COVID-19 Global Impact Analysis

Overview

The COVID-19 Tableau Dashboard provides a comprehensive analysis of the pandemic using multiple datasets. The primary focus of the dashboard is to visualize key trends related to COVID-19 deaths, vaccinations, and overall impact across different countries and regions. The data sources include:

- **CovidDeaths.xlsx**: Contains records of COVID-19-related fatalities, infection rates, and other statistics.
- **CovidVaccinations.xlsx**: Provides information on vaccine distribution and administration across different regions.
- **Tableau Joins File.xlsx**: Combines multiple datasets for better correlation and visualization.

Key Visualizations

1. **Global COVID-19 Death Trends**

   - A line graph showing the cumulative number of deaths worldwide over time.
   - Comparison of different countries, highlighting those with the highest death rates.
   - A breakdown of fatality rates by continent.

2. **COVID-19 Cases Over Time**

   - A time-series analysis displaying confirmed cases per day.
   - Regional comparison of active cases and recovery rates.
   - Heatmaps representing areas with the highest number of reported cases.

3. **Vaccination Progress**

   - A bar chart illustrating the number of vaccinations administered per country.
   - A comparison of fully vaccinated vs. partially vaccinated individuals.
   - An interactive world map showing vaccination rates by country.

4. **Mortality and Recovery Rates**

   - A pie chart presenting the proportion of deaths vs. recoveries.
   - Mortality rate comparison across different age groups and demographics.
   - Relationship between infection rates and death toll in high-risk regions.

5. **Regional Analysis**

   ❖ A country-wise comparison of COVID-19 statistics using bar and scatter plots.
   ❖ Ranking of the most affected regions based on deaths and active cases.
   ❖ A dynamic table listing real-time updates on cases, deaths, and recoveries.

Insights from the Dashboard

- Countries with high population density tend to have higher infection rates.
- Vaccination rollouts show a strong correlation with declining mortality rates.
- Some regions still have low vaccination rates, indicating the need for increased distribution efforts.
- The death rate fluctuates based on healthcare system capacity and government interventions.

Conclusion

This Tableau dashboard provides a data-driven approach to understanding COVID-19's impact globally. The interactive nature of the dashboard allows users to explore trends, compare statistics, and derive meaningful insights. The visualizations help policymakers, healthcare professionals, and researchers to make informed decisions regarding containment, vaccination strategies, and resource allocation.