

## Practical 8

### AIM:

Use the inbuilt dataset “titanic” the dataset contains 891 rows and contains information about the passengers who boarded the unfortunate titanic ship use the seaborn library to see if we can find any patterns in the data.

### REQUIREMENT:

Anaconda Installer

Windows 10 OS

Linux

Jupyter Notebook

### THEORY:

#### Data Visualization

- Data visualization is the **graphical representation of data** using charts, graphs, and maps.
- It helps to **understand trends, patterns, and outliers easily**.
- It is very useful in **Big Data** for making better decisions.

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#### Benefits of Data Visualization:

- **Better Analysis:** Helps analyze data like sales and performance easily
- **Quick Action:** Visuals help in making faster decisions
- **Identifying Patterns:** Shows relationships and trends in data
- **Finding Errors:** Helps detect mistakes in data quickly
- **Understanding the Story:** Makes data easy to understand at a glance
- **Business Insights:** Helps in making strategic decisions
- **Latest Trends:** Identifies current trends for better planning

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#### How Data Visualization Works:

- Converts large amounts of data into **visual formats (charts, graphs, dashboards)**
  - Uses tools that connect to **files, databases, APIs, etc.**
  - Helps in **analyzing and presenting data effectively**
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### Features of Good Visualization Tools:

- Interactive charts and dashboards
  - Easy connection to different data sources
  - Ability to combine data
  - Automatic data updates
  - Data sharing and exporting options
  - Secure access to data
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### Importance of Real-Time Visualization:

- Helps in making **quick business decisions**
- Handles **large and complex data easily**
- Makes data **easy to understand and explain**

### LibrariesUsed:

1. Seaborn
2. matplotlib

### CONCLUSION:

In this experiment we have studied about what is data visualization. How data visualization helps us in different ways. We have also used the inbuilt data set i.e., Titanic from the seaborn library to perform data visualization on it.