6/20/25, 5:27 PM credit score model

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In [5]: # Step 1: Import Libraries
 import pandas as pd
 import numpy as np
 from sklearn.model_selection import train_test_split
 from sklearn.linear_model import LogisticRegression
 from sklearn.metrics import classification_report, roc_auc_score
 import seaborn as sns
 import matplotlib.pyplot as plt
 # Step 2: Load Dataset
 url = "https://raw.githubusercontent.com/datasciencedojo/datasets/master/titanic
 df = pd.read csv(url)
 # Step 3: Preprocess Dataset
 df = df[['Pclass', 'Sex', 'Age', 'SibSp', 'Parch', 'Fare', 'Survived']]
 df.dropna(inplace=True)
 df['Sex'] = df['Sex'].map({'male': 0, 'female': 1})
 # Step 4: Feature Selection
 X = df.drop('Survived', axis=1)
 y = df['Survived']
 # Step 5: Train-Test Split
 X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_
 # Step 6: Train Model
 model = LogisticRegression()
 model.fit(X_train, y_train)
 # Step 7: Evaluate Model
 y_pred = model.predict(X_test)
 print("Classification Report:\n", classification_report(y_test, y_pred))
 print("ROC-AUC Score:", roc_auc_score(y_test, model.predict_proba(X_test)[:, 1])
Classification Report:
                           recall f1-score support
               precision
                   0.78
           0
                            0.82
                                       0.80
                                                   87
           1
                   0.69
                             0.64
                                       0.67
                                                   56
                                       0.75
                                                  143
    accuracy
   macro avg
                   0.74
                             0.73
                                       0.73
                                                  143
weighted avg
                   0.75
                             0.75
                                       0.75
                                                  143
ROC-AUC Score: 0.8163998357963875
```