

# How to find the best invest at the



# Lendingclub.com



 **LendingClub**

# Key Question



How should an investor decide in whom to invest on Lendingclub.com?



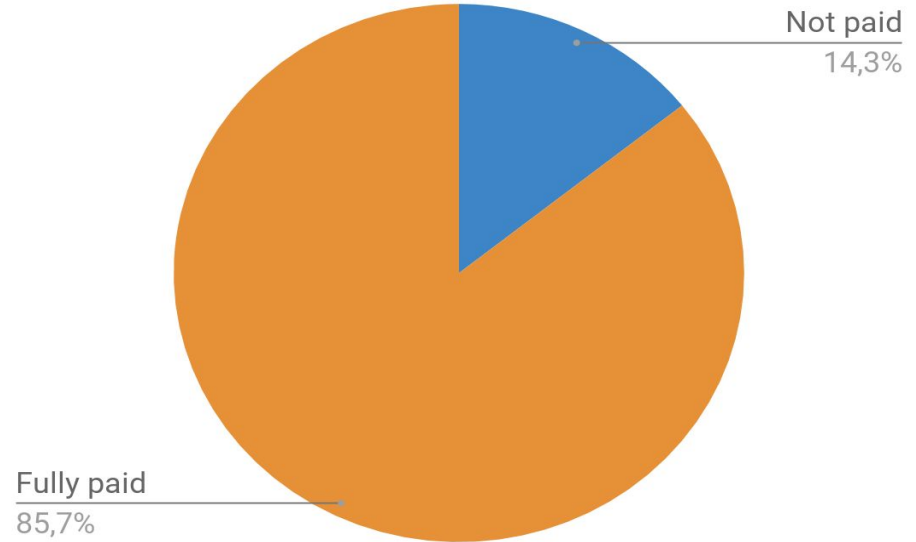
Basic Assumptions:

- low risk
- no personal influence
- no investment experience

# Dataset



- more than 40,000 datasets
- very imbalanced data with regard to target
- a lot of (not helpful) features to predict whether a loan will be paid back

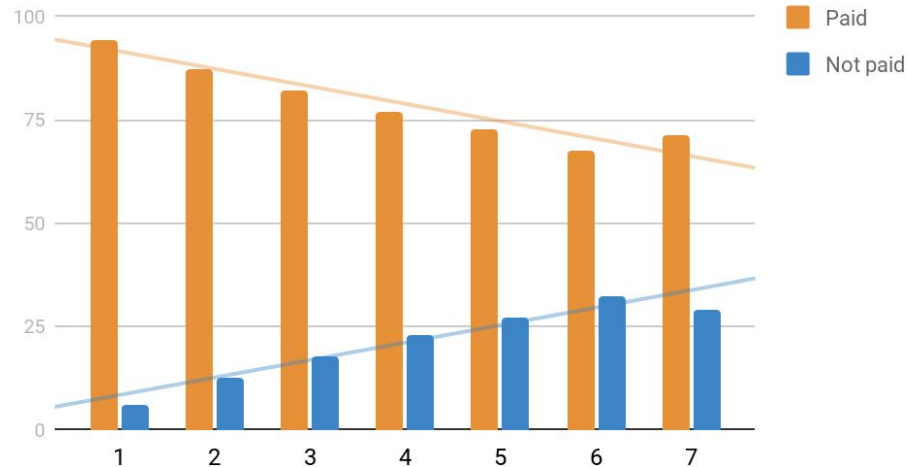


# Grade



The better the grade, the more likely the loan will be repaid.

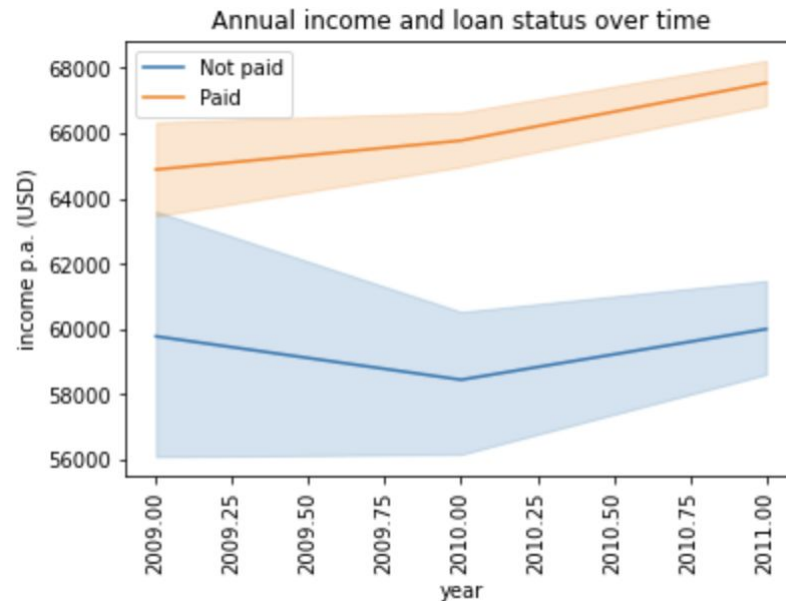
Grade and loan status



# Annual Income



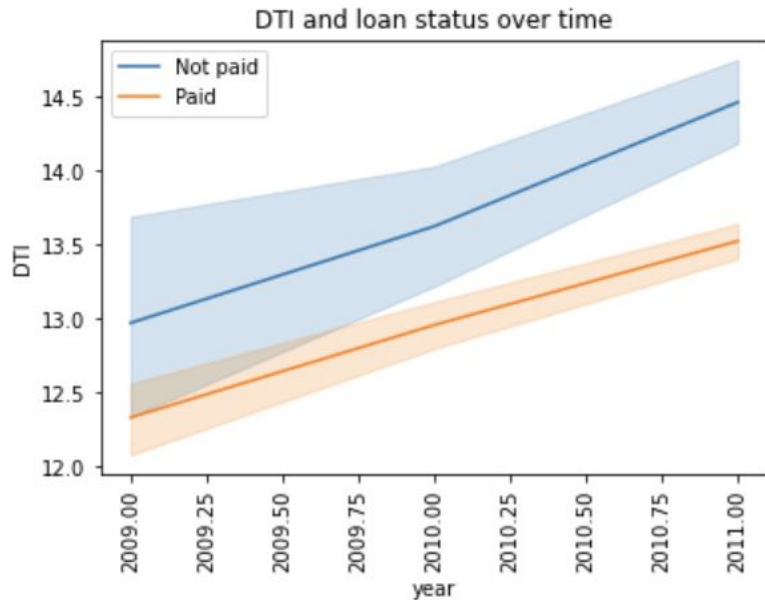
The higher the annual income (in USD),  
the more likely the loan will be repaid.



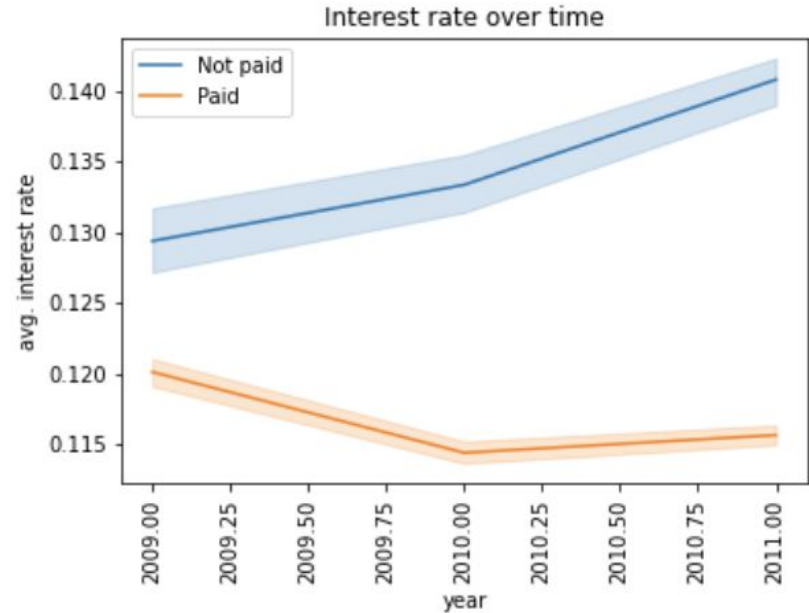
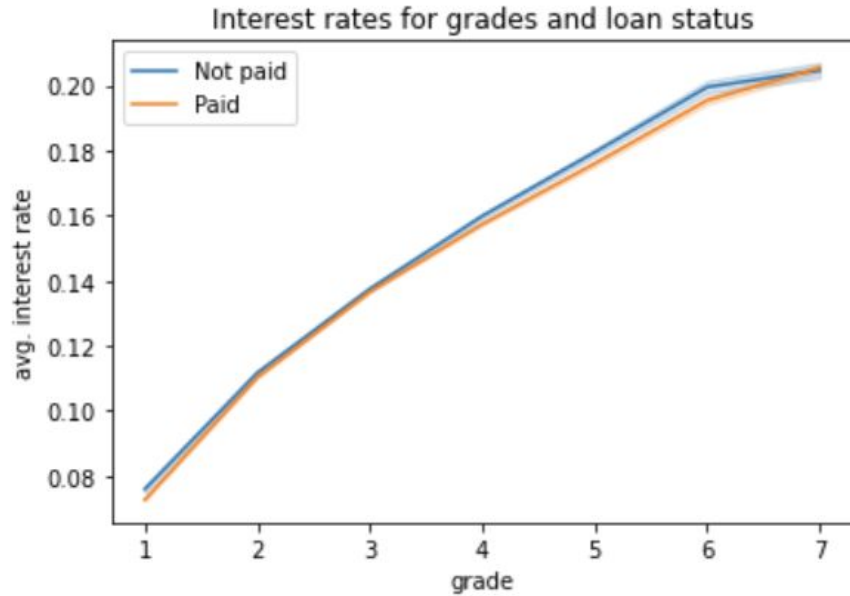
# Debt to Income Ratio



A lower monthly debit is connected with a higher probability that the borrower will pay back.



# Interest Rate





# Model



- Since mistakenly as good classified borrowers (= false positives) are especially heavy for investors:  $F_\beta$ -Score with high weighting of precision as evaluation metric.

$$F_\beta = (1 + \beta^2) \cdot \frac{\text{precision} \cdot \text{recall}}{(\beta^2 \cdot \text{precision}) + \text{recall}}$$

- best model:  $F_\beta = .81$

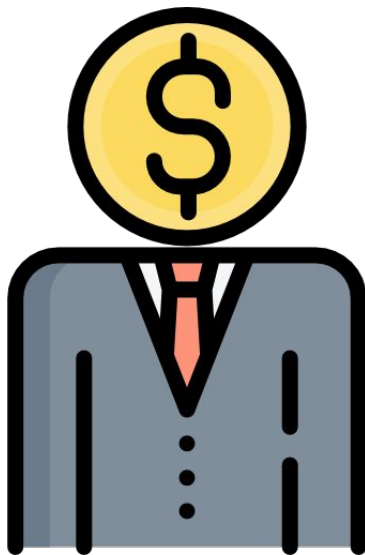


# Recommendation



When investing in Lending Club,  
go for borrowers with

- a low grade
- high annual income
- a low DTI
- a lower interest rate



In the end, investments are  
always fraught with risk!

# Thank you for your attention.

