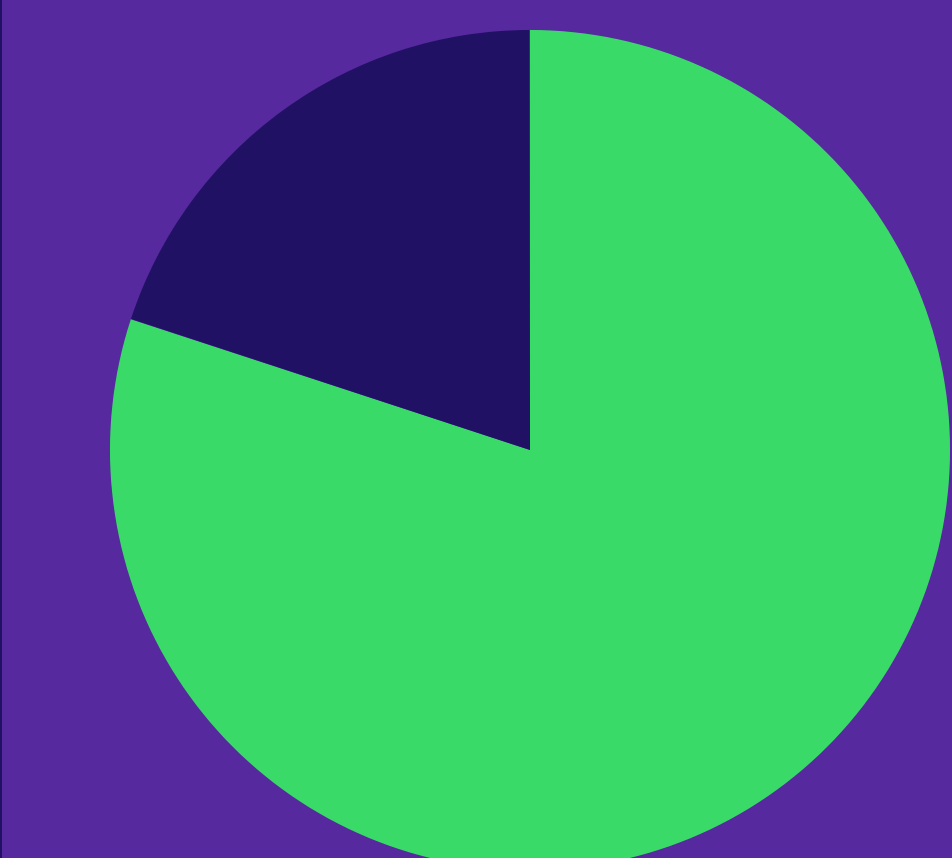


The data we will use is loan data provided by the company from 2007 to 2014. with a total observation of around 200 thousand (after processing).

Each borrower is labeled '1' for those who successfully repay. and labeled '0' for those who are late or fail to pay back.

Loan Status

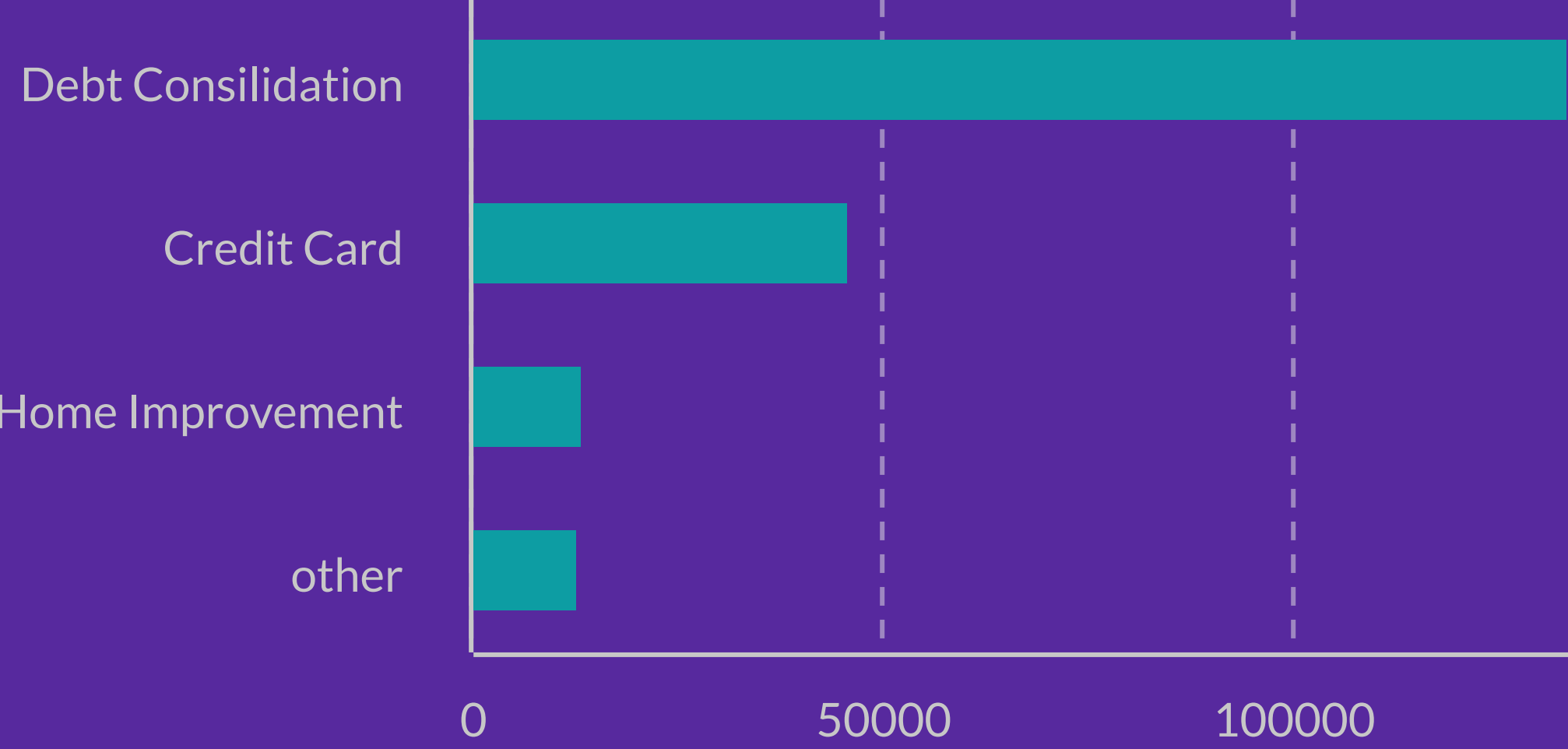


There are 80.04% of loans with good status, more than half of loans with bad status.

Good (80.04%) Bad (19.96%)

Loan Purpose

Most of the loans were made to pay off previous debts (Debt Consolidation), Around 58.03%.



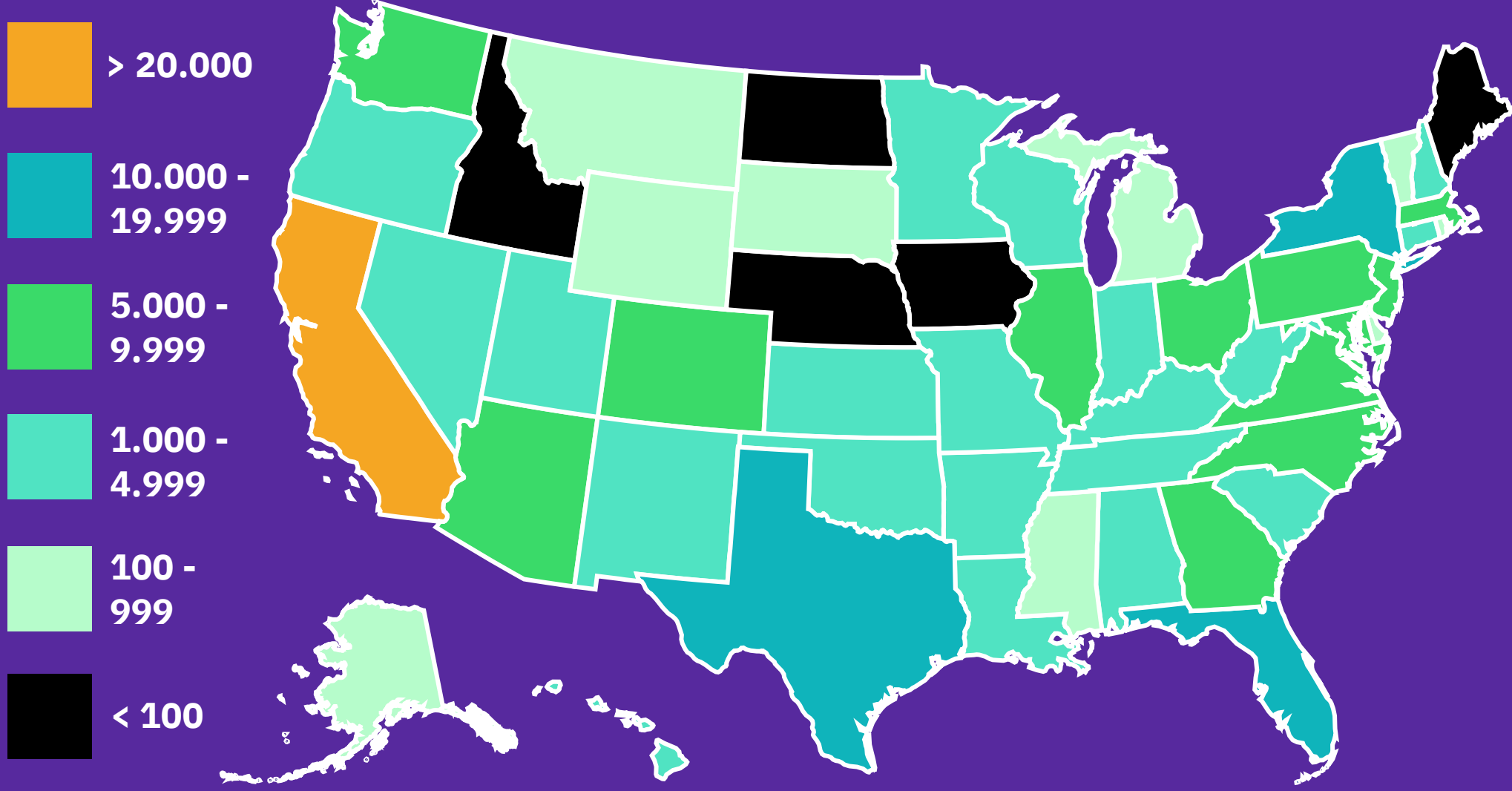
Total Loan

The average and deviation value of the total loan in bad loan status is greater than in good loan status

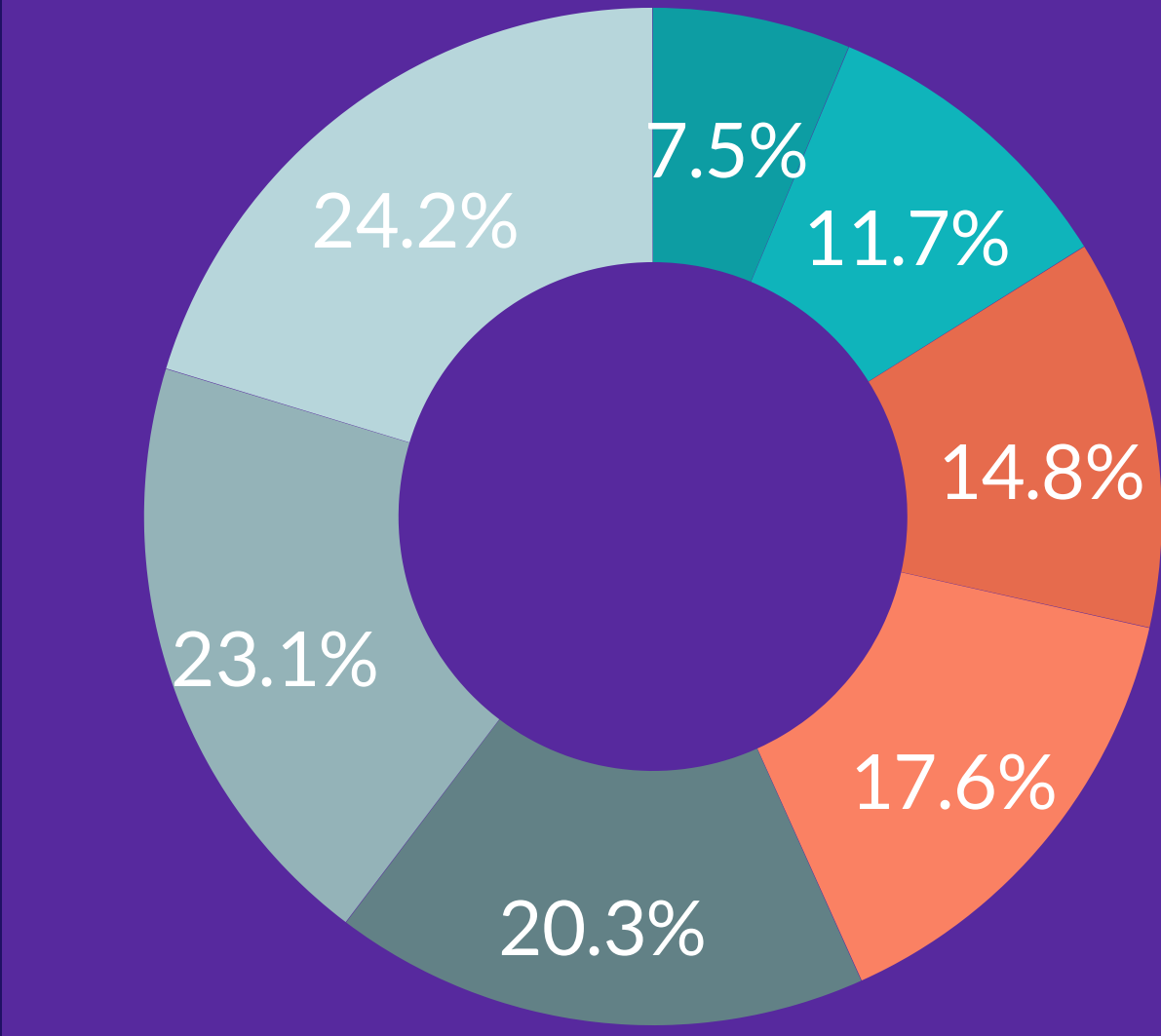
Loan Status	Mean	Std
Good	13214	7949
Bad	14205	8362

Borrower's Country of Origin

Most of the borrowers come from California



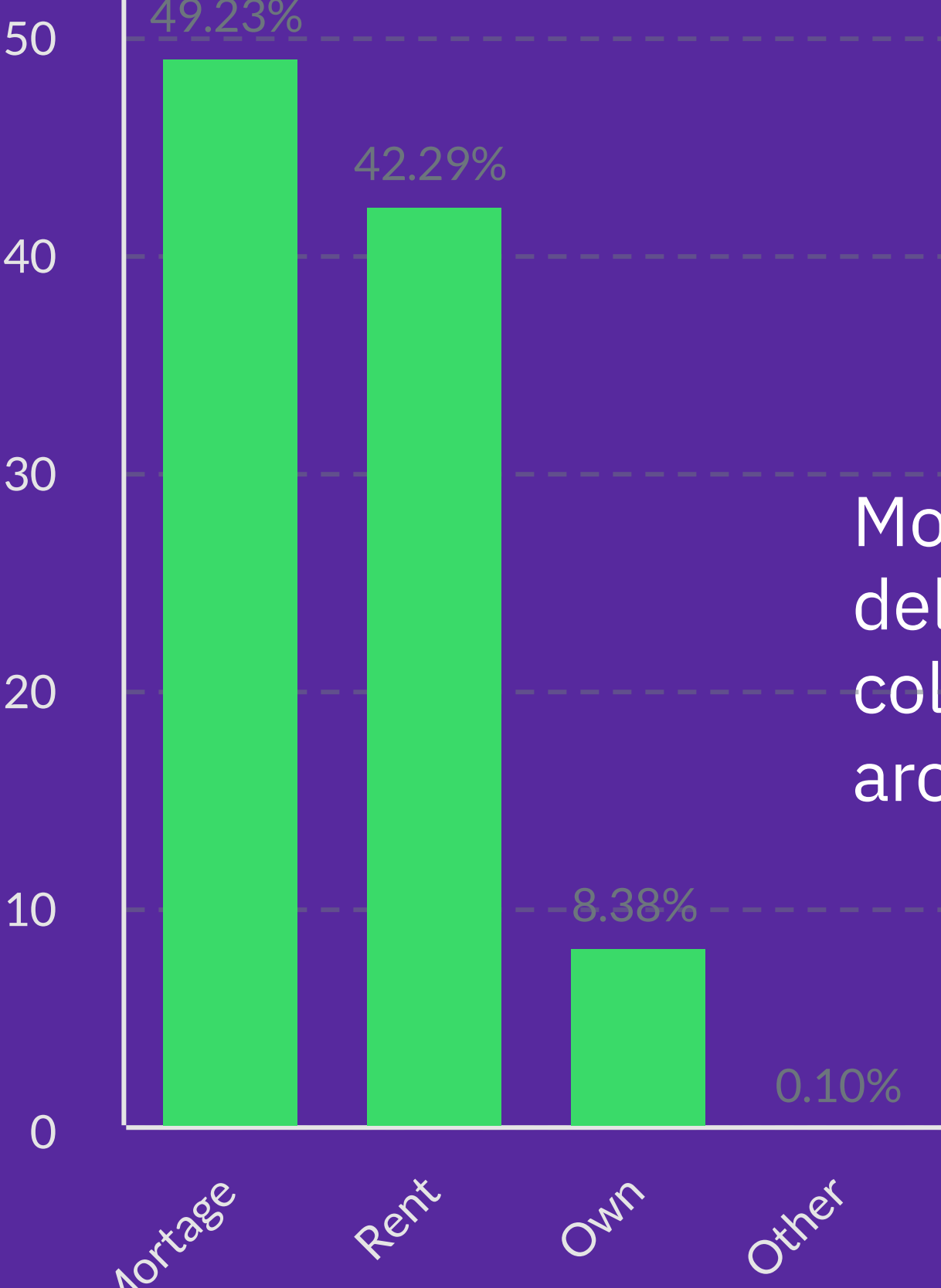
Loan Rate



Each loan rating has its own interest rate. Starting from grade A with an average interest rate of 7.5% to grade G with an average interest rate of 24.2%.

A B C D E F G

Home Ownership Status



Most of the borrowers delegate their house as collateral for the loan, around 49.23%

88% Precision

Chances of predicting bad loans as bad

97% Recall

Possibility not to misjudge bad loan status as good

92% f1-Score

The combination of precision and recall, the likelihood of how consistent the model is in predicting loan status.

Predictive performance



Prediction Accuracy



The model can predict customer loan status accurately with more than 90% probability

Prediction Result Analysis

The logistic regression model has read the pattern of the borrower's characteristics or features well. If we use this model, our probability of incorrectly determining a bad customer as a good customer is 97% so that the risk of delay or default can be minimized.

Conclusion

Customers with bad loan status tend to make loans in larger amounts than customers with good loan status.

Thank You



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