COVID-19 PANDEMIC ANALYSIS

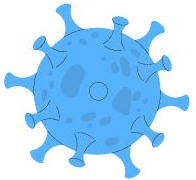
A SQL PROJECT

BY: WAMUYU MUNENE

PROBLEM STATEMENT

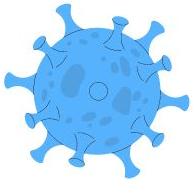
The COVID-19 pandemic caught communities globally unprepared and left devastating effects in its wake.

In this project, I will be analyzing some of those effects, with a particular focus on medical implications. The analysis will primarily center on examining infection, death, and recovery rates using a dataset consisting of records from countries around the world.



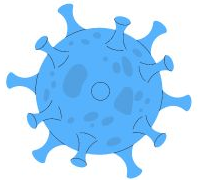
DATA PREPARATION & UNDERSTANDING

- For data cleaning & pre-processing, the column names were updated to ensure ease of SQL querying.
- Secondly, date column type was changed from string to date.
- Ensured there were no null values that would skew results.



DATA PREPARATION & UNDERSTANDING

- The data used in this analysis consists of 78,386 records collected from 121 countries.
- Each of the records displays the total number of confirmed cases, deaths and recoveries documented in a single day in a specific country.
- The data spans from 22-01-2020 to 13-06-2021, a total of 509 days.



DATA PREPARATION & UNDERSTANDING

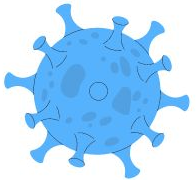
- All countries had 509 records each except for China, Australia, Canada, UK, Denmark, France and Netherlands that had more records.

- This is because most countries had one entry record for each of the 509 days representing a summation of the country's overall metrics.

- Countries with higher number of records was caused by them presenting data for each geographical zone separately on each date recorded e.g
    - China's 7126 records = 14 regions/day * 509 days

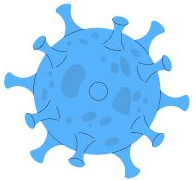
INSIGHTS

- Total confirmed cases were 169,065,144.
- Total deaths were 3,647,894.
- Total recoveries were 113,089,548.
- Overall average of confirmed cases was 2156 per day.
- Overall average of deaths was 46 per day.
- Overall average of recoveries was 1442 per day.



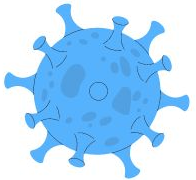
INSIGHTS

- Total confirmed cases by year were 80,121,099 (Jan - Dec 2020) and 88,944,045 (Jan - June 2021)
- Total deaths were 1,803,549 (Jan - Dec 2020) and 1,844,345 (Jan - June 2021).
- Total recoveries were 50435616 (Jan - Dec 2020) and 62653932 (Jan - June 2021).



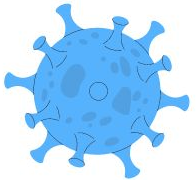
INSIGHTS

- The month with the highest infection rate was April 2021 with 4699 cases per day.
- The month with the highest death rate was January 2021 with 84 cases per day.
- The month with the highest recovery rate is May 2021 with 4007 cases per day.



INSIGHTS

- The countries with the highest total of infection, death and recovery cases were US, India and Brazil.
- Brazil’s infection rate peaked in March 2021 averaging at 70886 cases per day.
- India’s infection rate peaked in May 2021 averaging at 290674 cases per day.
- The US infection rate peaked in December 2020 averaging at 207404 cases per day.



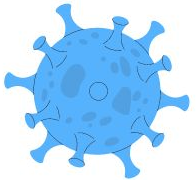
INSIGHTS

- The countries with the lowest infection, death and recovery totals were Kiribati, Samoa and Marshall Islands.
- Each of these countries had less than 10 confirmed infection cases for the 18-month period.
- Each of these countries had 0 covid related deaths for the 18-month period.

CONCLUSION

According to our findings, the infection rate accelerated in 2021 and there were more infections during the 6-month period than in all of 2020.

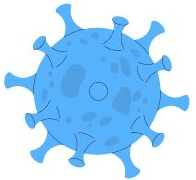
Our insights also show increased rate of spread and subsequently deaths in densely populated regions.



CONCLUSION

This analysis highlights trends and patterns depicted in the spread, mortality and recovery rates of the COVID-19 pandemic across the world during the 2020-2021 period when it was at its peak before the employment of effective preventative measures mainly the vaccines that mitigated the pandemic.

These findings emphasize the critical need for proactive public health measures and international cooperation to effectively combat future health crises.



THANK YOU