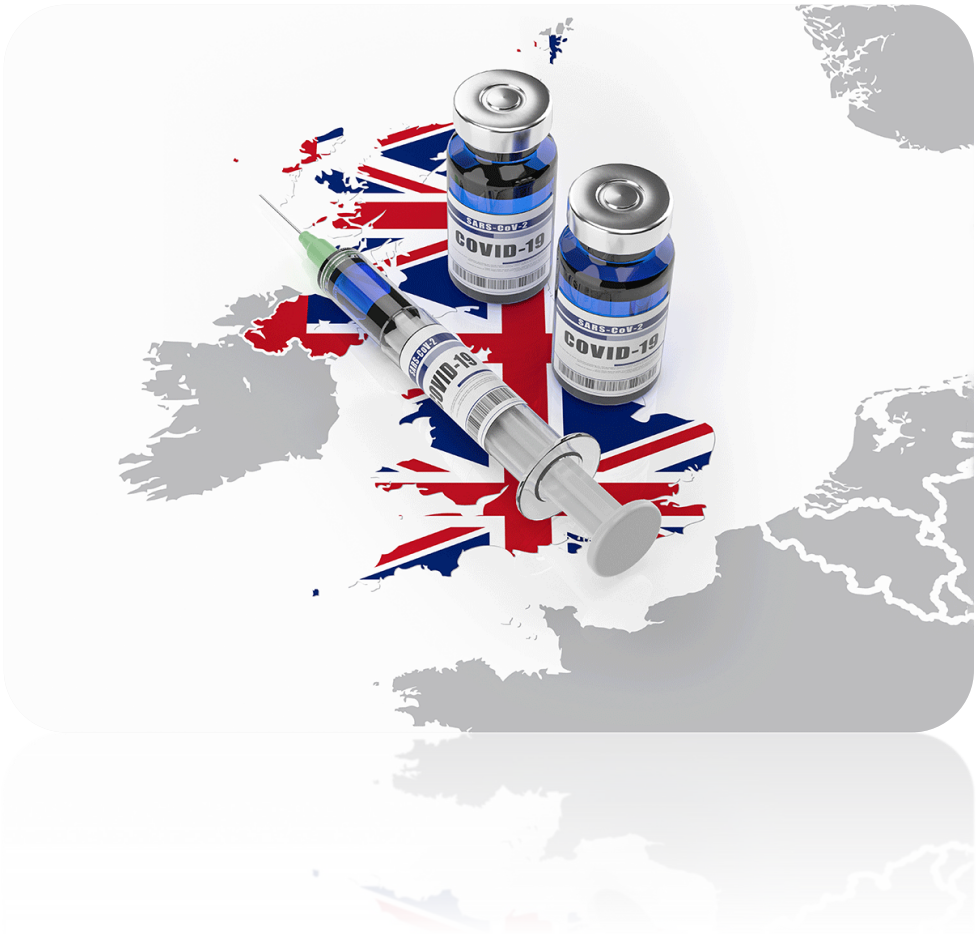

UK COVID Assignment

LSE Data Analytics

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Word Count: 916

Link to GitHub repository: https://github.com/v-charlotte/LSE_DA_COVID_analysis

Table of Contents

1. Background and context of the scenario

As per the United Kingdom's government's request, the report presents an in-depth analysis of COVID-19 data (from January 2020 to October 2021). The initial goal is to increase the number of fully vaccinated individuals (people who have received a first and second dose of the vaccine). Furthermore, the United Kingdom's government is planning to launch a series of marketing campaigns around the country in order to promote the COVID-19 vaccine. For this reason, the United Kingdom government wishes to identify trends and patterns within the provided data that can be used to inform the government's marketing approach further for its end goal of increasing the number of fully vaccinated UK inhabitants.

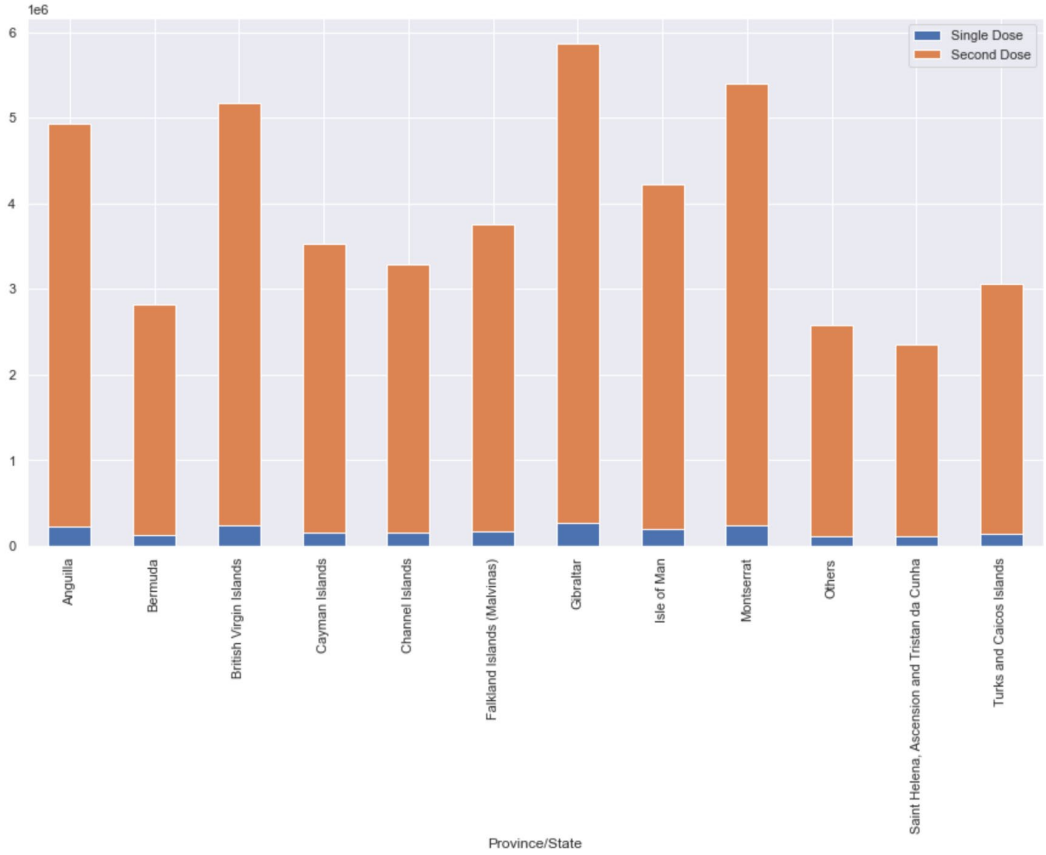
The report below depicts the insights retrieved after having taken the UK's given COVID-19 data, cleansed it thoroughly, analyzed it, and extracted the necessary key insights to answer the UK governments pressing COVID-19-related questions for its marketing team.

2. Analytical approach

The analytical approach made was to thoroughly study the data as it is essential to explore the comprehensive data, given that typical mistakes may occur during this phase if the data has not entirely been read and studied effectively. After having studied the given data, given the UK government's request, various portions of data were selected and transformed into data frames and later into tables and charts for the purpose of visualization and better analysis, as seen below.

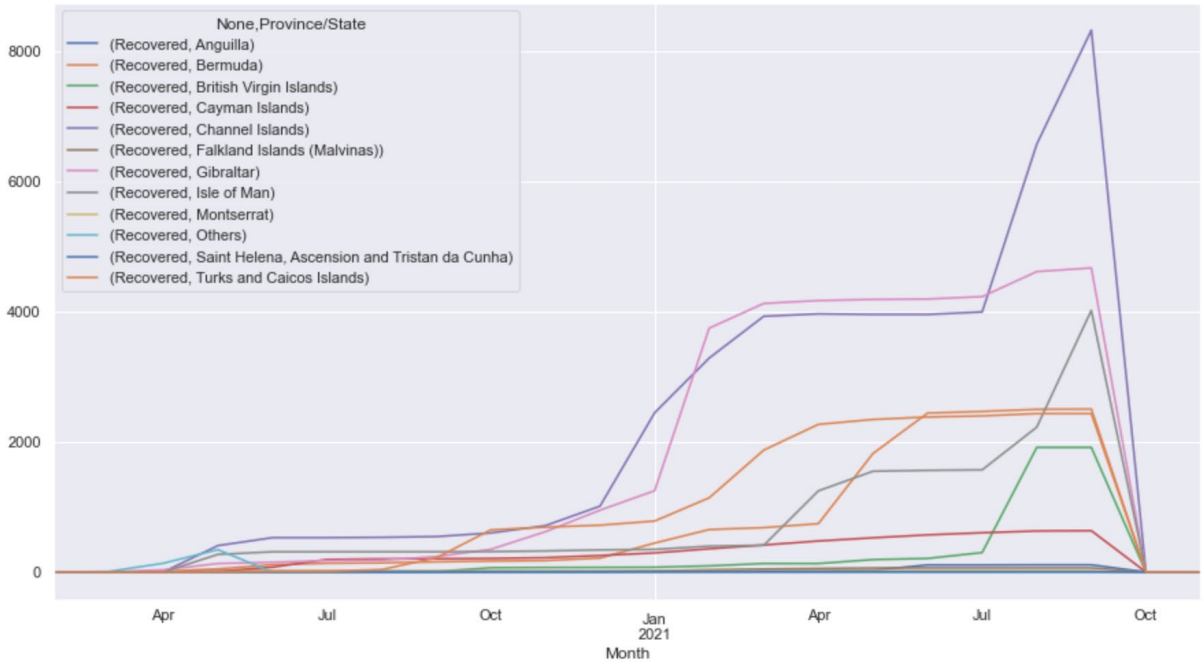
3. Visualizations

Table 1: The number of UK inhabitants expecting a second dose



The table above depicts the number of UK inhabitants who have had their first vaccine dose and awaiting their second. It may be noticed that the first expecting state/province is Gibraltar, followed by Montserrat, the British Virgin Islands, and Anguilla. On the contrary, the last three who are not are Bermuda, others, and lastly, Saint Helena, Ascension, and Tristan da Cunha.

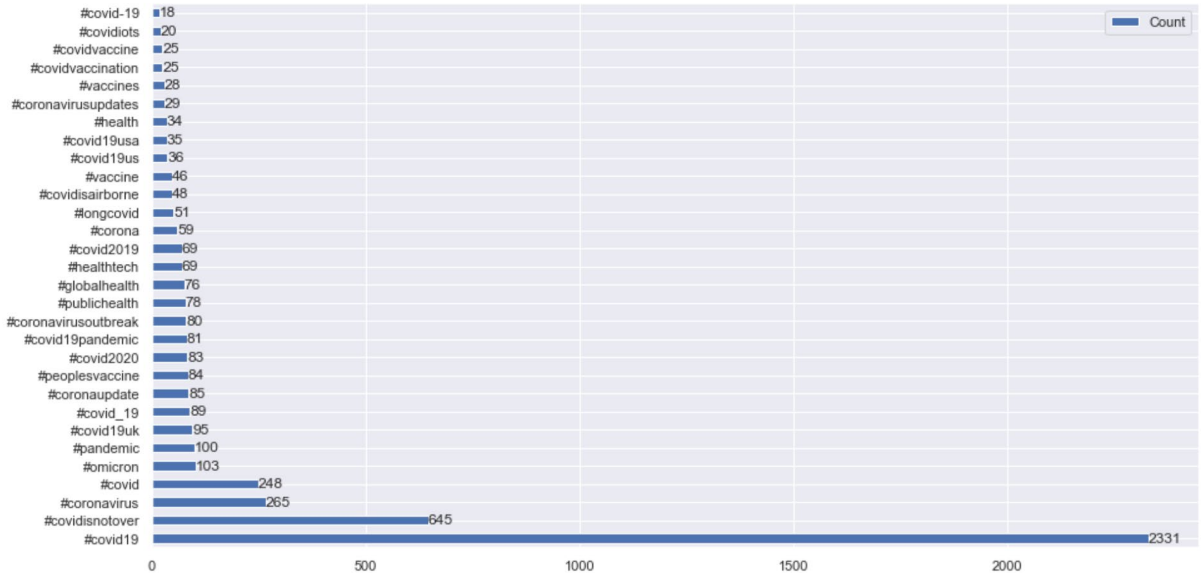
Table 2: Total number of recoveries from January 2020 to November 2021



The table above depicts the UK Covid-19 data's total number of inhabitant recoveries from January 2020 to November 2021. It may be noticed that there is a gradual increment beginning in early 2020 which starts being noticed around the end of February, the start of April. This trend then increases steadily until the end of 2020 and heavily steeps up in December 2020, the start of January 2021. A second steep slope increases in all provinces/states in August 2021 and September 2021 until there is a downward slope at last.

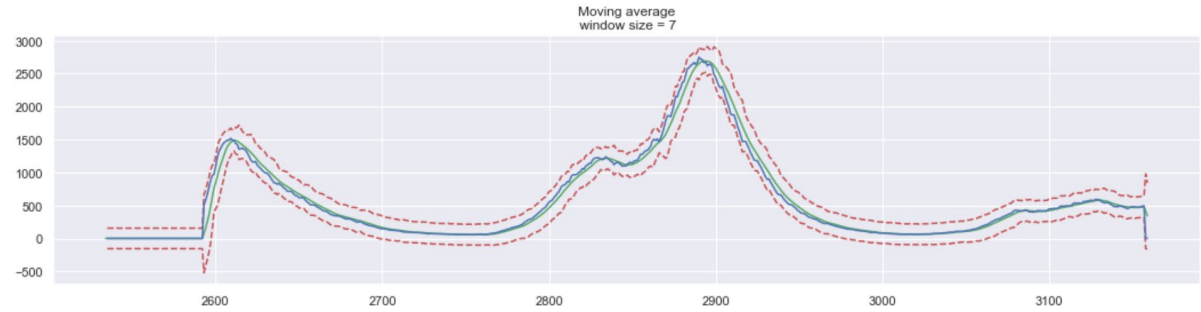
In terms of the order about which province/state had the largest cases of recoveries, it is seen that in the first place it is the Channel Islands (purple), followed by Gibraltar (pink), and third it is the Isle of Man (grey).

Table 3: Hashtags in 200 Tweets between March 18 - 20



The above table is highly revealing in terms of what current events are occurring globally. Naturally, the hashtag #covid19 was the most prevalent at the time with 2,331 Tweets. Furthermore, it is noticed that only about two percent (2%) of Tweets included the keyword “vaccine”. Overall, seventy percent (70%) of Tweets mentioned COVID indicating the grandeur of the current event the Covid-19 pandemic was.

Table 4: Moving average with a window size of 7



The graph above demonstrates the overall moving average of Covid-19 happening. As naturally happens with a pandemic, the pandemic “waves” may be noticed occurring. The first happening in April 2020, the second (and largest) in February 2021, and a small elapse occurring in October 2021.

4. Patterns, trends, and insights

As per the Covid-19 vaccinations, it is noticed that Gibraltar obtained the greatest number of differences between the first vaccine dose and the second vaccine dose. Furthermore, it is understood that all provinces / states obtained the same percentage of fully vaccinated UK individuals. When it comes to “others”, in Northern Europe, the province / state had the highest cumulative number of cases, and also in “others”, it had the highest total number of deaths.

Regarding the monthly trends, it may be seen that Bermuda and the Cayman Islands had the highest increment (a steep slope) when it came to the number of deaths. Additionally, Gibraltar, the Channel Islands, and the British Virgin Islands had more of a flatter slope in the number of deaths. Looking at the recoveries, there have not been any data updates since August 2021.

Moving on to the daily trends, it is seen that the Isle of Man and Bermuda have a relatively higher number when it comes to daily number of deaths. Furthermore, it is noticed there are peak numbers of deaths in the Summer times, more specifically in July and August for the British Virgin Islands.

When it comes to suggestions for decision-making, Bermuda and the Isle of Man should be the first two targets for the United Kingdom government. Regions like Gibraltar, the Channel Islands, and the British Virgin Islands should be avoided for the moment. Lastly, data should be gathered and reported in a more efficient approach to avoid a lack of data procurement if future trackings are necessary.

The presented external data insights obtained are that there were only 2% of tweets that included the keyword “vaccine” however, 70% of the tweets effectively mentioned the keyword COVID.