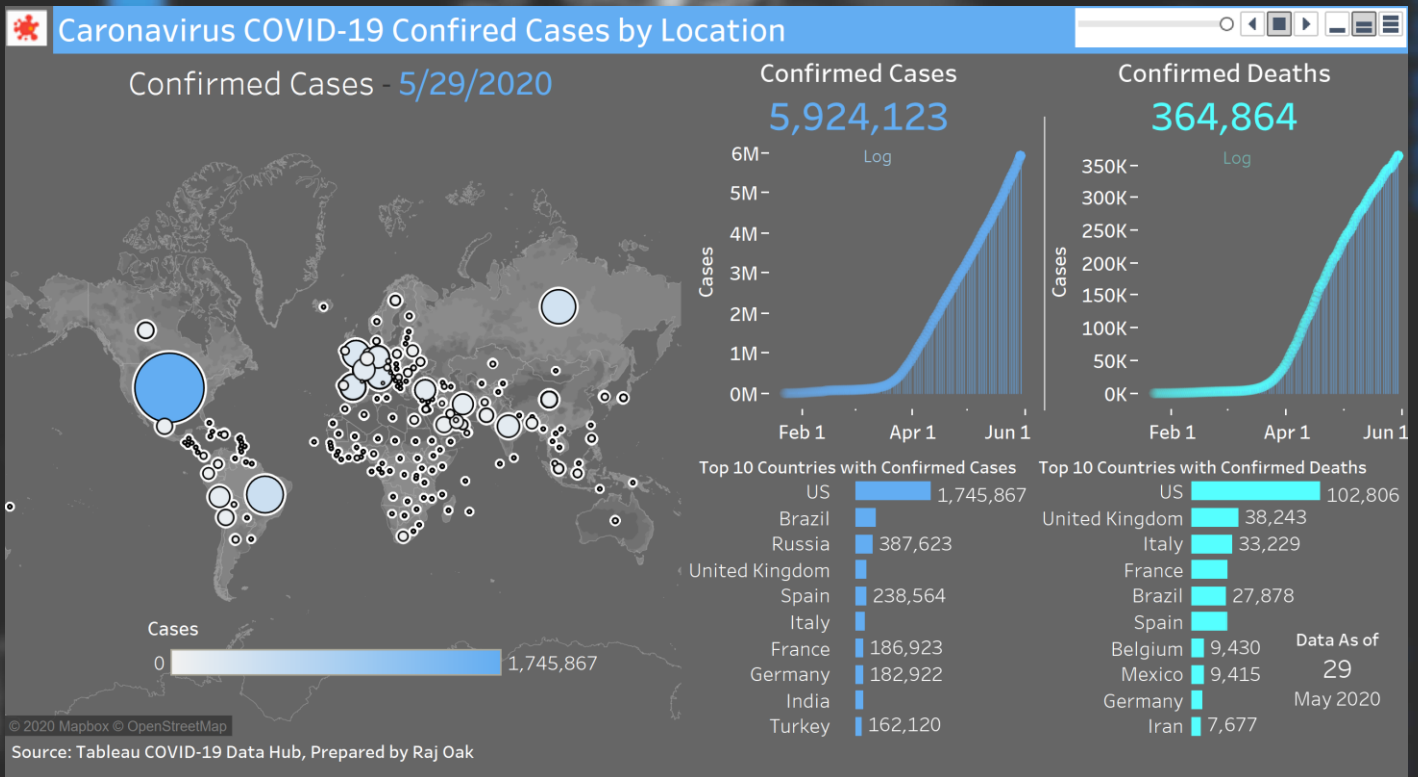


COVID-19

Confirmed Cases Data Analysis

Raj Oak

May 29, 2020



Purpose

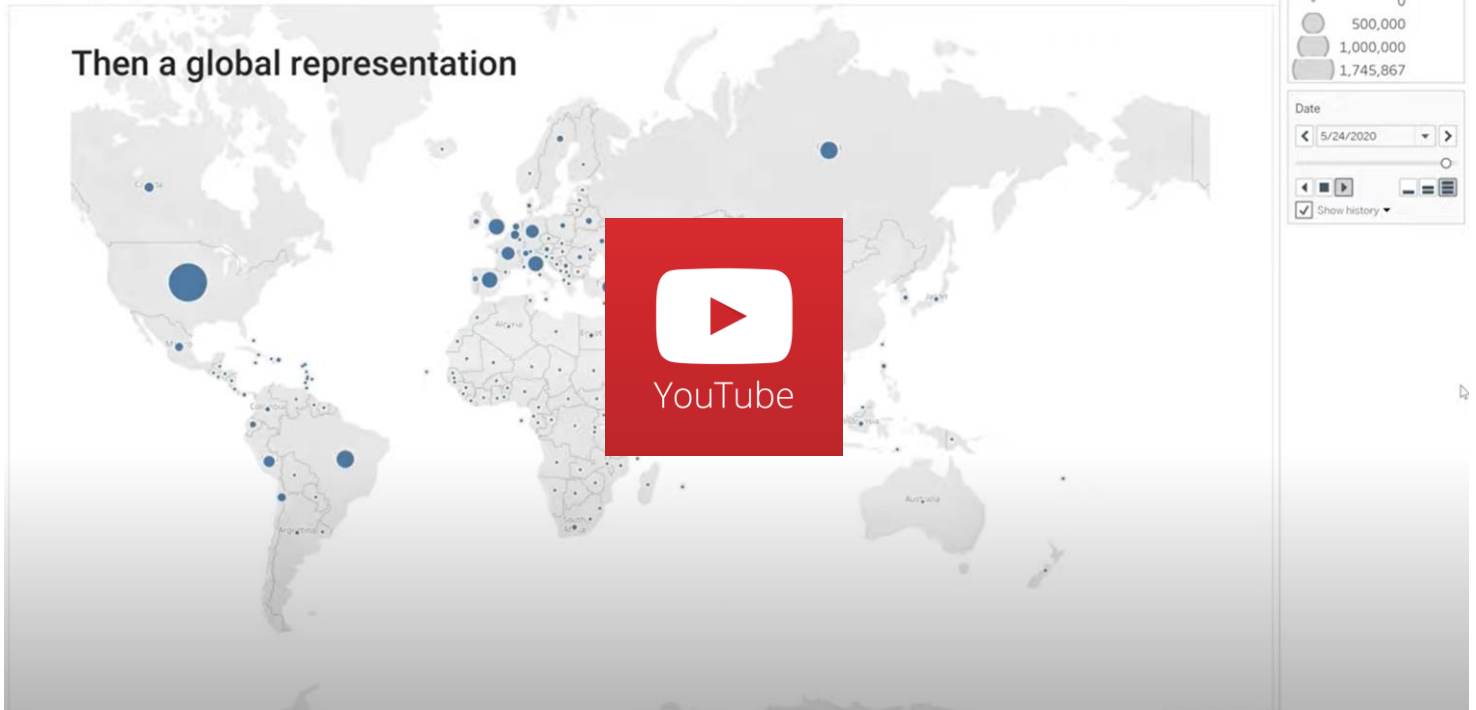
COVID-19 Confirmed Cases Data Analysis project and report is made as a personal project to gain experience and expertise in data analysis and building tableau dashboards.

The information in the report cannot be used for any purposes whatsoever without the prior consent of the author. For more information, you can reach out using the contact information provided at the end of the report.

The report will walk the reader through several steps taken to arrive at the final dashboard and some key analytics that can be inferred from the chart metrics.

I would like to thank Anthony Smoak for being the instructor and sharing methods to make professional dashboard.

Map - 5/24/2020



YouTube Video

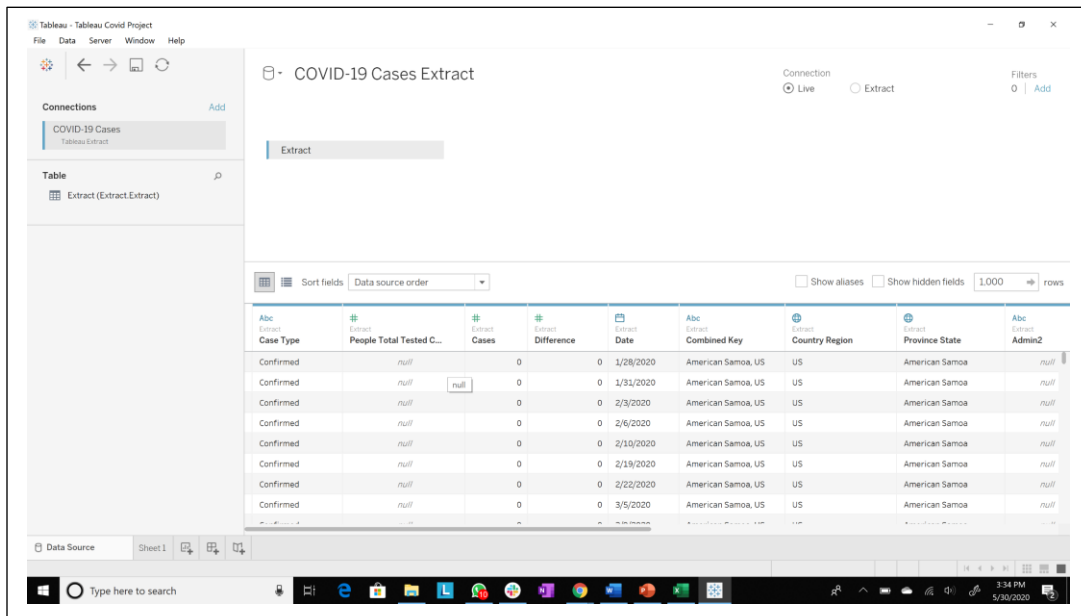
Feel free to have a look at the YouTube video which represents the entire view of the dashboard with animations and periodic impact on the number of cases worldwide with this link:

<https://www.youtube.com/watch?v=MCuP1YY117s>

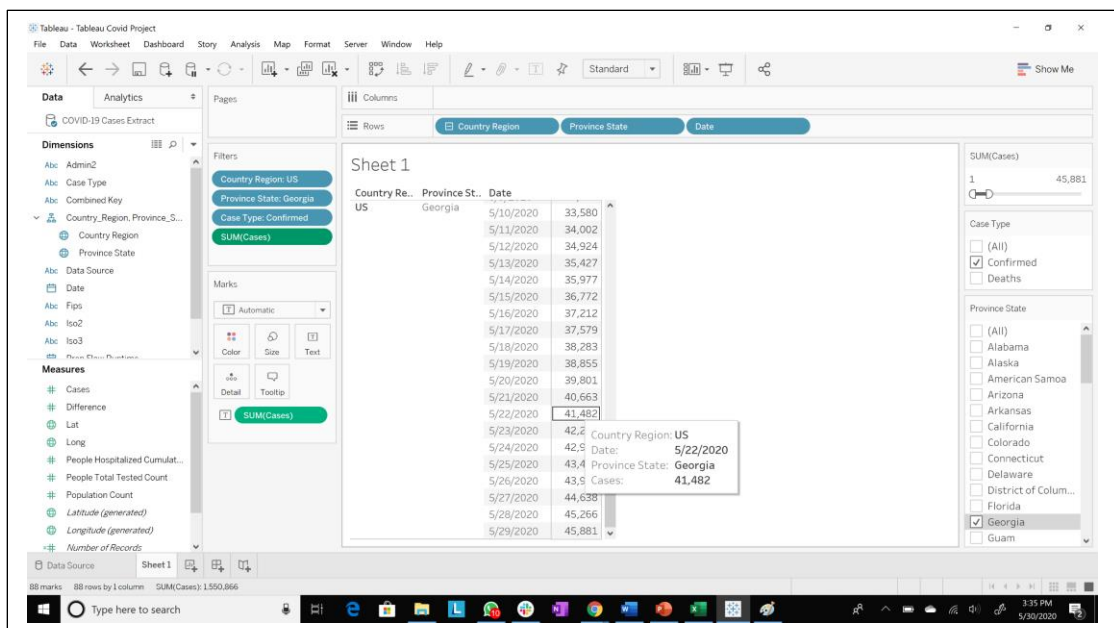
Tableau Public Link

<https://public.tableau.com/profile/raj.oak#!/vizhome/TableauCovidProject/Dashboard2>

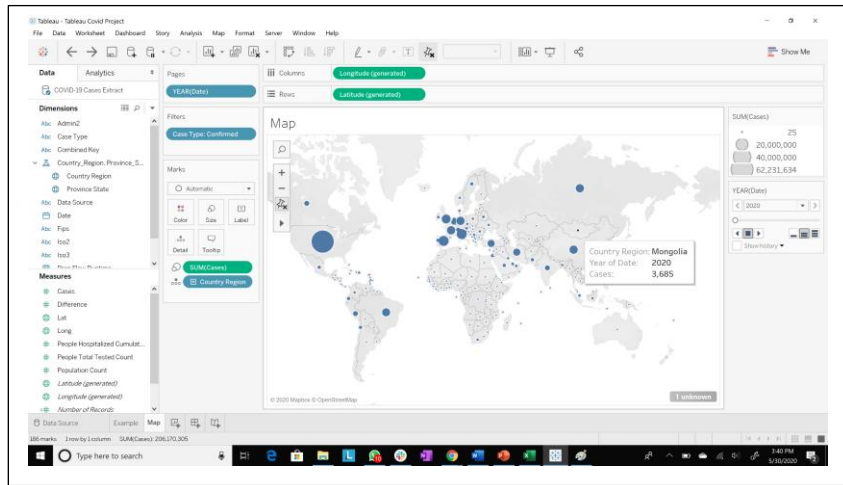
The Process



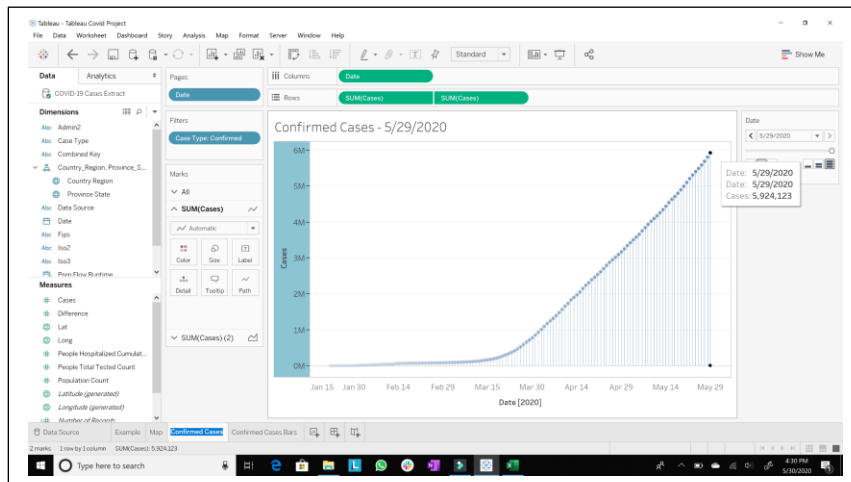
The data was obtained from Tableau COVID-19 Data Hub website which displayed several key metrics till May 29, 2020. The data was imported into Tableau version 2020.1 for analysis.



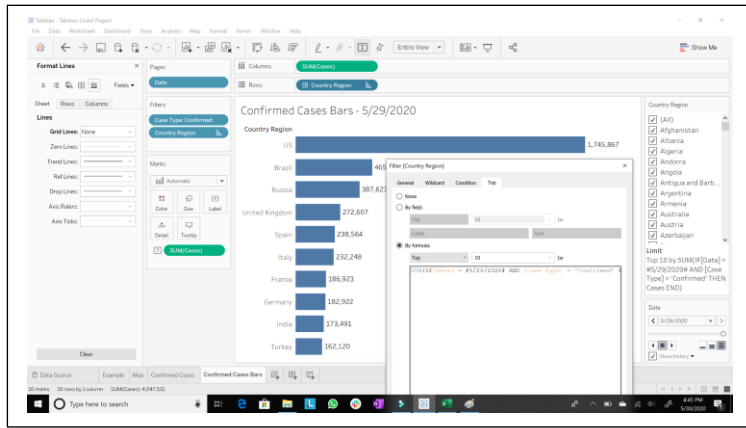
The data was sorted and tested for the continuity for some of the states. The image represents the check done for the US state of Georgia.



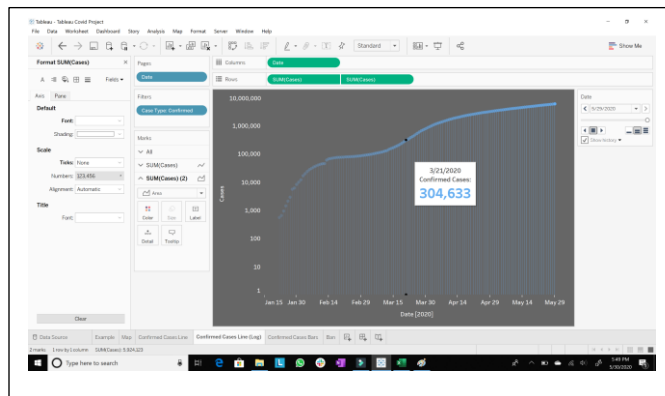
Next, the data for confirmed cases was plot on the world map using latitude and longitude data available. It can be noticed in the video simulation the growth of the virus affected China in the initial stages and as of now (May 29, 2020) has massively impacted the USA.



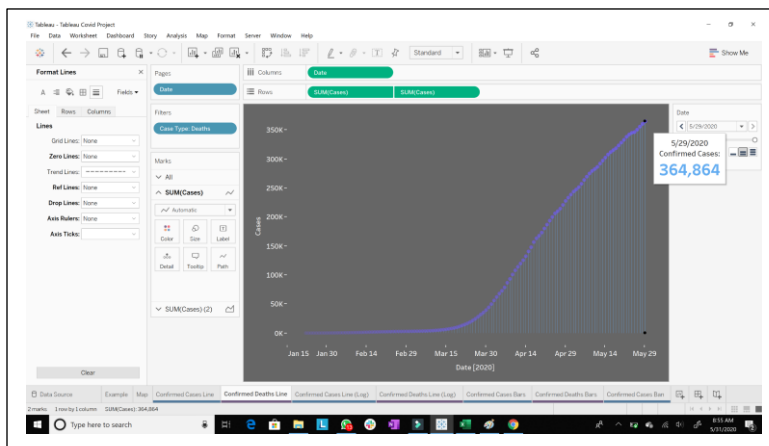
Next, confirmed cases were plot against the time period and it can be noticed that there is a rapid worldwide growth after March 20, 2020. The tooltip indicates the value and the respective date for total number of people affected by the virus.



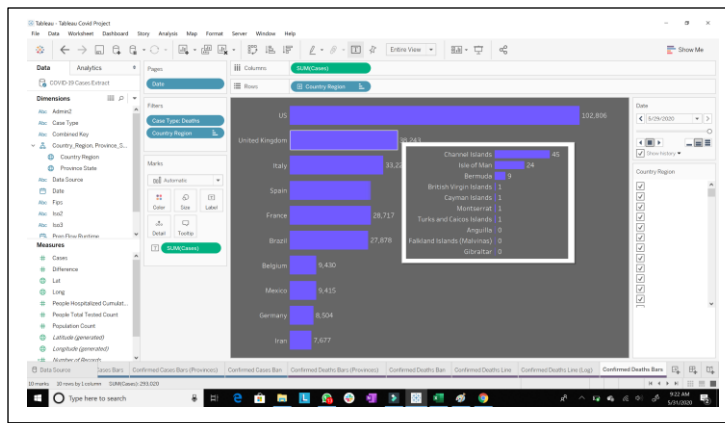
Afterwards, a bar graph is used to depict the top 10 countries that are most affected by the pandemic and as it can be noticed the highest number of patients are in the US with about 1.7 million reported cases, followed by Brazil and Russia.



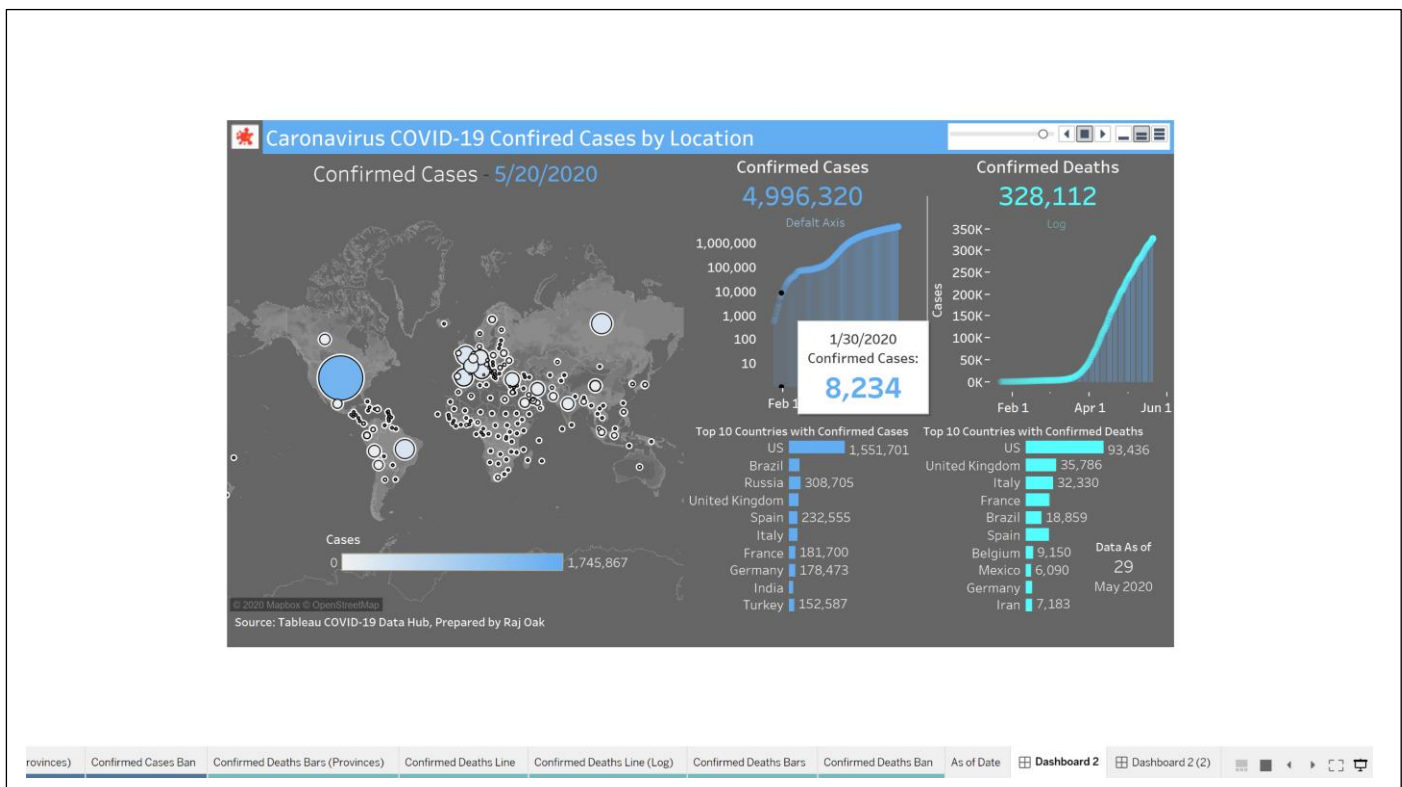
Later on, the total number of cases are represented on a log scale to understand the magnitude in which the cases have rose. The tooltip indicates the number of patients and the date.



A similar line graph is drawn to represent the total number of deaths caused by the virus. The tooltip is used to indicate the total number of deaths worldwide.



A similar bar graph is prepared for the top 10 countries with maximum number of deaths and the tool tip is modified to provide the number of deaths in each province of the country. For example the tool tip in the image shows the distribution of the deaths across several provinces in United Kingdom.



The image above represents the complete dashboard that was prepared by attaching all the elements discussed and some color modifications were done to enhance the appearance. The tool tip provides the relevant information regarding the specific aspects and the date of prediction. The button provided on top of each line chart displays either log scale or the default scale and can be accessed in the presentation mode.



Heartfelt Thanks to All
COVID-19 Warriors

Key Findings

Some of the key findings that are revealed by studying the data are the following:

- The initial cases were rapidly growing in the country of China. On March 3, 2020 the cases reached a high value of about 81,000 and were stabilized to a large extent. At this time, the US registered cases were around 500.
- By March 15, 2020 there was a rapid growth in cases from the US, the cases by this time had reached around 6000 cases. The most rapid growth is experienced by Italy and the total cases by this time was around 31,500 cases. Italy was followed by Germany having about 15,000 cases during the same time.
- By April 1, the number of cases in the US had started increasing at a much higher rate and had reached more than 200,000 and Italy had reached around 110,000, followed by Spain with 104,000 cases.
- By mid-April, around April 15, the number of COVID-19 cases in the US had risen to around 630,000, followed by Spain with about 177,000 cases, followed by Italy with 165,000 cases.
- By May, 2020, there were more than 1.1 million cases in the US, followed by Spain with 215,000 cases and Italy with 207,000.
- By end of May, US was still leading the cases with a total of 1.7 million, followed by Brazil with 465,000 cases and Russia with 387,000. Brazil and Russia had a sudden upsurge of cases by May 19, 2020. The top 5 countries with the highest number of confirmed cases are US, Brazil, Russia, United Kingdom and Spain as of 29 May, 2020.



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Tableau Public Link

<https://public.tableau.com/profile/raj.oak#!/vizhome/TableauCovidProject/Dashboard2>