID-19 cases alone does not have a significant effect on the change in GDP. However, it is important to note that other factors, such as government spending, the growth of online services, and the continuation of essential workers and services, may have played a role in limiting the decline in GDP in many countries. It is also possible that the scatter plot does not accurately reflect the relationship between these two variables due to the limited data available. Overall, it is difficult to determine the exact relationship between the number of COVID-19 cases and the change in GDP without further information and analysis.



# LEARNING / FUTURE WORK

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- The main thing we learned from this project is the ability to web scrape HTML web pages using python and then parse the content of that specific web page using various useful libraries.
- We also learned the process to create a Database using SQLite3 and then create and populate tables within that Database by writing out the SQL queries.
- Hopefully, we will be able to utilize the learnings from this project in our future projects or work which will help us gain more experience when working with similar tools.

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THANK YOU!

