



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
investment

Many
instruments
to earn
returns

P2P Lending

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

So who is this for....?

Capital Match
1 Chang Business Park Crescent #02-17 Plaza 8 @ CBP, Podium, C, Singapore

1.7 ★★★★★ 18 reviews

investment 4 default 4 loans 4 payment 3

E Verma
Local Guide · 54 reviews · 12 photos
5 months ago
It might not be officially rated but it is close to that.
25% of my investment was placed in bad loans. The name of the companies to which they lend money, do not sound bad. Some are official government bodies. But ... More

Angie Tan
7 reviews
8 months ago
I have \$250 in outstanding debt for over a year. That is 25% of my capital and I expect no chance of getting back. ... More

Gustav Eriksson
1 review
10 months ago
65% of my investment is lost! Do not touch this company!
Looks professional and their customer service is wonderful, it's a setup to ... More

Funding Societies Pte Ltd
112 Robinson Rd, #03-01, Singapore

3.3 ★★★★★ 55 reviews

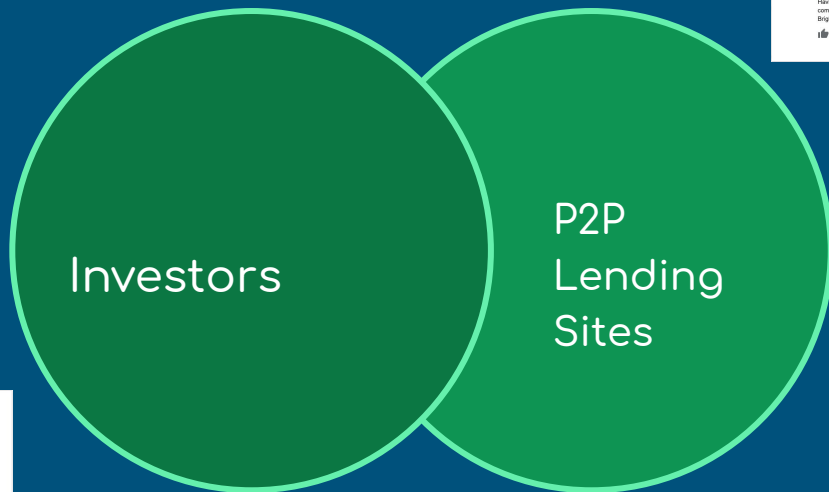
rate 10 loans 5 returns 1

Kong Hwa Lim
Local Guide · 26 reviews · 26 photos
2 months ago
Pros: good platform, professional team, strong shareholders, largest selection of deals, allows hosted SBA's alternative funding.
Cons: For a financial product, can only be good if returns are positive which ... More

Response from the owner 2 months ago
Hi Kong Hwa, thanks for taking the time to share your experience and sorry to hear that it hasn't been the most positive one. ... More

Yuhui Loh
1 review
4 months ago
Very bad experience! Defaulted rate 97%. The company doesn't do anything to control the risk or to protect individual customers.
My 3mm related debts all went to SME ID 84694H. ... More

Response from the owner 2 months ago
Hi Chui, sorry to hear about the defaults incurred. Kindly allow us to clarify some of the points you've raised. ... More



CoAssets
4 Shenton Way #03-01 OUE Downtown 1

3.2 ★★★★★ 18 reviews

crowdfunding 6 investment 6 projects 3

Justine Bon
1 review
2 months ago
I had dealt with both CA Funding Pte Ltd and Coasset International Pte Ltd. To be very clear to the other investors, please note that only CA Funding Pte Ltd is regulated by MAS. As such, only MAS can have regulatory forces on CA Funding. ... More

Jason Tan
2 reviews
3 weeks ago
Feels like a scam to me, hope the authority investigates thoroughly


Esther
Local Guide · 45 reviews · 18 photos
6 months ago
Having issues getting back my capital from a promissory note investment in them. It's been sold to a company called Sun's Investments, a company incorporated in 2018 and management linked to Brighton.

MoolahSense
150 Cecil St, #03-00, Singapore

2.2 ★★★★★ 44 reviews

All default 17 rate 11 peer-to-peer lending 7 experience 7 +6

Daniel Neo
1 review
3 weeks ago
Not the type to post reviews especially google reviews but felt like I should to warn people of how dangerous Moolahsense is.
Had invested in a real estate training centre with Moolahsense and as you can ... More

Lee Jiamel
Local Guide · 41 reviews · 18 photos
10 months ago
Seriously?


Janus Kiong
Local Guide · 404 reviews · 94 photos
3 weeks ago
You want \$100 platform to \$1000000, no email notification unless action to abuse off loan default the bank.

Data Processing

The Lending Club
data from Kaggle

Remove data
unknown to
investors

Impute FICO
median

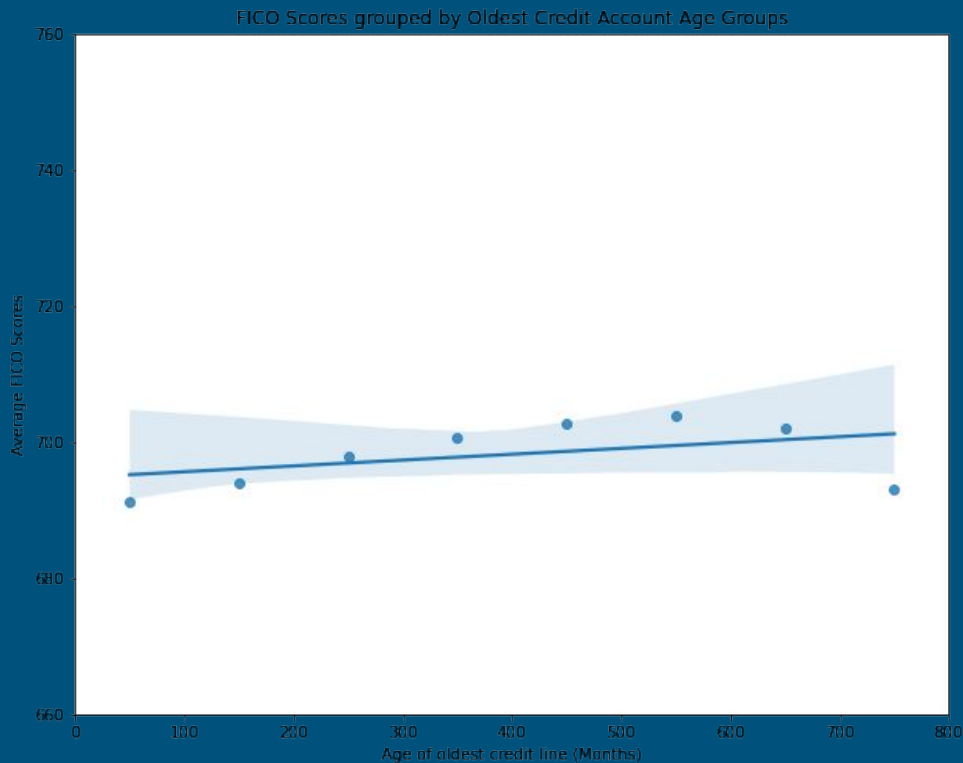
Convert
employment
length

Consolidate
income and
DTI columns

Update null
values

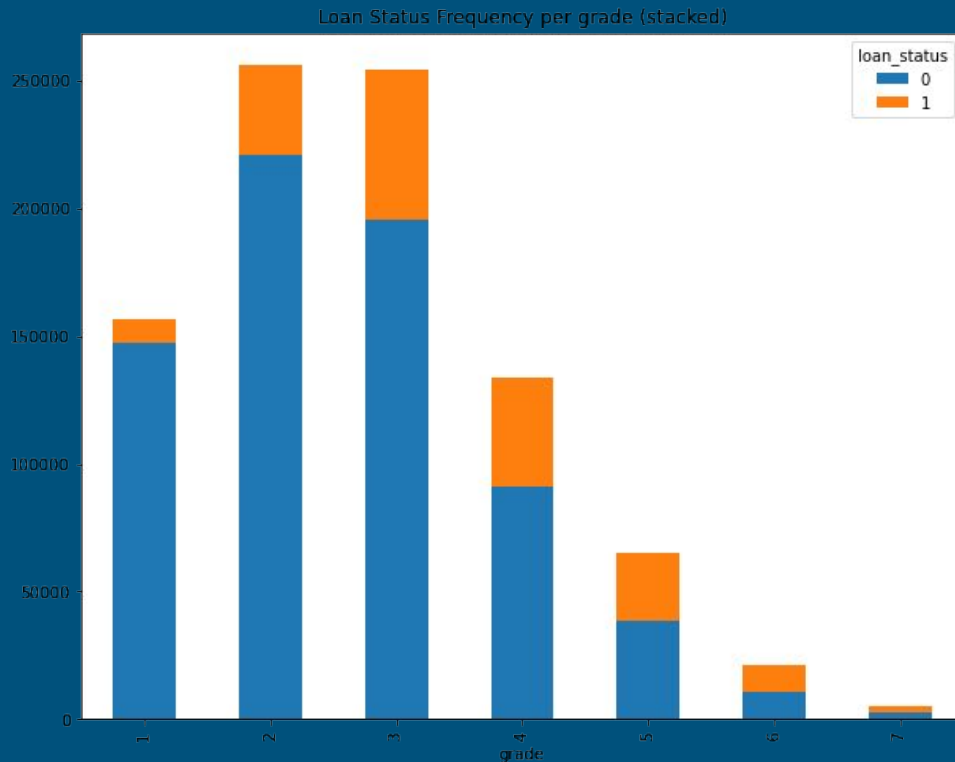
Exploratory Data Analysis

FICO Scores by Credit Account Age

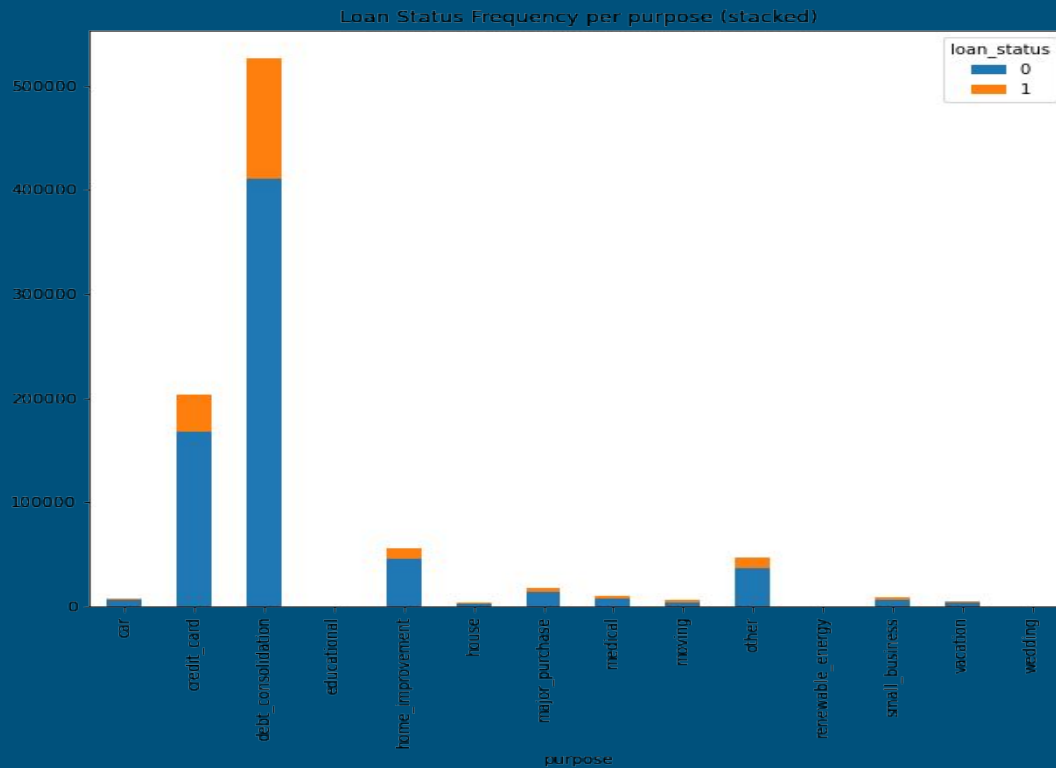


- FICO scores factor in the age of the oldest credit account
- Median FICO score increases with the age

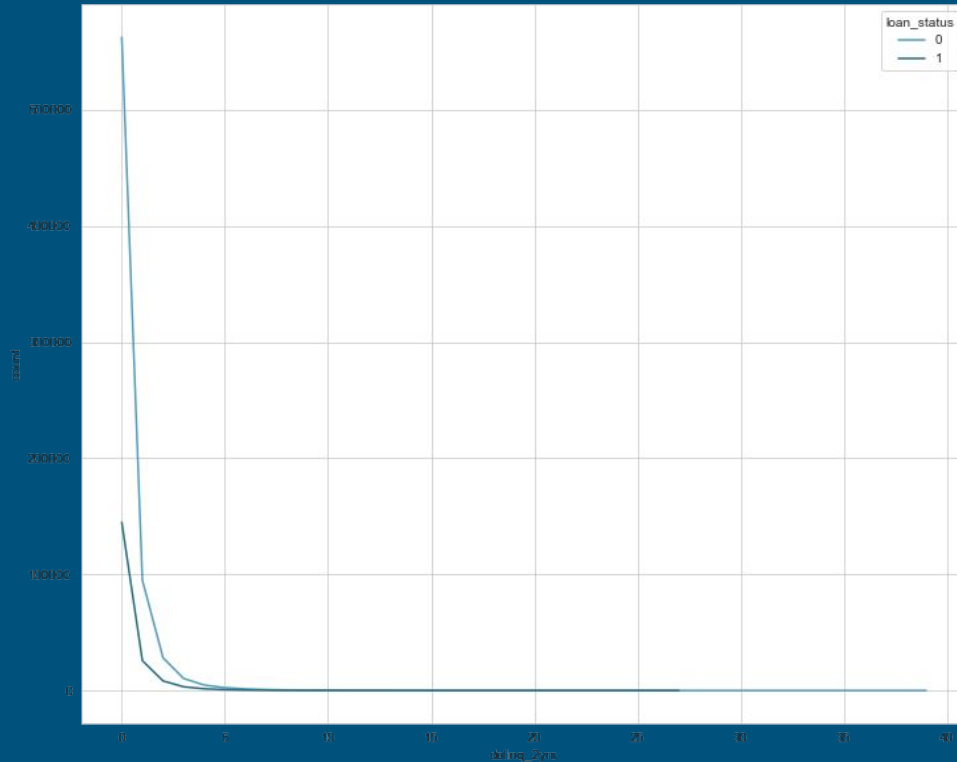
Lending Club Grades to Loan Payback



Loan Purpose to Loan Payback



Delinquencies in the last 2 years to Loan Payback



Modeling



Modeling - Classifiers

Logistic Regression

Stochastic Gradient
Descent

Random Forest

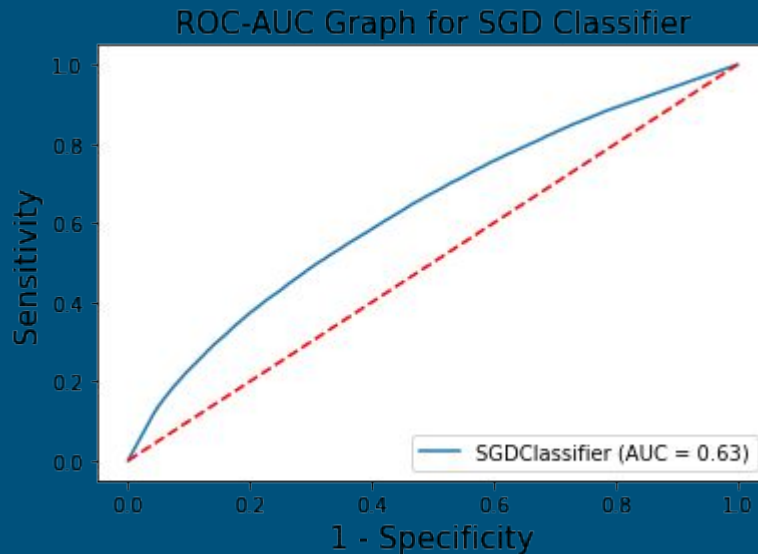
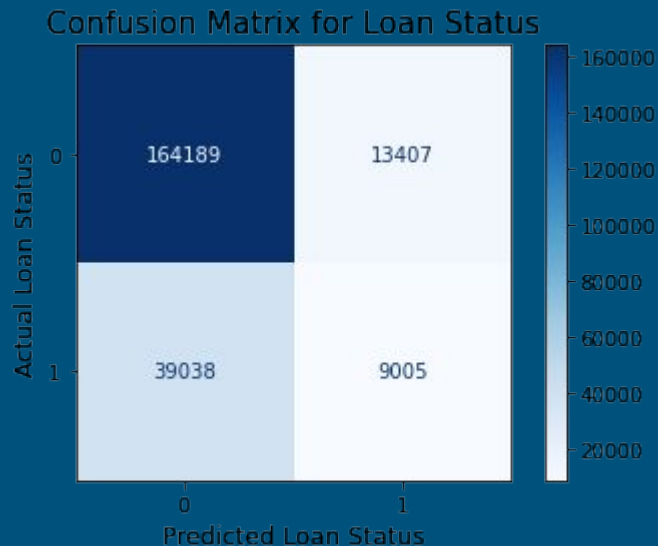
XG Boost

Models Used

Models

- Logistic regression
- Stochastic Gradient Descent
- Random forest
- XG Boost

Modeling - Results



Conclusions and Recommendations

- Tends to predict loans that will be paid off
- Lower accuracy on loans that might be defaulted

Recommendations

- Take more current data to train the model
- Better feature engineering