

Home Credit Default Risk

Can you predict how capable each applicant is of repaying a loan?



Agenda

- 01 Introduction
- 02 Best Model
- 03 Key Features Driving Predictions
- 04 Business Recommendations
& Next Steps

Introduction

Business Problem

Accurately predict loan defaulters helping financial institutions minimize risk making informed lending decisions

Introduction

Target variable

- 0 = No Default (customer repaid loan)
- 1 = Default (customer failed to repay)

Introduction

Benchmarks

A majority classifier would achieve:

- Accuracy: 91.97%
- AUC: 50%

Best Model – Why XGBoost?

- Exceeds benchmarks
- RandomizedSearchCV - Prevent overfitting
- 5-fold Cross Validation
- Mean Accuracy: 92.0%
- Mean Kaggle Score (AUC): 76.2%

Key Features Driving Predictions

Age

Older applicants have a lower risk of defaulting

Income Types

Different income types had significant differences in default risk

Business Recommendations & Next Steps

- Adjust loan policies based on loan amount
- Strengthen risk assessment based on income type
- Target older borrowers for lower-risk lending



Thank you

Any Questions?