Strategies for Loan Selection

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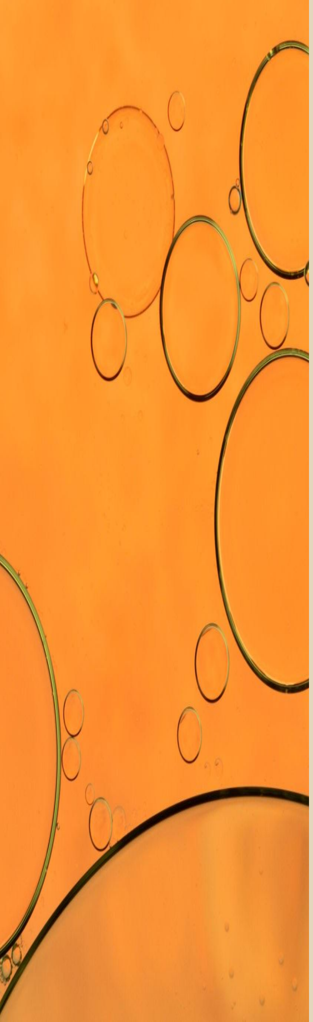
Agenda

1 Our Approach
2 How to find risky loans
3 What do the scores mean
4 What loans should you pick



Where we left off...

- The parameters we chose for determining the strategies and loans to pick
- The importance of each of these features
- How these features impact the loan grade

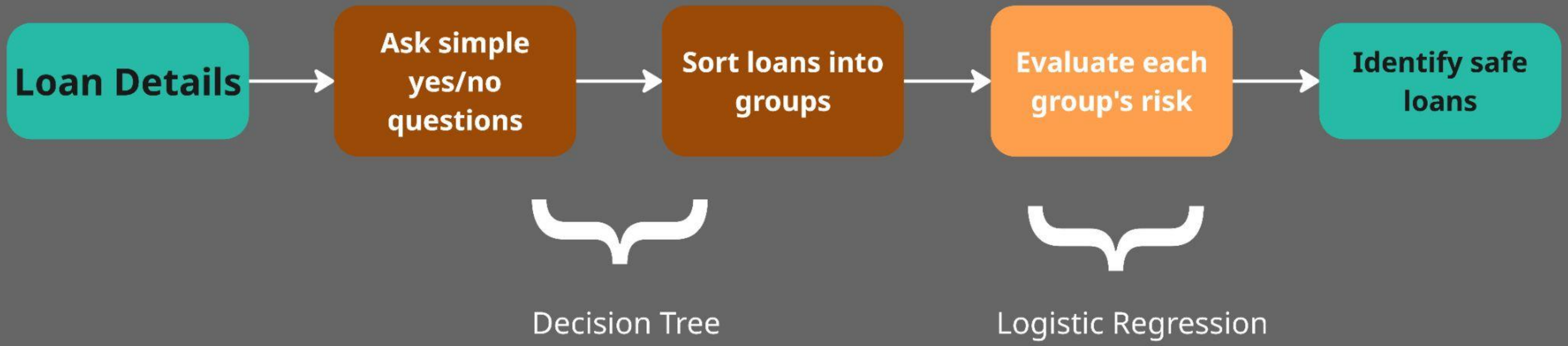
Our Approach to picking **Loan Defaults**

- Built a model to help predict which loans will default, and if they do, how much will you get back
- Tried multiple approaches with different factors to see which features impact default prediction and recovery
- Most important features are **interest rate, grade & sub-grade, term of loan, annual income and debt-to-income ratio** to loosely group similar loans together.
- We then use features like **number of open credit lines and overdue account balance** to segregate them into finer groups.
- Some features we excluded were **recoveries, loan status, last payment date and total payments** made because it would be like having access to information that isn't available at the time when you make the decision.

Our Approach
to predicting **Returns**

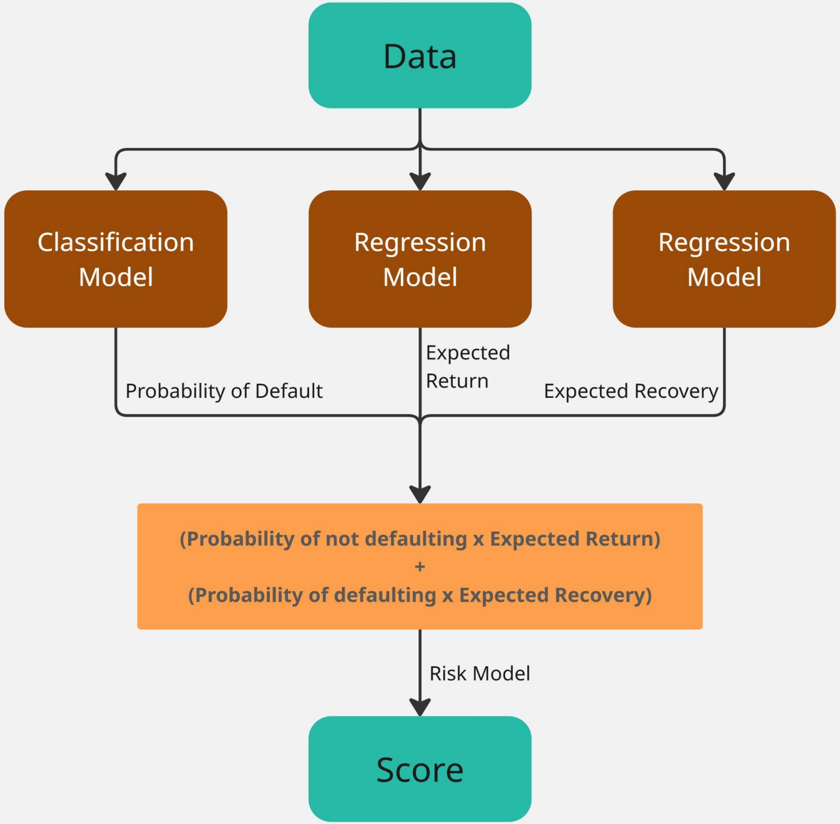
- Built a model to help predict how much will we get from a loan - both incase it goes through and in case it defaults
- We took an approach for returns under which in case of early payment, the amount is reinvested at market rate. This is a more realistic scenario compared to not getting money back on time always, or always getting the same rate and prepayment.
- Most important features are **loan amount, credit line gap** (how long ago was the first credit line opened), **debt to income ratio, annual income**.
- Some features we excluded were **recoveries, loan status, last payment date and total payments** made because it would be like having access to information that isn't available at the time when you make the decision.
- The same was then done to predict the **recovery** in case of a loan default

How do we find **Risky loans?**



- We sort loans by asking simple questions about their details.
- Loans with similar characteristics are grouped together.
- We focus on important factors like interest rate, credit quality, and income.
- This helps us predict which loans are safest to invest in.

How do we **Get the Scores?**



Our model scores loans by first minimizing risk and then maximizing recovery, ranking them to clearly identify the best investment opportunities.

- The Risk Model is designed to derive the score in such a way that it minimizes the risk as a priority and then maximizes the return/recovery.
- It assigns a score to each loan from 0 to 100
- The loan with highest score is the best one to invest in.

for Example

Risk Adjusted Score	Predicted Default Probability	Return %	Recovery %
80.381918	0.031653	0.152845	0.019083
49.787526	0.184913	0.159666	0.008602
2.862318	0.836549	0.154771	0.012797

This is the loan with one of the highest scores ~80

It's one of the safest loans with a decent return of 15%

And it didn't default as well

Arguably, one of the worst loans, with a score of just 2

Although with the same return, the model gauged its default probability around 88%. Thus the score comes down to super low.

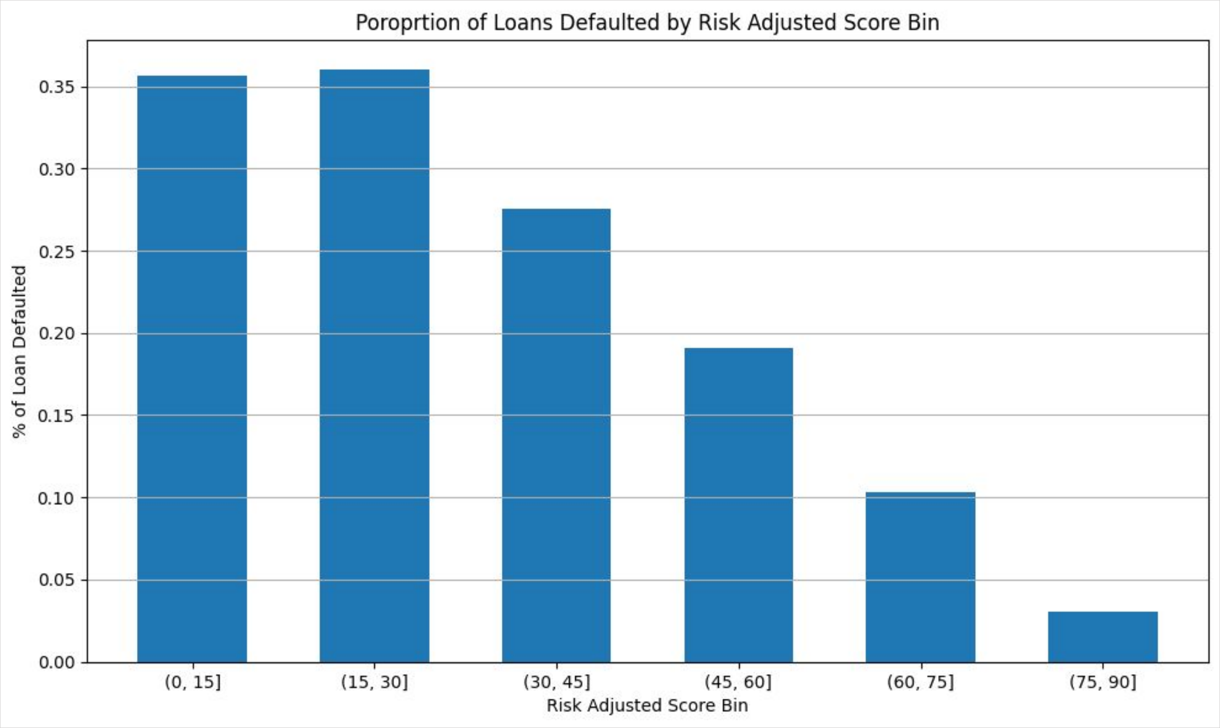
This is the loan with one of the most mid tier loans with a score of ~50

Although a similar return as the best one its score is significantly lower due to its high default probability

Well, You can pick any loan,

But for a safer investment prefer the loans with a **score of above 85.**

Although don't invest in any loan below 75 for minimal risk



While, other methods such as picking purely based off of expected returns can give higher returns, they carry a much higher risk.

And we want your money to be **safe & growing.**

“ THANK YOU