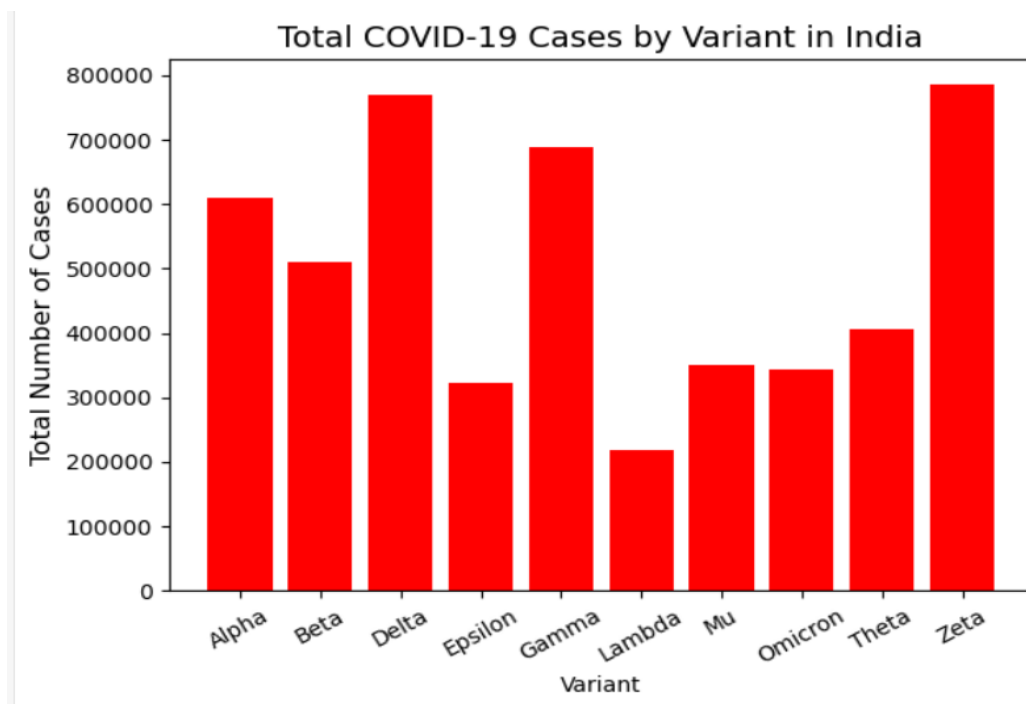# Goal:

The Dataset I am using primarily focus on how different COVID-19 variants spread across different countries and number of cases, deaths, recovered, hospitalized over a period. Considering the number of cases and variants from a targeted country I visualized this data in the form of bar chart.

Visualization:

Total COVID-19 Cases by Variant in India

Insights:

i. Chart Type: Bar chart

ii. This Bar chart shows total number of cases present in India (targeted country) when COVID-19 variants was existent.

iii. Bars in visualization represents how high were the cases raised in India.

iv. Possess high accuracy of data.

v. X-axis represents the total number of cases where as Y-axis represents the different COVID-19 variants in India.

Data Abstraction:

This dataset concentrates on evaluating the total number of COVID-19 variants affected on different countries in specific time.

- ➤ Key Attributes:-
    - o Variants: - These are the different viruses which occurred while affecting the world.
    - o Countries: - Countries which affected during the time.
    - o Cases and deaths: - Count of cases filled and number of deaths caused due to variants.
- ➤ Data type:
    1) Numerical type.
    2) Categorical type.
- ➤ Numerical data:
    1) Number of cases
- ➤ Categorical data:
    1) Variants.

Task Abstraction:

The main task which is considered here is the targeted country that is Indian values of the dataset which contains mainly variants and number of cases of COVID-19 raised.

- ▪ Marks :
    1) Line.
- ▪ Channels :
    1) Color- Hue.
    2) Vertical position.

Data Source:

https://www.kaggle.com/datasets/imdevskp/corona-virus-report/data?select=country_wise_latest.csv

Code:

```python
import pandas as pd
import matplotlib.pyplot as plt

# Load the dataset from a CSV file into a DataFrame
data = pd.read_csv('covid_variants_dataset.csv')

# Filter the dataset to include only rows for the specified country
country_data = data[data['Country'] == target_country]

# Specifying the country to visualize
target_country = "India"

# Calculate the total number of cases for each variant in the country
total_cases_by_variant = country_data.groupby('Variant')['Cases'].sum()

# Bar graph to visualize the data
plt.bar(total_cases_by_variant.index, total_cases_by_variant.values, color='red')

# Adding title and axis labels to the graph
plt.title(f'Total COVID-19 Cases by Variant in {target_country}', fontsize=14)
plt.xlabel('Variant', fontsize=10)
plt.ylabel('Total Number of Cases', fontsize=12)

# Rotate the x-axis labels for better readability
plt.xticks(rotation=30)
# Display the graph
plt.tight_layout()  # Ensures labels fit properly
plt.show()
```