Credit Risk Classification

In this module the task was to take a set of historical lending data and create and train models to evaluate the risk of lending. The purpose of this was to determine whether a loan would be a low or high end risk and whether or not our model can accurately predict that.

Results:

Regression Model 1:

Precision: 100% precision on predictions of low risk loans. 85% precision on high risk loans

Recall: 99% precision on low risk loans. 91% precession on high risk loans.

Accuracy: Overall Accuracy was 99% with a balanced accuracy score of 0.9520479

Regression Model 2:

Precision: 100% precision on predictions of low risk loans. 84% precision on high risk loans

Recall: 99% precision on low risk loans. 99% precession on high risk loans.

Accuracy: Overall Accuracy was 99% with a balanced accuracy score of 0.9936781

Summary:

Regression model 2 appears to the be better of the two models and the model I would choose. I would choose this because while in inaccurately predicted high risk loans more often, it did not give us nearly as many false positives on high risk loans. Ultimately the worst case scenario for a bank would be predicting a loan was low risk, when in fact it was actually high risk. So in this situation misidentifying something as a high risk is more acceptable because the loan would just not be accepted. You lose some business, but that would be less than if you had a loan default.