Credit Risk Analysis Report

Credit-Risk-Classification Challenge

Denise Miller

**Overview of Analysis:**

The purpose of the analysis is to observe the accuracy of the model in correctly identifying the low (0) and high (1) risk borrowers helping to determine the risk of defaulting in a loan. The historical data provided by the company thats used to train the model was provided on a csv named Lending\_data csv. The y-variable is the loan status and the x-variable that was taken into consideration is the loan size, interest rate, borrower income, debt to income, number of accounts, derogatory marks and the total debt. After splitting the data set into training and testing sets, the logistic regression mode is used to train the data.

**Results/Metric Performance:**

**Training:**

**Precision:**

**0 Label**: 100%

**1 label:** 86%

**Recall**

**0 Label:** 99%

**1 label:** 93%

**F1-score**

**0 Label:** 100%

**1 label:** 90%

**Accuracy:** 99%

**Testing:**

**Precision:**

**0 Label:** 100%

**1 label:** 84%

**Recall:**

**0 Label:** 99%

**1 label:** 94%

**F1-score**

**0 Label:** 100%

**1 label:** 89%

**Accuracy**: 99%

**Summary:**

Looking at how accurate and how high the recall, F1-score and precision percentages are, I would recommend the model trained be used by the financial institutions. The model is able to correctly not just the healthy borrowers but the high risk (1) borrowers had a high correct classification which means the financial institute will be able to just look for the high risk if necessary.