**✅ Summary of Performed EDA on Bank Marketing Dataset**

This document summarizes the Exploratory Data Analysis (EDA) tasks performed using the Bank Marketing dataset in Jupyter Notebook.

**1. Loading the Dataset**

* **Code Used**: pd.read\_csv()
* **Purpose**: Load the data into a pandas DataFrame for analysis.

**2. Checking for Missing Values & Data Types**

* **Code Used**:
* df.isnull().sum()

df.dtypes

* **Purpose**: Identify any null values and understand the data type of each feature (numerical or categorical).

**3. Generating Summary Statistics**

* **Code Used**: df.describe()
* **Purpose**: Get statistical measures like mean, standard deviation, min, max, etc., for numerical features.

**4. Importing Visualization Libraries**

* **Code Used**:
* import seaborn as sns

import matplotlib.pyplot as plt

* **Purpose**: Required libraries for data visualization.

**5. Plotting the Target Variable Distribution**

* **Code Used**:
* sns.countplot(x='y', data=df)
* plt.title('Distribution of the Target Variable (y)')

plt.show()

* **Purpose**: Understand the imbalance in the target class (yes/no for term deposit).

**6. Correlation Matrix for Numerical Features**

* **Code Used**:
* numerical\_df = df.select\_dtypes(include=['float64', 'int64'])
* corr = numerical\_df.corr()
* sns.heatmap(corr, annot=True, cmap='coolwarm')
* plt.title('Correlation Matrix')

plt.show()

* **Purpose**: Visualize how numerical features are related to each other using correlation coefficients.