

DATA SCIENCE AND TOOLKIT

Findings from Visualisation

Introduction

This analysis explores the *country_wise_latest* COVID-19 dataset using various data visualisations.

The goal is to understand the global distribution of confirmed cases and deaths through graphical interpretation.

The visualisations created include:

- Bar chart of top 10 confirmed cases
 - Bar chart of top 10 deaths
 - Pie charts for confirmed and deaths
 - Histogram of confirmed cases
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□ 1. Top 10 Countries by Confirmed Cases

The bar chart shows that the majority of confirmed COVID-19 cases are concentrated in a small number of countries.

Findings

- A few countries (e.g., USA, India, Brazil) dominate the global case count.
 - The distribution is **highly right-skewed**, meaning only a handful of countries have extremely high numbers.
 - There is a significant gap between the highest and lower-ranked countries.
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⇒ 2. Top 10 Countries by Deaths

The bar chart for deaths shows similar dominance by countries with the highest confirmed infections.

Findings

- Countries with high confirmed cases also report high deaths.

- Some countries show disproportionately higher deaths relative to cases.
 - Mortality impact is **not uniform**, reflecting differences in healthcare quality, detection, and response.
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□ 3. Pie Chart – Share of Confirmed Cases

The pie chart displays the percentage contribution of the top 10 countries to total global confirmed cases.

Findings

- The top 10 countries account for a **large share** of total global cases.
 - Case distribution is heavily concentrated in a few regions.
 - Remaining countries contribute much less comparatively.
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□ 4. Pie Chart – Share of Deaths

The pie chart for deaths also shows uneven distribution.

Findings

- A few countries dominate the global share of total deaths.
 - Higher shares suggest greater exposure, population size, or weaker healthcare systems.
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□ 5. Histogram – Distribution of Confirmed Cases

The histogram reveals how confirmed cases are spread across all countries.

Findings

- The distribution is **right-skewed**, meaning most countries have lower case counts.
 - Only a few countries act as extreme outliers with very high confirmed numbers.
 - This indicates significant variation in outbreak severity across countries.
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□ Overall Conclusion

- The impact of COVID-19 is **uneven and concentrated** in a few countries.

- Case and death distributions show major disparities worldwide.
 - Pie charts reinforce that top countries dominate global totals.
 - Histogram highlights outliers and unequal pandemic spread.
 - The visualisations collectively reveal patterns in infection spread, severity, and mortality differences across countries.
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