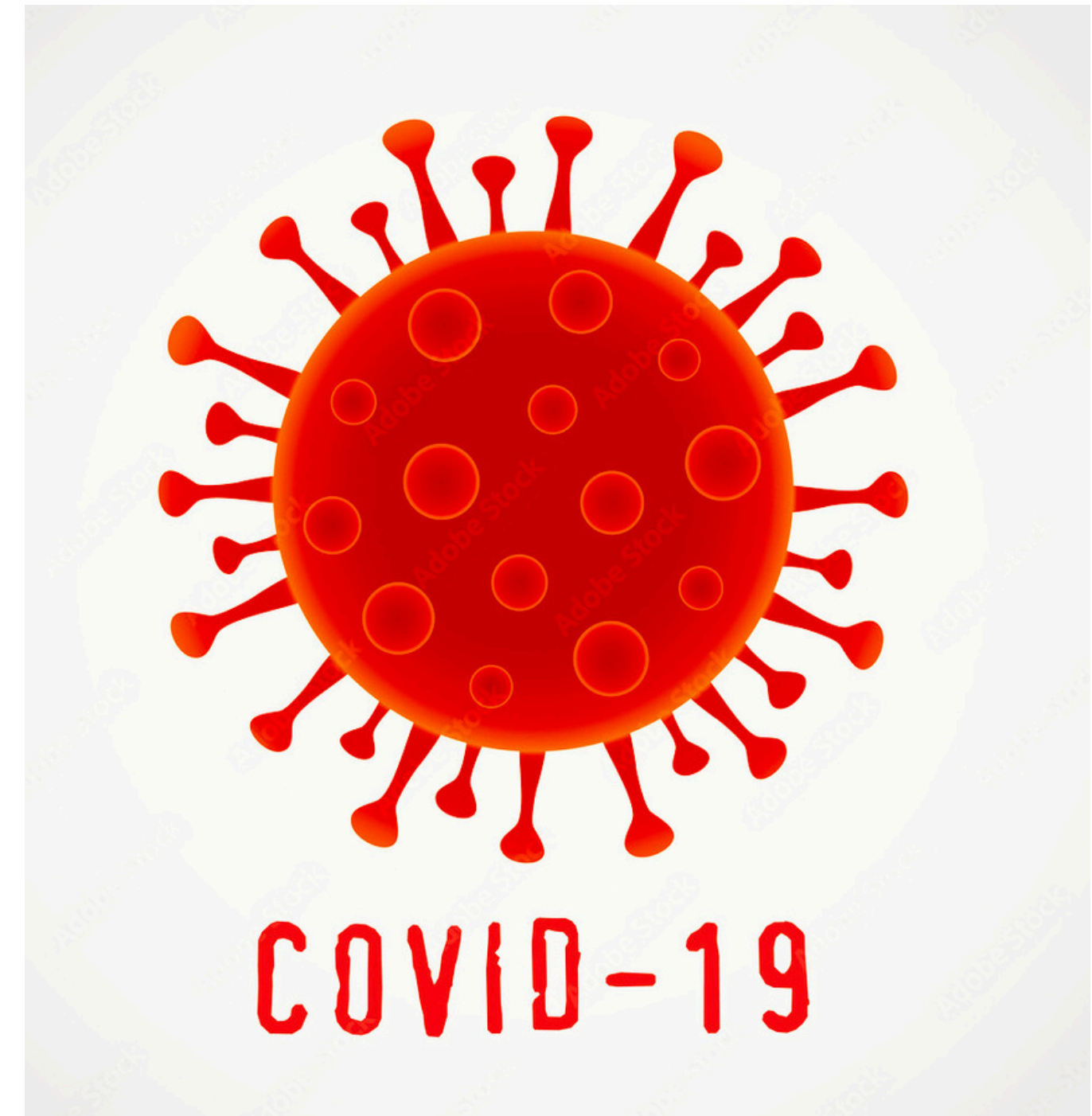
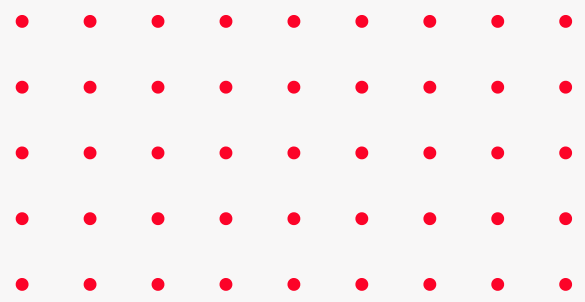


Covid-19 Dashboard Analysis

Submitted by – Natesh Kumar



Introduction



- COVID-19 is the disease caused by the SARS-CoV-2 coronavirus. It usually spreads between people in close contact.
- It was so sudden that countries were not prepared for it so data analysis is important for managing the pandemic.

Problem Statement

- The need for accurate tracking of COVID-19 cases, recoveries, and deaths. So that we have the exact data and numbers.
- Importance of understanding trends so that we can take inform public health decisions without data we can take wrong decisions.

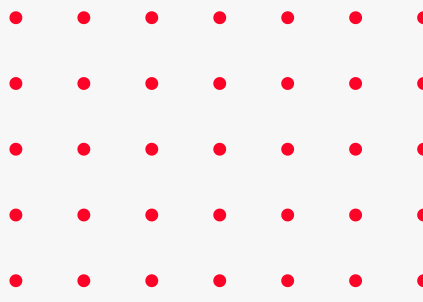


Data-Sourcing Strategy

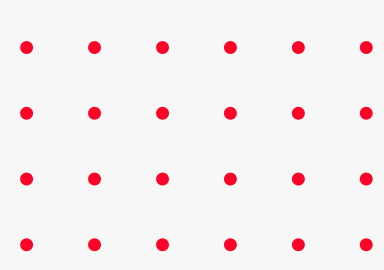
- Data sources: Kaggle for datasets, Power BI for dashboard and some youtube video lectures for reference.
- Criteria for selecting data sources: Reliability, Good Columns and comprehensiveness



Key Performance Indicators (KPIs)



- Total Confirmed Cases
- Total Recovered
- Total Active Cases
- Total Deaths
- Case Fatality Rate (CFR)
- Recovery Rate



Project Design Document

The COVID-19 design document provides an examination of the pandemic's global impact. Key performance indicators include total confirmed cases (576M), total recovered (248M), total active cases (301M), and total deaths (27M). This analysis utilizes data from reliable sources like WHO and Kaggle, I applied DAX calculations in Power BI to get insights such as Case Fatality Rate (CFR) and Recovery Rate. The data model, shows interconnected tables (Case Data, Covid 19 Data, New Case Data, Measures Table), supports accurate trend analysis and insights. Visual components of the dashboard, including interactive gauges, graphs, and charts.

DAX Calculations in the Dashboard

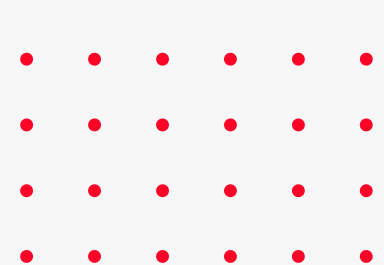
DAX (Data Analysis Expressions) is a formula language used in Power BI to create custom calculations and aggregations for data analysis.

Examples of key DAX calculations from the dashboard:

Active Cases: $\text{Total Confirmed Cases} - (\text{Total Recovered} + \text{Total Deaths})$

CFR: $(\text{Total Deaths} / \text{Total Confirmed Cases}) * 100$

Recovery Rate: $(\text{Total Recovered} / \text{Total Confirmed Cases}) * 100$

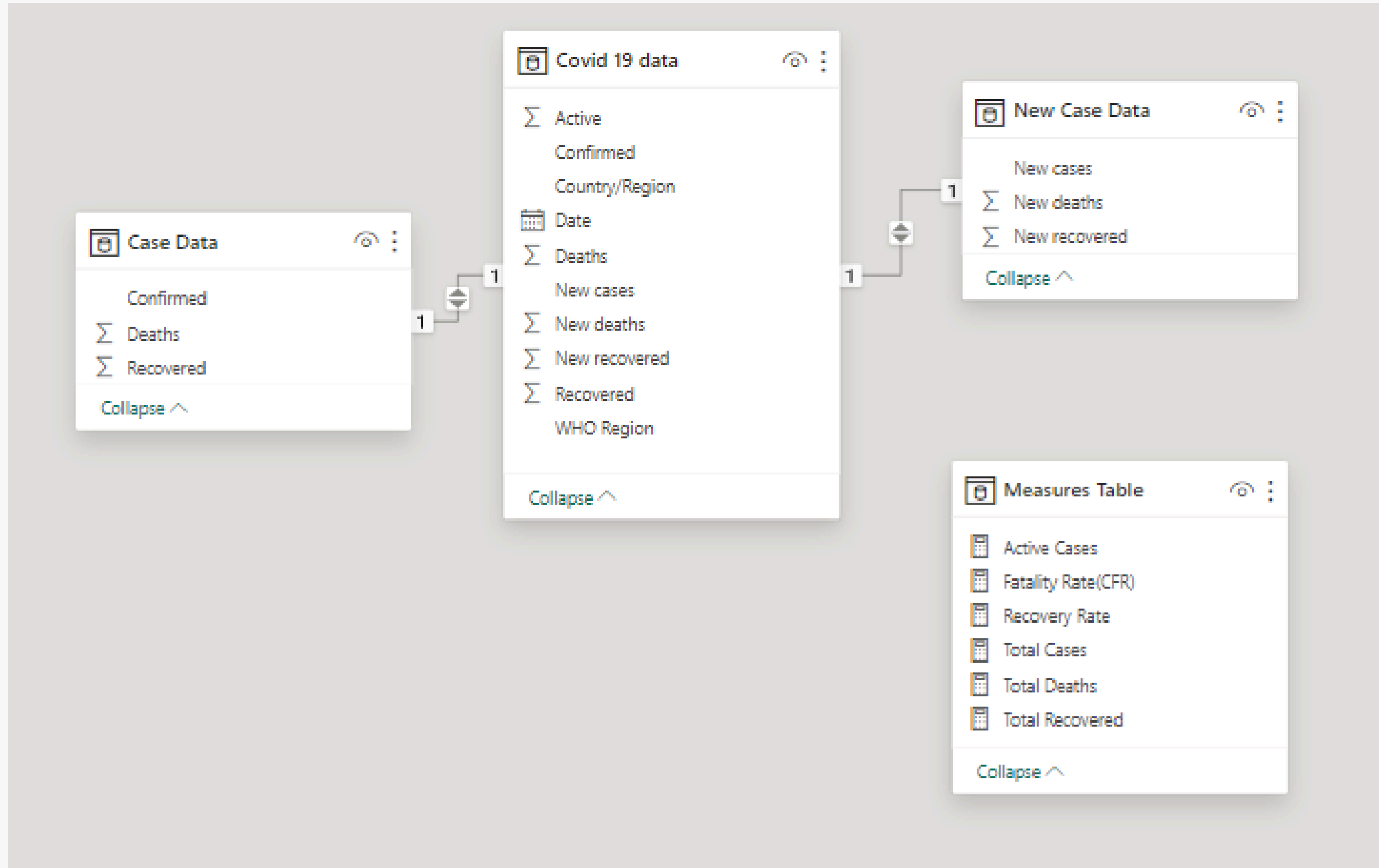
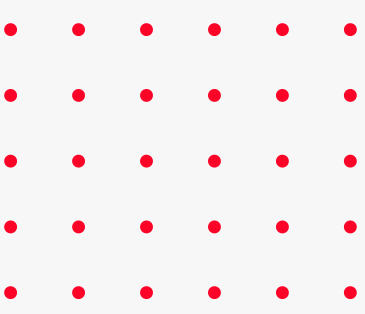


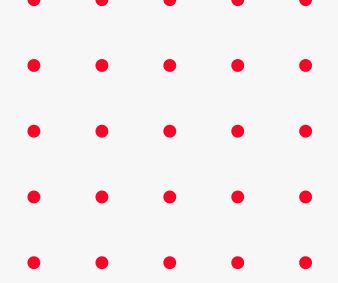
Semantic Layer

- The semantic layer simplifies and organizes business logic, hierarchies, calculations, and more.
- We have Created total 4 tables in this dashboard's ER Diagram which consist Main Fact table, case data, new case data and Measures.
- These tables have a relationship of one to one.



• Figure of ER Diagram

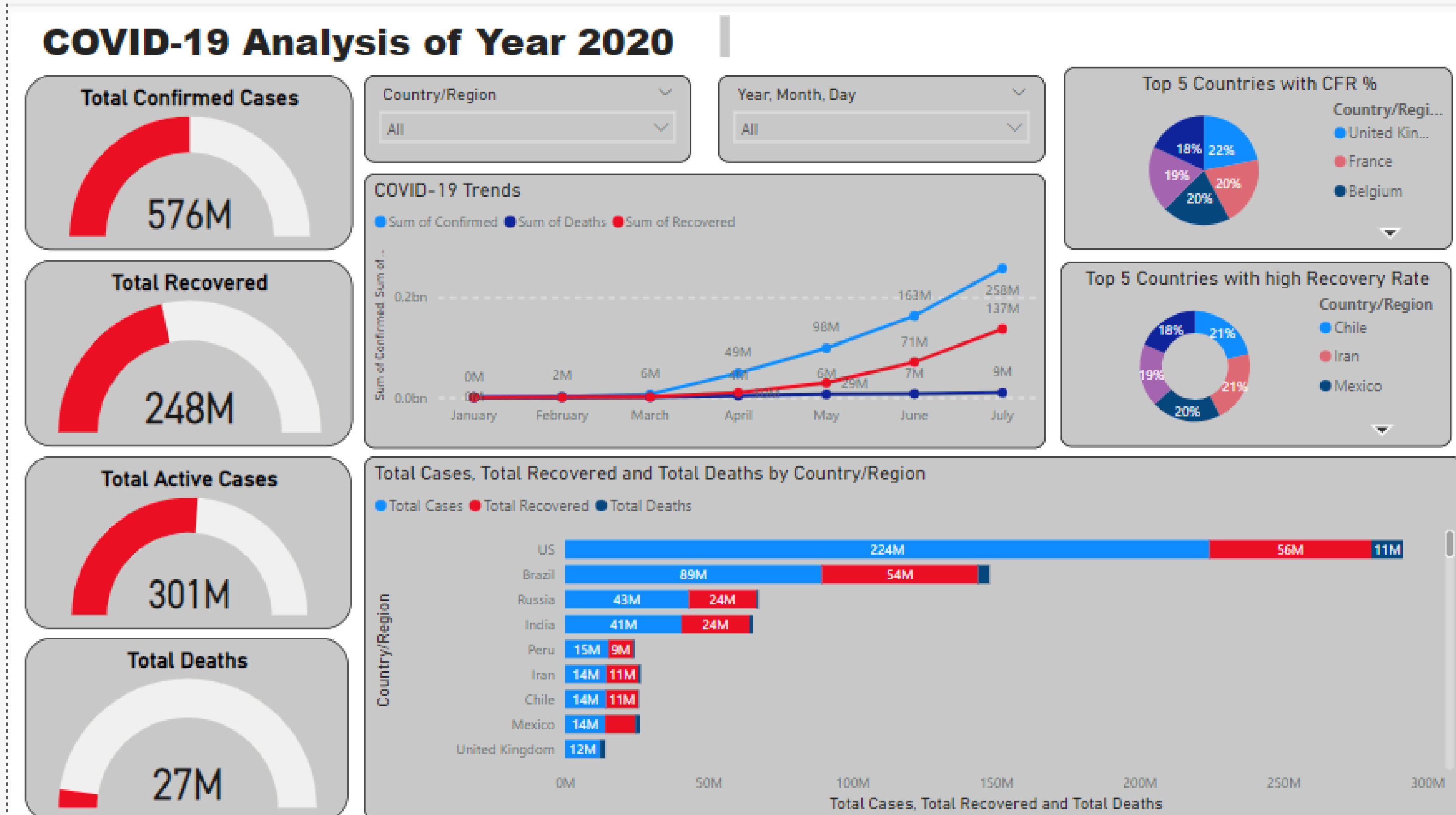




Visualization Layer and Functionalities

1. Visualization layer is insights of dashboards representing and those are:
 - Total Confirmed Cases, Total Recovered, Total Active Cases, and Total Deaths gauges
 - COVID-19 Trends graph which represents data by month.
 - Bar chart comparing total cases, total recovered, and total deaths by country/region
 - Pie charts showing top 5 countries by CFR and recovery rate

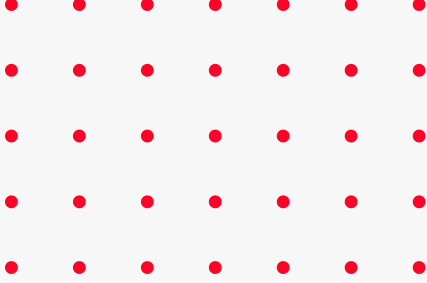
Image of the Dashboard for better reference



Conclusion

- **Key Findings** - The analysis revealed that COVID-19 had a profound global impact in 2020, with 576 million confirmed cases, 248 million recoveries, and 27 million deaths. Countries like the US, Brazil, and India were among the most affected.
- **Future Steps** - Governments and health organizations should utilize these insights to build new strategies, enhance healthcare infrastructure so that we can tackle it more easily in future if it happens.





THANK YOU