**READ ME**

**PURPOSE:**

This analysis is designed to predict loan statuses based on historical financial information from the provided dataset. The prediction is vital in assessing creditworthiness of borrowers and the risk of loan defaults. The accuracy of the information is vital in making informed decisions.

**FINANCIAL INFORMATION IN THE DATA:**

The dataset included several important variables, such as debt to income and derogatory remarks, which helped in predicting the Loan Status. Loan Status is the target variable, which provides insight into credit worthiness.

The states of Machine Learning used in this process were:

* Data Loading and Preparation
  + Loaded dataset and split into x and y
  + Split data into Training and Testing sets
* Model Building
  + Used Logistic Regression as the baseline
  + Fit the model to X train and Y train
  + Made predictions on the X test, using the trained model
* Evaluation
  + Generated a confusion matrix to understand performance
  + Printed a classification report for precision, recall, and F1-score

**SUMMARY:**

**The logistic regression model performance displayed:**

* **Outstanding Accuracy of 0.99**
* **Excellent Precision for both classes:**
  + **100% for Fully Paid**
  + **87% for High-Risk.**
* **Remarkable recall:** 
  + **100% Fully Paid identified**
  + **94% High-Risk identified** Top of Form

**High accuracy, precision, and recall performance makes this model a strong candidate for lending-scenario decision making.**