

FINAL VISUALIZATION REPORT

Introduction

This report provides the analysis of a Country-wise COVID-19 dataset where the most critical statistics including confirmed cases, deaths, recovery, and the number of active cases for different countries are considered. Data is handled and analyzed using effective and efficient analytical tools and techniques charts and graphs are developed to analyze the general trends, correlation, and patterns of data. The outcomes are informative since they combine numerical data on the impact of the pandemic with qualitative results.

Summary Statistics and Visualization

Summary statistics of the Country-wise COVID-19 dataset describe the mean, median, minimum, and maximum values for the selected variables and countries. The average of the confirmed cases is 88,130 while the mean of deaths is 3,497 and recoveries is 50,631. The standard deviation points to considerable fluctuation of volatility in confirmed cases with a maximum of 4,290,137 cases and 148,011 deaths (Leung *et al.* 2020). The cross-regional comparison also reveals that the recovery rate and mortality rate are not homogenous. Using “Deaths per 100 Cases” and “Recovered per 100 Cases,” one can evaluate the specific approach of each country toward the pandemic and its consequences.

The grouped bar chart presents the deaths, recovered, and active cases of the ten countries with the most confirmed COVID-19-positive individuals. The country with the most deaths and active cases is the US, suggesting that its outbreak was catastrophic. Brazil, on the other hand, has the highest number of recovery cases which defines a better recovery rate. This visualization aids in understanding the difference in the stringency levels of the pandemic across countries, and the inequity of the health status (Zuo *et al.* 2020). The data is scaled to thousands to enhance visualization, making it easier to compare the COVID-19 state of affairs globally.

The scatter plot focuses on the deaths per 100 cases and the recoveries per 100 cases in different regions of the WHO. The plot shows how these two variables correlate, where each data point is the performance of a country in terms of deaths as well as recoveries. Color coding by WHO region ensures that one region can be compared easily with the other, thus bringing out the impact of COVID-19 within the different regions easily. Using this visualization, more meaningful knowledge can be gained of the overall health situation in the world and how the countries with similar rates of disease differ from one another.

The correlation heatmap indicates the directional relationship between the key numerical attributes in the dataset such that these include confirmed case, death, recovery, active case, new case, and new death. The heatmap depicts the values of correlation which can be positive or negative and they range between -1 and 1. In positive relationships like the one between confirmed cases and deaths, this means that as the number of confirmed cases rises, so does the number of deaths (Dixon *et al.* 2021). The heatmap also shows how these variables are correlated and can be used to gain a better understanding of COVID-19 and the forces shaping the global pandemic.

Conclusion

The analysis of the Country-wise COVID-19 dataset gives some understanding of the COVID pandemic situation in the world. The graphs and descriptive statistics exaggerate major changes, relationships, and fluctuations in COVID-19 cases, deaths, and recovery. The analytics approach provides a better knowledge of the pandemic's progression throughout various countries.

References

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