

PROJECT 2

COVID-19 DATA VISUALIZATION

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Data Visualization – Project 2

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Dataset: <https://www.kaggle.com/datasets/josephassaker/covid19-global-dataset>

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ABOUT THE DATASET

Introduction

This project builds upon the COVID-19 Global Dataset explored in Project 1, which is publicly available on Kaggle at the following link:

<https://www.kaggle.com/datasets/josephassaker/covid19-global-dataset>

This dataset gives a detailed view of how Covid-19 spread and affected people around the world from early 2020 until May 2022. It contains data from 225 countries, including daily and cumulative confirmed cases, deaths, recoveries, testing rates, and per capita statistics.

Objective Statement

The purpose of the COVID-19 Global Dataset is to visualize global and national COVID-19 trends from 2020–2022 using Tableau Public.

Dataset Cleaning & Organization

The dataset was prepared for visualization using Tableau Public. Both the summary and daily subsets were cleaned by removing rows with null values, particularly in columns containing numerical values such as `active_cases`, `daily_new_cases`, `total_deaths`, `serious_or_critical_cases`, `population`, and others.

No additional datasets were added, but the existing data was filtered to include the most relevant columns for visualization, such as `country`, `date`, `daily new cases`, `deaths`, `serious or critical cases`, and `population metrics`.

This cleaned and organized data formed the foundation for creating clear and meaningful visualizations.

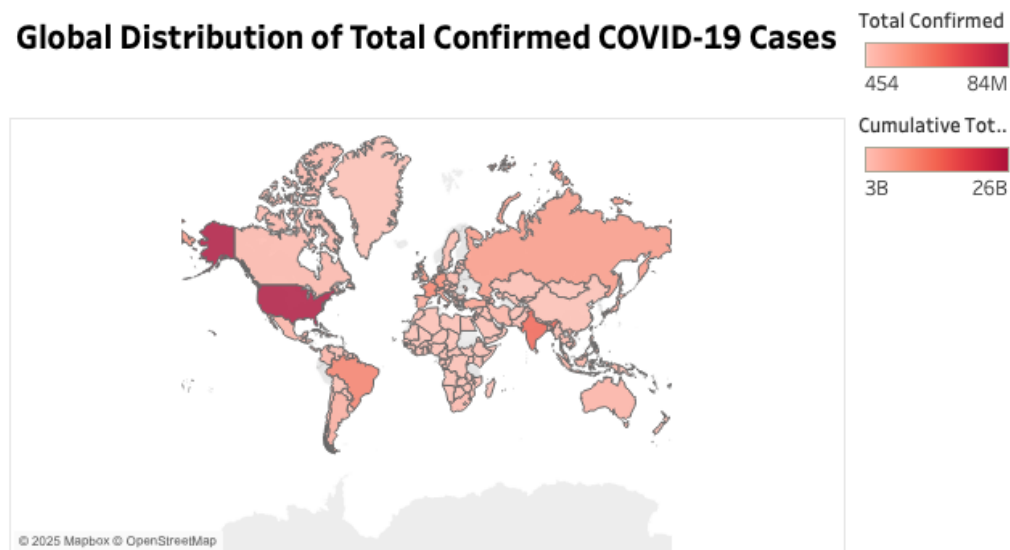
DASHBOARDS

The purpose of this extended project is to deepen the analysis of the COVID-19 pandemic's impact by creating multiple interconnected dashboards. For this project, I have created three interconnected dashboards that together tell a cohesive story about the COVID-19 pandemic.

Dashboard 1: Global Overview of COVID-19 Impact

Global Overview of COVID-19 Impact

Global Distribution of Total Confirmed COVID-19 Cases



Top 10 Countries by Cumulative COVID-19 Cases (as of Dec 31, 2022)

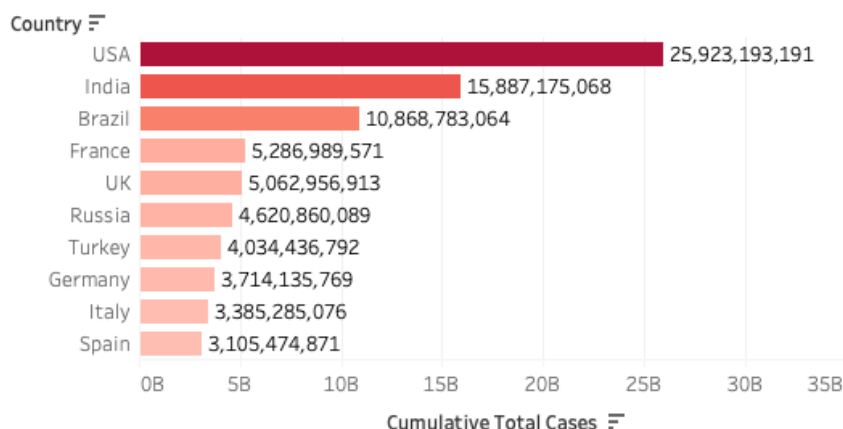


Figure 1: Global Overview of COVID-19 Impact

Link: https://public.tableau.com/views/Dashboard1_17532213817040/Dashboard1?:language=en-US&publish=yes&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link

This dashboard presents a high-level view of the worldwide impact of COVID-19 during the years 2020 to 2022. It focuses on identifying the global spread and highlighting the countries most affected in terms of total cases.

The dashboard includes two visualizations stacked vertically to show the global impact of COVID-19. The first is a map highlighting total confirmed cases by country, using darker reds to show higher case numbers. Below it, a bar chart shows the top 10 countries with the most cases. Together, these charts give both a big-picture view and a closer look at the hardest-hit countries.

Dashboard 2: COVID-19 Severity & Spread: U.S., India, Brazil

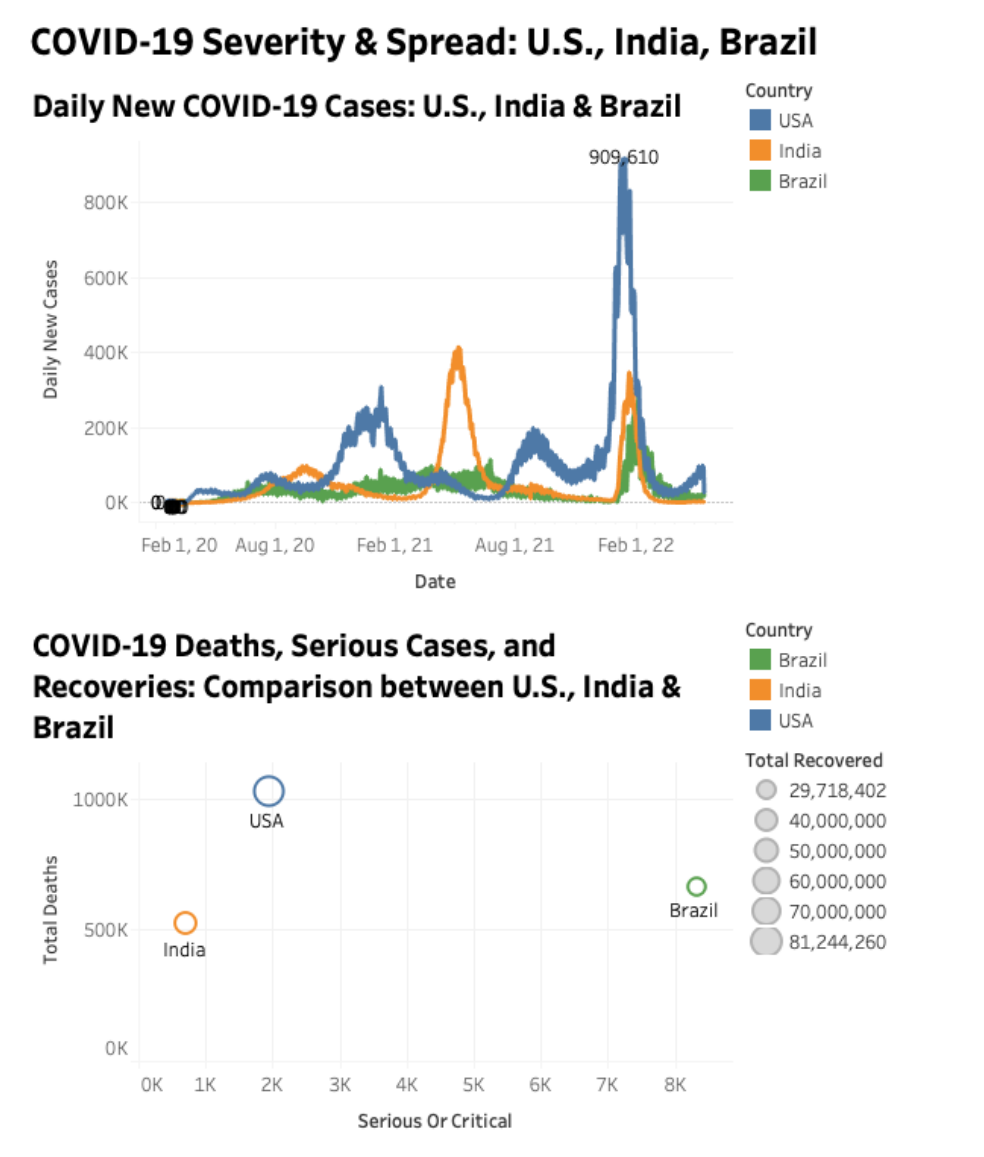


Figure 2: COVID-19 Severity & Spread: U.S., India, Brazil

Link: https://public.tableau.com/views/Dashboard2_17532814103050/Dashboard2?:language=en-US&publish=yes&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link

This dashboard tells a of the COVID-19 crisis in the U.S., India, and Brazil, the three countries with the highest number of reported cases.

The dashboard combines two visualizations including the line chart that shows the rise and fall of daily new cases, revealing the pandemic's waves over time and a bubble scatter plot comparing the severity (serious cases and deaths) and scale of recovery (recovered cases). Together, these visuals offer a deeper understanding of how the virus surged, how severely each nation was affected, and how each responded in its path to recovery.

Dashboard 3: COVID-19 Mortality and Recovery in the U.S.

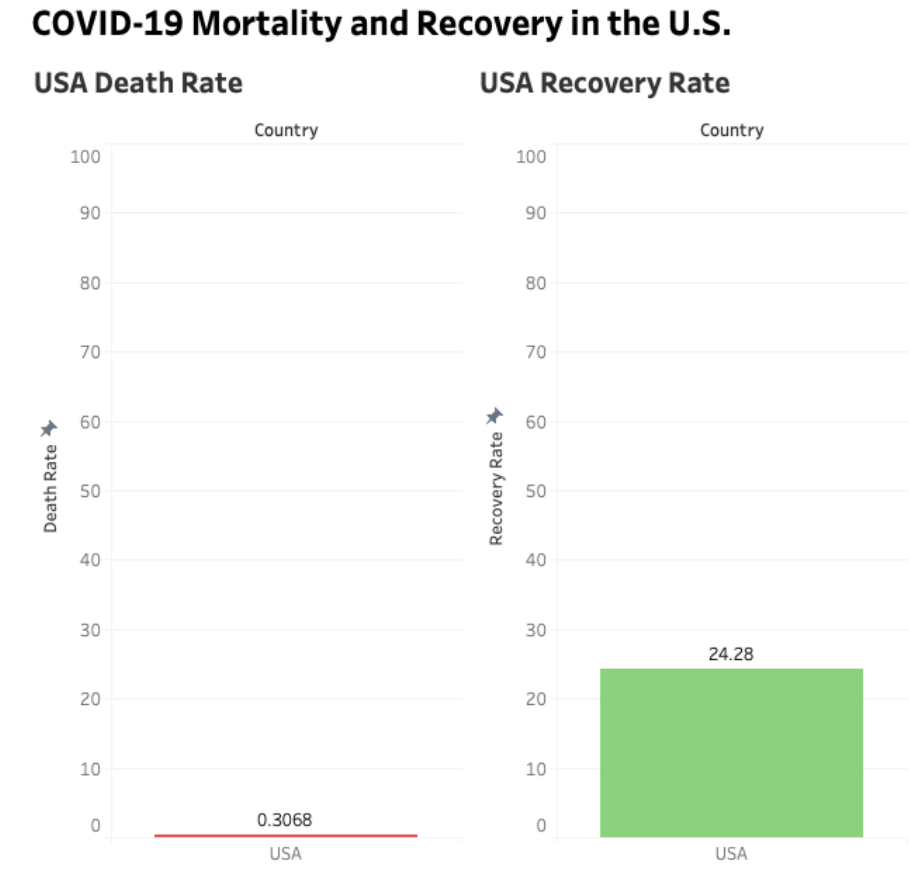


Figure 3: COVID-19 Mortality and Recovery in the U.S.

Link: https://public.tableau.com/views/Dashboard3_17533153421420/Dashboard3?:language=en-US&publish=yes&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link

This dashboard focuses on the human impact of COVID-19 in the United States by visualizing the percentage of the population who died and those who recovered from the virus.

The dashboard displays two vertical bar charts side by side to provide a stark contrast between the mortality and recovery rates, offering a clear, easy-to-understand view of the pandemic's outcomes in the U.S. The consistent axis scales and distinct color choices help viewers quickly comprehend the scale of loss and recovery.

DATA STORY: Tracing the Impact of COVID-19

The COVID-19 pandemic left a profound mark on the world between 2020 and 2022, reshaping lives, healthcare systems, and economies on a massive scale. This data story unfolds across three dashboards, zooming in from a global overview to country-specific comparisons, and finally to a detailed look at the United States, the nation most affected by the crisis.

Dashboard 1 provides a global snapshot. The map and bar chart show the U.S. leading in confirmed cases, followed by India and Brazil. This sets the stage, highlighting not just the scale of the pandemic but also pointing out the countries where the virus hit hardest and calling for deeper analysis.

Dashboard 2 zooms in on the top three affected countries. The line chart shows how the pandemic unfolded differently in each nation: the U.S. had consistently high peaks, Brazil showed a steadier trend, and India had fewer extreme waves. The scatter plot adds more depth, showing the U.S. had the highest deaths and recoveries, Brazil had the most serious cases, and India had relatively fewer severe outcomes. These trends reflect not just case counts, but also differences in healthcare response, policies, and population behavior.

Dashboard 3 focuses on the U.S. In vertical bar charts, we see that while only around 0.3% of the population died from COVID-19, nearly 24% recovered. This contrast between loss and survival underscores both the severity of the virus and the strength of the healthcare system in supporting recovery.

Across all three dashboards, one story stands out: the United States consistently experienced the highest impact of COVID-19 from case numbers to severity and recovery, making it the epicenter of the global pandemic story.

Reference:

Assaker, J. (2020). *COVID-19 Global Dataset*. Kaggle.
<https://www.kaggle.com/datasets/josephassaker/covid19-global-dataset>

Tableau Public Links:

Dashboard 1:

https://public.tableau.com/views/Dashboard1_17532213817040/Dashboard1?:language=en-US&publish=yes&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link

Dashboard 2:

https://public.tableau.com/views/Dashboard2_17532814103050/Dashboard2?:language=en-US&publish=yes&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link

Dashboard 3:

https://public.tableau.com/views/Dashboard3_17533153421420/Dashboard3?:language=en-US&publish=yes&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link