# DATA STATISTICS
## GDP COUNT (1970 - 2023)

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# INTRODUCTION

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- The objective of this presentation is to explore and analyze the dataset on India's Gross Domestic Product (GDP) from 1970 to 2023, aiming to gain insights into the country's economic trends and patterns.
- GDP is a fundamental measure of a nation's economic performance and reflects the total value of goods and services produced within a specific time period. Analyzing GDP data helps us understand the overall health and growth of an economy.
- By studying the India GDP dataset, we can uncover significant trends, identify key sectors driving economic growth, and gain valuable insights for policy formulation, investment decisions, and economic planning.
- Through this presentation, we aim to showcase the importance of data statistics in understanding and interpreting economic indicators, ultimately empowering stakeholders to make informed decisions based on reliable information.

Remember to elaborate further on the importance and relevance of analyzing GDP data, highlighting the benefits it brings to various sectors and stakeholders in India.

# MOTIVATION

- The analysis of India's GDP dataset holds significant importance due to several reasons. Firstly, GDP serves as a vital indicator of a country's economic health and progress. By studying the GDP trends over time, we can assess the overall economic growth, identify periods of expansion or contraction, and gain insights into the country's economic performance.

- Understanding the sector-wise contributions to GDP allows us to identify the key drivers of economic growth. It helps policymakers and economists gauge the impact of various sectors such as agriculture, manufacturing, and services on the overall economy. This knowledge can guide decision-making processes related to resource allocation, sector-specific policies, and investment strategies.

- Furthermore, analyzing the historical GDP data enables us to identify long-term economic patterns, cyclical fluctuations, and the impact of policy changes. These insights can provide a basis for forecasting future economic trends and making informed predictions.

# Details of Data Set

- Year: This column represents the specific year for which the GDP data is recorded. It spans from 1970 to 2023, providing a comprehensive historical timeline.

- GDP: The GDP column contains the Gross Domestic Product values for each corresponding year. GDP represents the total monetary value of all goods and services produced within a country's borders during a specific time period. It serves as a crucial indicator of economic performance and growth.

- Per Capita: The per capita column indicates the GDP per capita, which is calculated by dividing the total GDP by the population of the country. It represents the average economic output per individual and provides insights into the standard of living and economic well-being of the population.

- Growth: The growth column signifies the GDP growth rate for each year. It indicates the percentage change in GDP compared to the previous year, reflecting the rate of economic expansion or contraction. Positive growth rates indicate economic expansion, while negative growth rates indicate economic contraction

# PANDAS

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- pandas is a popular library for data manipulation and analysis. It offers data structures like DataFrames, which are well-suited for handling tabular data like the GDP dataset.

- Functions like pd.read_csv() allow you to read the dataset from a CSV file into a DataFrame, making it easy to work with the data.

- pandas functions like df.head(), df.info(), and df.describe() provide quick overviews of the dataset, displaying the first few rows, summary statistics, and column information.

- With pandas, you can filter the data using conditions, perform aggregations, merge or join multiple datasets, and handle missing values using functions like df.loc[], df.groupby(), df.merge(), and df.fillna().

# Example

# OUTPUT

```python
import pandas as pd
df=pd.read_csv("GDPProjectdataset.csv")
print(df)
```

```
      Year     GDP  Per Capita  Growth      GNI
0     2021    1234        2257    8.68  3023.42
1     2020    2345        1910   -6.60  2641.49
2     2019   54656        2047    3.74  2874.65
3     2018   68787        1974    6.45  2713.33
4     2017    3234        1958    6.80  2439.59
5     2016  787898        1714    8.26  2226.42
6     2015  232435        1590    8.00  2097.60
7     2014  565767        1560    7.41  2021.00
8     2013     465        1438    6.39  1941.12
9     2012     343        1434    5.46  1870.99
10    2011      87        1450    5.24  1704.43
11    2010    6554        1351    8.50  1505.74
12    2009    8789        1097    7.86  1358.35
13    2008     445         994    3.09  1195.03
14    2007    6879        1023    7.66  1081.97
15    2006  332445         802    8.06   916.98
16    2005  676879         711    7.92   809.09
17    2004  213223         624    7.92   687.28
18    2003  989809         544    7.86   573.89
19    2002  232324         469    3.80   500.20
20    2001      22         450    4.82   485.44
21    2000      55         442    3.84   467.08
22    1999     787         441    8.85   454.40
23    1998    8998         413    6.18   420.15
...
48    1973     565         143    3.30    85.74
49    1972       9         123   -0.55    71.81
50    1971      99         118    1.64    67.63
51    1970      32         112    5.16    63.88
```

# DATA VISUALIZATION

- Data visualization plays a crucial role in data statistics, providing a visual representation of information that enhances understanding, communication, and decision-making.
- Exploratory analysis: Visualizations allow for the initial exploration of the dataset, enabling the identification of patterns, trends, and outliers. They provide an intuitive understanding of the data distribution and relationships between variables, helping analysts gain valuable insights.
- Communication and presentation: Visualizations are powerful tools for communicating complex statistical information to a wide range of audiences. They simplify complex data and enable clear and concise presentation of key messages, making presentations more engaging and impactful.
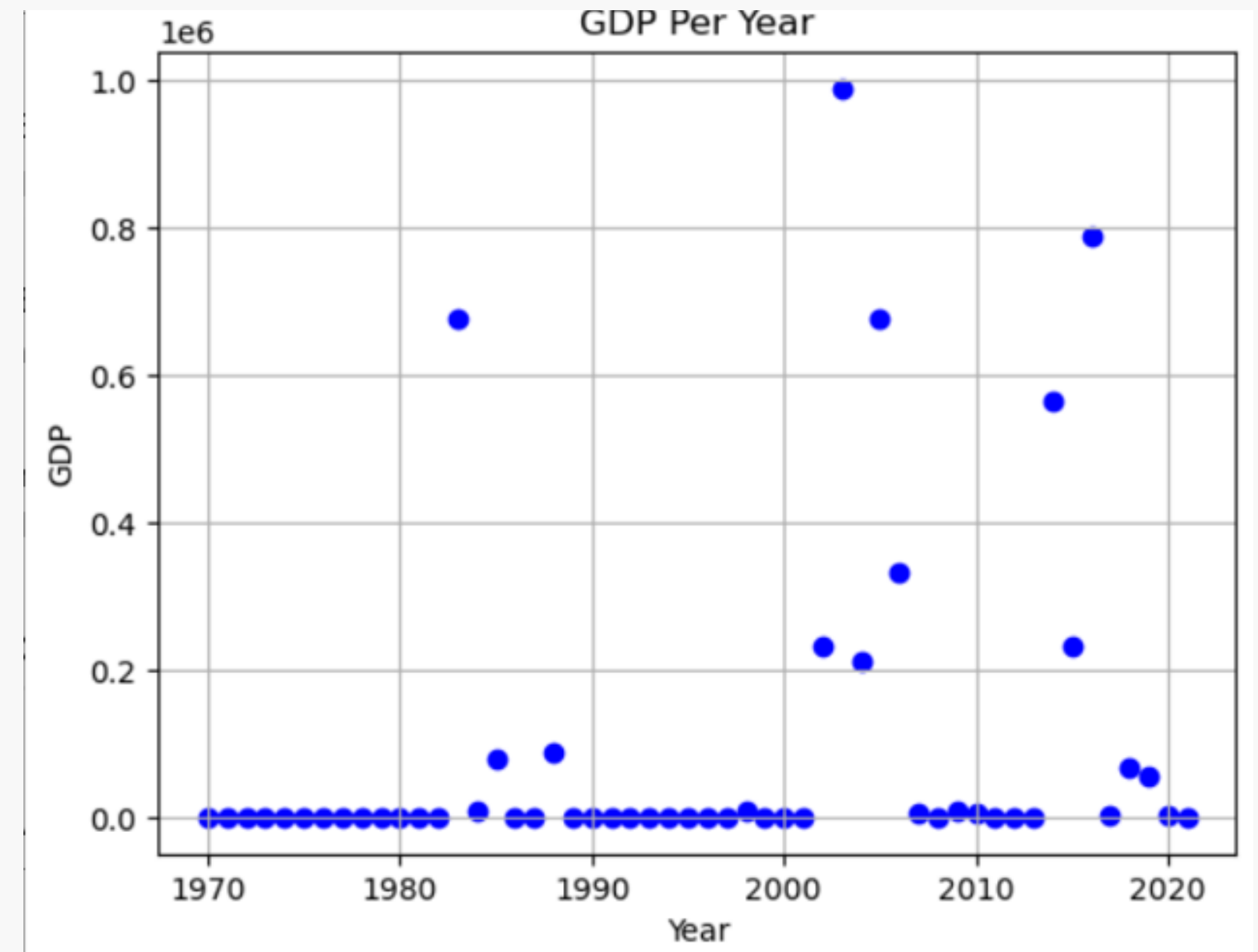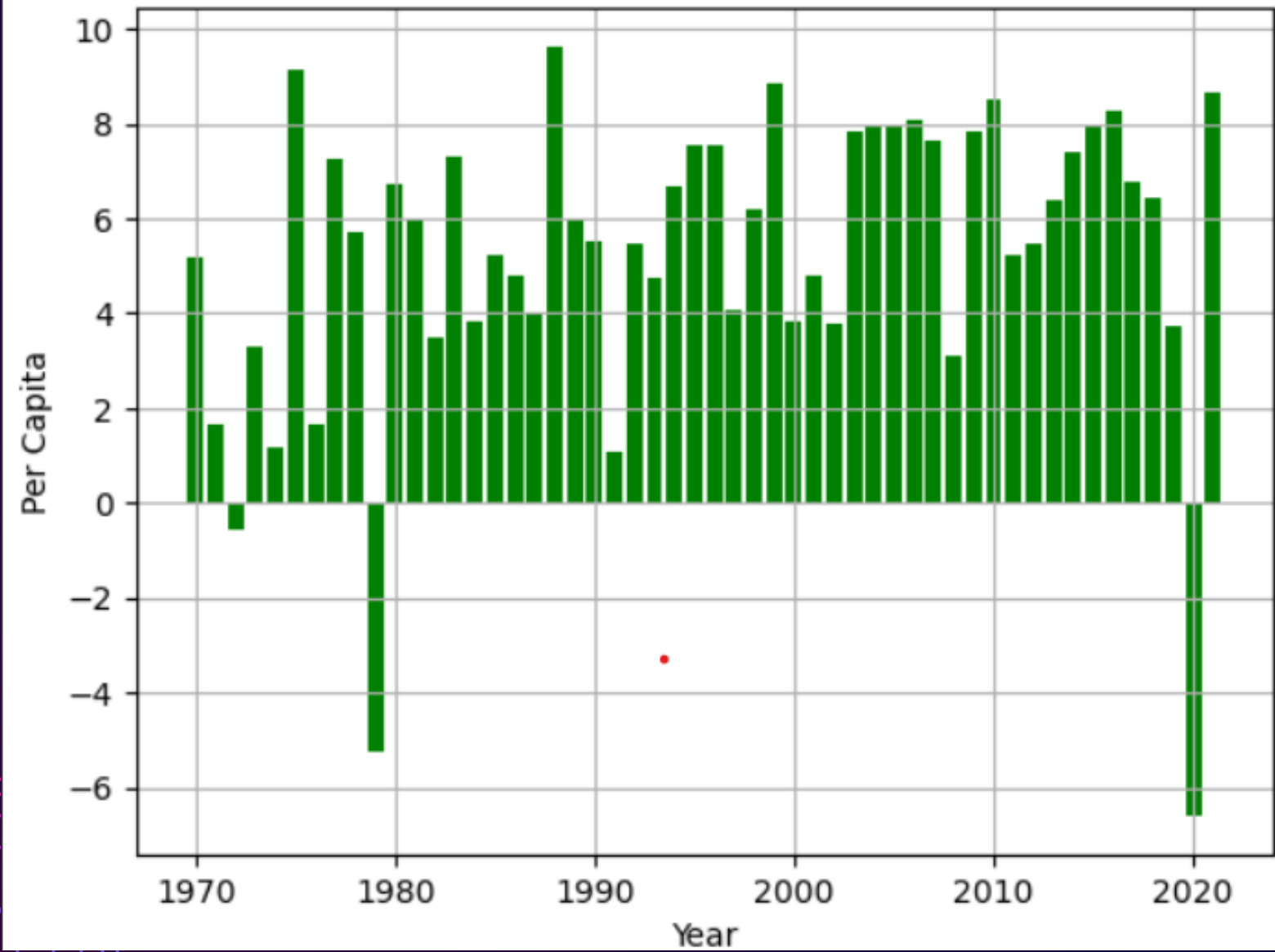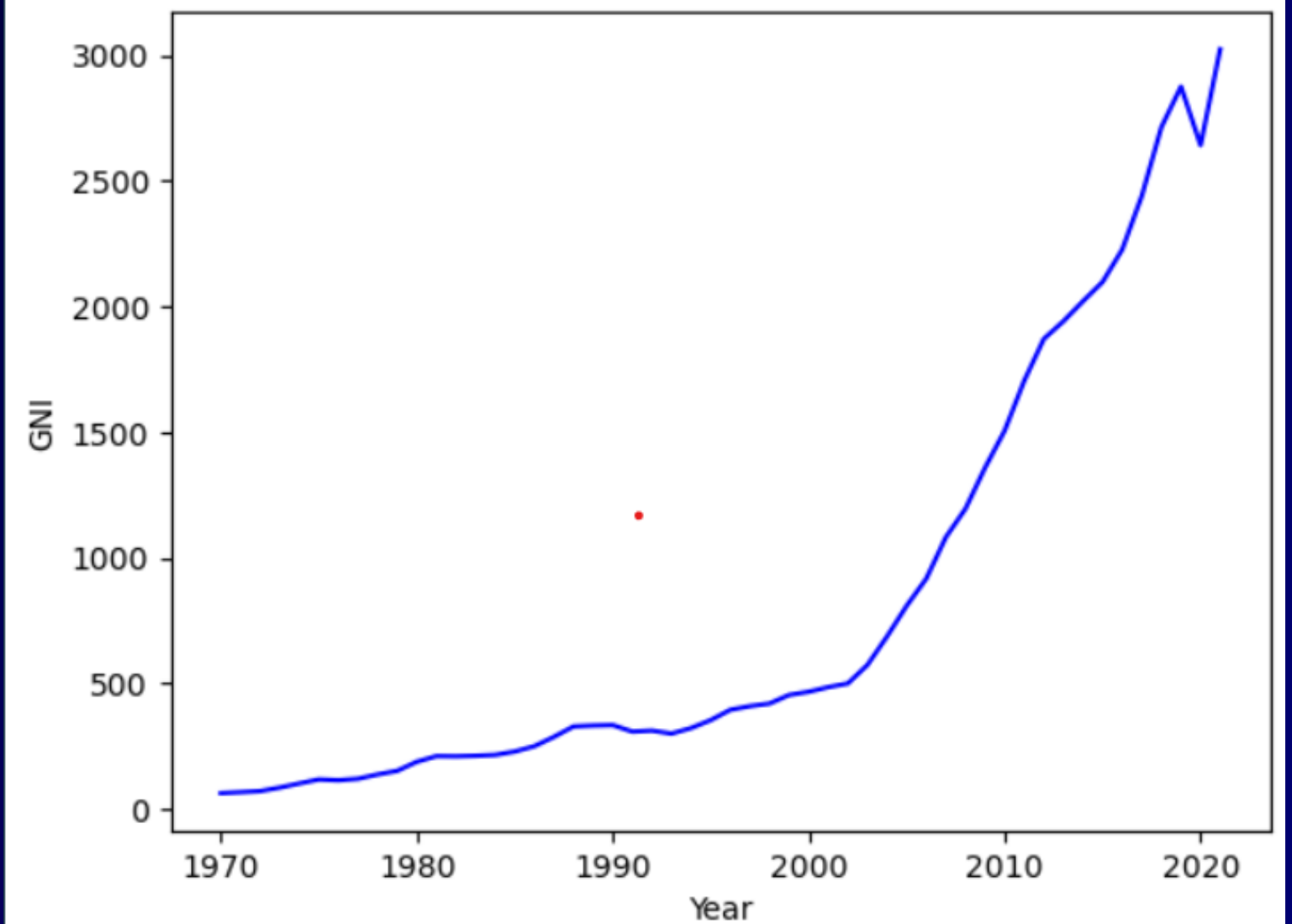
YEAR vs PER CAPITAL

YEAR vs GNI

# THANK YOU