

### Importing Libraries:

```
python
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import numpy as np

import pandas as pd

import matplotlib.pyplot as plt

import seaborn as sns

import warnings

warnings.filterwarnings('ignore')
```

- NumPy and Pandas are used for data manipulation and analysis.
- Matplotlib and Seaborn are used for creating visualizations.
- Warnings are imported and filtered to suppress any warnings that may appear during execution.

### Loading the Dataset:

```
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df = sns.load_dataset('titanic')
```

- `sns.load_dataset('titanic')` loads the Titanic dataset directly from Seaborn. The dataset contains 891 rows with information like passenger class, sex, age, fare, survival status, and other features.

### Exploring the Dataset:

```
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df.info()
```

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df.describe()
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df.shape
```

- `df.info()` gives a summary of the dataset, including the number of entries, column names, non-null values, and data types.
- `df.describe()` provides summary statistics like count, mean, standard deviation, minimum, and maximum values for numerical columns.
- `df.shape` gives the dimensions of the dataset, i.e., the number of rows and columns.

Setting Visualization Style:

```
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sns.set(rc={'figure.figsize': (6, 4)})
```

- `sns.set()` is used to configure the aesthetics of the plots, setting the figure size for the upcoming visualizations.

Plotting the Histogram for 'Fare':

```
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sns.histplot(x='fare', data=df)  
  
plt.title('Distribution of Fare')  
  
plt.show()
```

- `sns.histplot()` is used to plot the histogram of the `fare` column, which represents the price of tickets. This gives a distribution of the fare values across all passengers.

- `plt.title('Distribution of Fare')` sets the title of the plot.
- `plt.show()` displays the plot.

Plotting the Distribution for 'Age':

```
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sns.set(rc={'figure.figsize': (6, 4)})

sns.displot(x='age', data=df, bins=70, height=5,
            aspect=1.2)

plt.title('Distribution of Age')

plt.show()
```

- `sns.displot()` creates a histogram for the `age` column, with 70 bins. This shows the distribution of passenger ages on the Titanic.
- `plt.title('Distribution of Age')` sets the title of the plot.
- `plt.show()` displays the plot.

Plotting Count Plot for 'Survived' vs 'Pclass':

```
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sns.set(rc={'figure.figsize': (5, 5)})

sns.catplot(x='survived', data=df, kind='count',
            hue='pclass')
```

- `sns.catplot()` creates a categorical plot, specifically a count plot, that shows the number of survivors and non-survivors, grouped by passenger class (`pclass`). The `hue='pclass'` argument colors the bars based on the passenger class.

- `sns.set(rc={'figure.figsize': (5, 5)})` sets the figure size for the plot.

Plotting Count Plot for 'Survived' vs 'Sex':

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```
sns.set(rc={'figure.figsize': (5, 5)})
```

```
sns.catplot(x='survived', data=df, kind='count',  
hue='sex')
```

- Similar to the previous count plot, this one visualizes the survival status, but groups the data by sex (`sex`). This helps to examine how survival rates differ between males and females.