

COVID-19 DATASET

Overview:

This Exploratory Data Analysis (EDA) aimed to uncover patterns, trends, and relationships within a cleaned COVID-19 dataset. The process involved analyzing key metrics such as confirmed cases, deaths, recoveries, weekly changes, and regional breakdowns. The findings reveal how the pandemic has progressed globally and identify areas with the most significant impact.

Data Cleaning Summary :

1. Standardized column names to lowercase and snake_case format.
2. Removed unnecessary whitespaces and capitalized region names for consistency.
3. Checked for duplicate country names (e.g., USA vs. United States) and cleaned inconsistencies.
4. Converted numerical columns to the correct data types for analysis.
5. Verified metrics like weekly_percentage_increase, deaths_100_cases, and recovered_100_cases were formatted properly.

Descriptive Statistics Insights:

1. The mean and median values for core metrics like Confirmed, Deaths, and Recovered indicate wide variance across countries.
2. Some countries have extremely high standard deviations in confirmed cases and deaths, showing major global inequality in case distribution.
3. The Range for confirmed cases shows a stark contrast between least and most affected countries.

Correlation Analysis Findings :

1. Strong positive correlation between Confirmed Cases and Deaths, indicating that higher case numbers typically lead to more deaths.
2. Moderate correlation between Confirmed and Recovered, suggesting recovery efforts scale with case load.
3. Negative correlation between deaths_100_cases and recovered_100_cases, highlighting inverse outcomes across some regions.

Key Insights & Takeaways:

1. Countries with the highest confirmed cases also contribute significantly to global deaths and active cases.
2. Some regions with lower total cases (e.g., Africa) show disproportionately high death rates relative to recovered cases.
3. Weekly percentage increase in cases shows emerging hotspots that are not yet high in total cases but are growing quickly.
4. Recovery and death rates provide valuable indicators for evaluating healthcare response effectiveness.

DASHBOARD COVID-19 INSIGHTS

- **Cards:** For key KPIs like Total Confirmed, Total Deaths, Total Recovered, and Active Cases.(Using DAX measures)
- **Map:** Visualizing confirmed cases by country.
- **Bar Chart:** New cases, deaths, and recovered by country
- **Line/Column Chart:** Weekly case change by who_region

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GLOBAL COVID-19 DASHBOARD

16M

Total Confirmed Measure

654K

Total Deaths Measure

9M

Total Recovered Measure

6M

Active Cases Measure

Actual recovery vs Target recovery

12.12K

85

Active Cases Measure by who_region

who_region

Americas (1.22%)

Europe (0.35%)

South-East Asia (0.35%)

Africa (0.35%)

Eastern ... (0.35%)

Western ... (0.35%)

Total Confirmed Measure by country_region and who_region

who_region

Africa

Americas

Eastern Mediterranean

Europe

South-East Asia

Western Pacific

Map

SUM OF NEW CASES VS NEW DEATHS VS NEW RECOVERED

who_region

Africa

Americas

Eastern Mediterranean

Europe

South-East Asia

Western Pacific

country_region

US

India

Brazil

Colombia

Peru

South Korea

Iran

Spain

Italy

France

Germany

UK

Japan

China

South Korea

Iran

Spain

Italy

France

Germany

UK

Japan

China

Sum of weekly_case_change by country_region

country_region

US

India

Brazil

Colombia

Peru

South Korea

Iran

Spain

Italy

France

Germany

UK

Japan

China

Dashboard Covid-19

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