Logistic Regression

**1. Data Exploration:**

a. Load the dataset and perform exploratory data analysis (EDA).

b. Examine the features, their types, and summary statistics.

c. Create visualizations such as histograms, box plots, or pair plots to visualize the distributions and relationships between features.

Analyze any patterns or correlations observed in the data.

**2. Data Preprocessing:**

a. Handle missing values (e.g., imputation).

b. Encode categorical variables.

**3. Model Building:**

a. Build a logistic regression model using appropriate libraries (e.g., scikit-learn).

b. Train the model using the training data.

**4. Model Evaluation:**

a. Evaluate the performance of the model on the testing data using accuracy, precision, recall, F1-score, and ROC-AUC score.

b. Visualize the ROC curve.