Loan Payback Prediction - P2P Lending

By Gareth Loh

What is P2P Lending?

- Cuts out financial institutions as the middle man
- Enables individuals to obtain loans from other individuals
- Easier for borrowers to access loans
- Lenders able to generate more interest income than conventional savings accounts

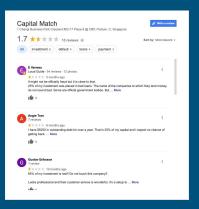
Problem Statement

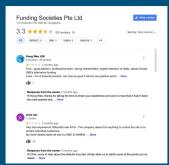
Liquid funds for instruments to earn returns

P2P Lending

Help investors assess and predict if the loan will be paid back

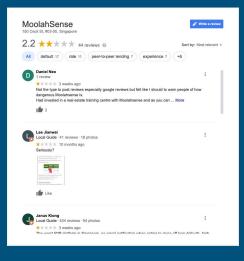
So who is this for...?





Investors P2P
Lending
Sites





Data Processing

The Lending Club data from Kaggle

Remove data unknown to investors

Impute FICO median

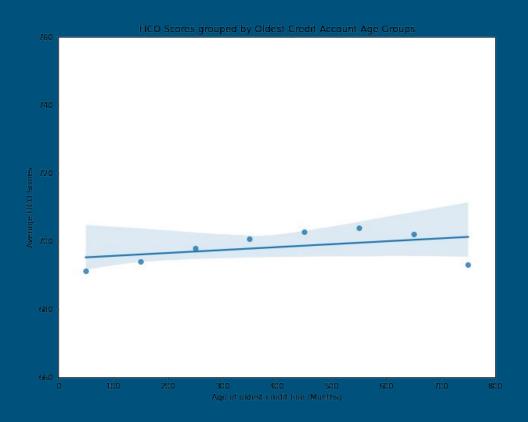
Convert employment length

Consolidate income and DTI columns

Update null values

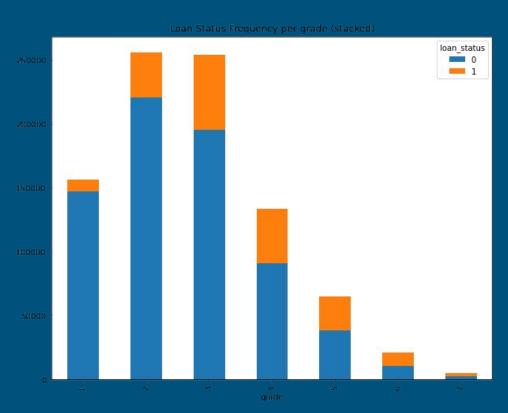
Exploratory Data Analysis

FICO Scores by Credit Account Age

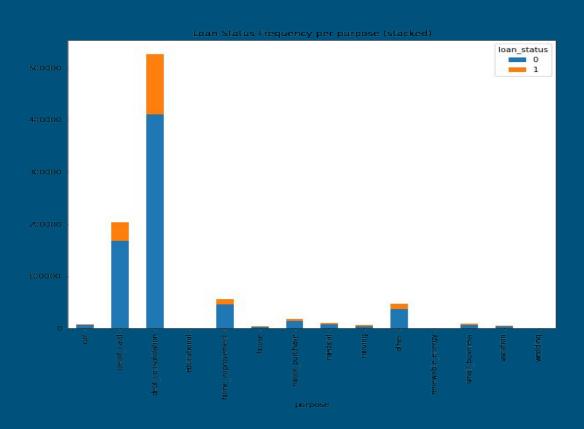


- FICO scores factor in the age of the oldest credit account
- Median FICO score increases with the age

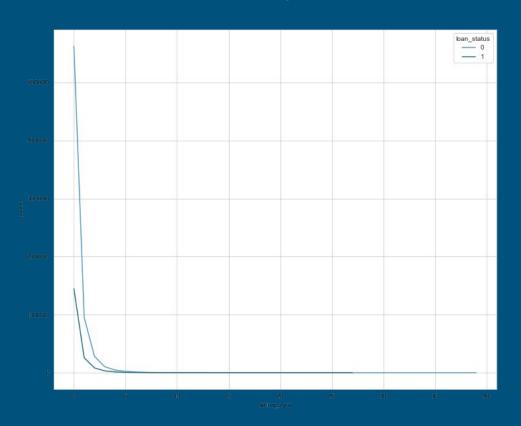
Lending Club Grades to Loan Payback



Loan Purpose to Loan Payback



Delinquencies in the last 2 years to Loan Payback



Modeling

Modeling - Classifiers

Logistic Regression

Stochastic Gradient Descent

Random Forest

XG Boost

Modeling - Results

Conclusions and Recommendations