



LENDING CLUB CASE STUDY-MLC 61

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THE PROBLEM

What is the problem?

- How to mitigate credit loss risk?

Who has this problem?

- Lending Club – a consumer finance company

Why should this problem be solved?

- To avoid loss of loan amount issued to high risk loan customers to mitigate credit loss

How will I know this problem has been solved?

- By identifying factors which determine likelihood of loan default and taking informed decision

OBJECTIVE

- Lending Club is a consumer finance company. Their objective is:
 - To identify factors which affect the likelihood of a loan repayment
 - To make an informed decision after assessing risk profile of a loan application
 - If customer is likely to repay loan, then not approving loan results in loss of business
 - If customer is likely to default, then approving the loan results in credit loss
 - Hence, risk mitigation is desired
 - Probable recommendations are solicited

APPROACH

Business understanding

- ⑩ Key dependent variable is loan_status having 3 values
- ⑩ Fully paid, Charged Off, Current
- ⑩ Need to identify major factors which affect loan_status

Dataset analysis

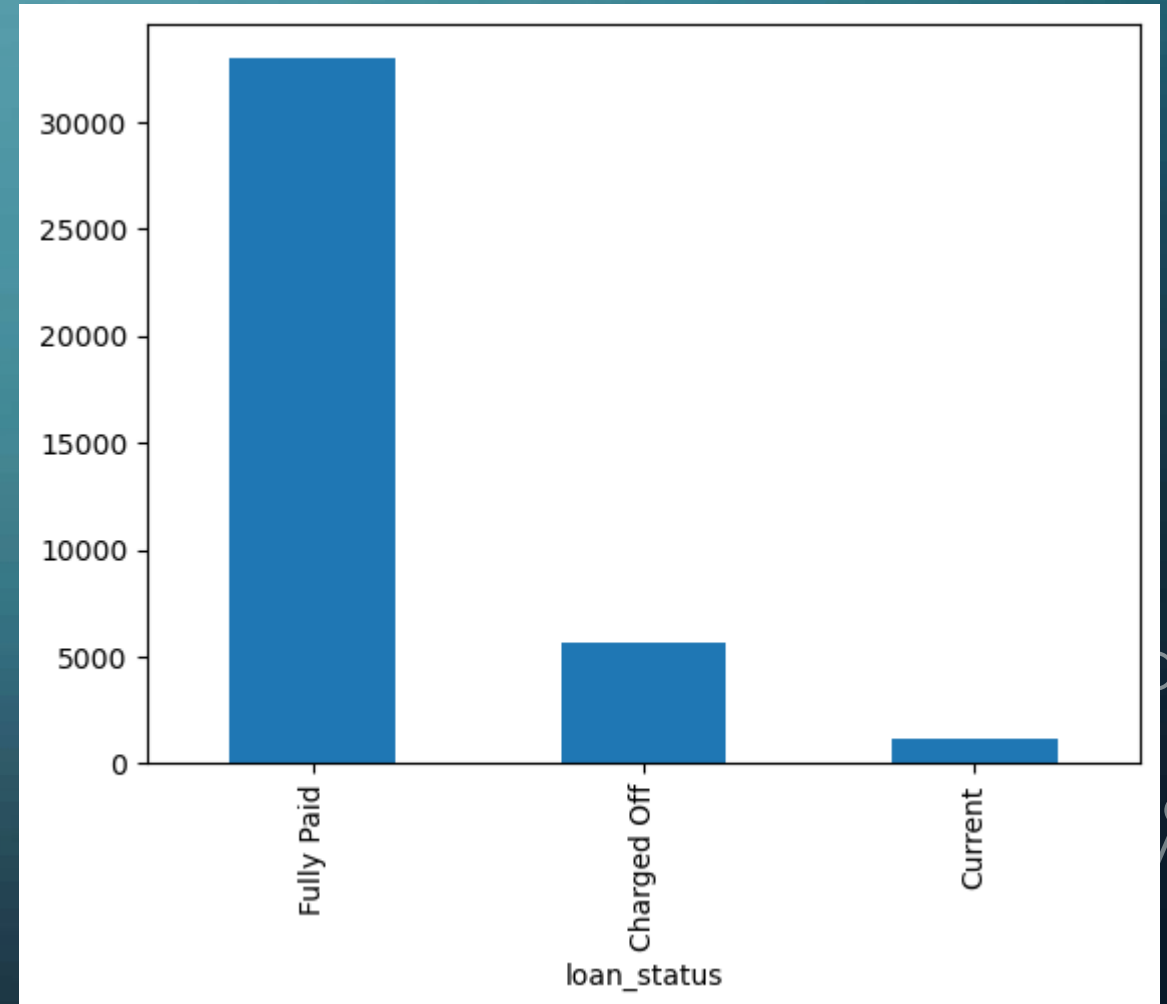
- ⑩ Given dataset contains past loan applications
- ⑩ Objective is to identify key variables affecting dependent variable loan_status
- ⑩ Enable Lending Club with information about defaulting loan customer patterns

Business objective

- ⑩ Mitigate risk profile in loan applications
- ⑩ Avoid credit loss as much as possible
- ⑩ Onboard repaying customers to boost business

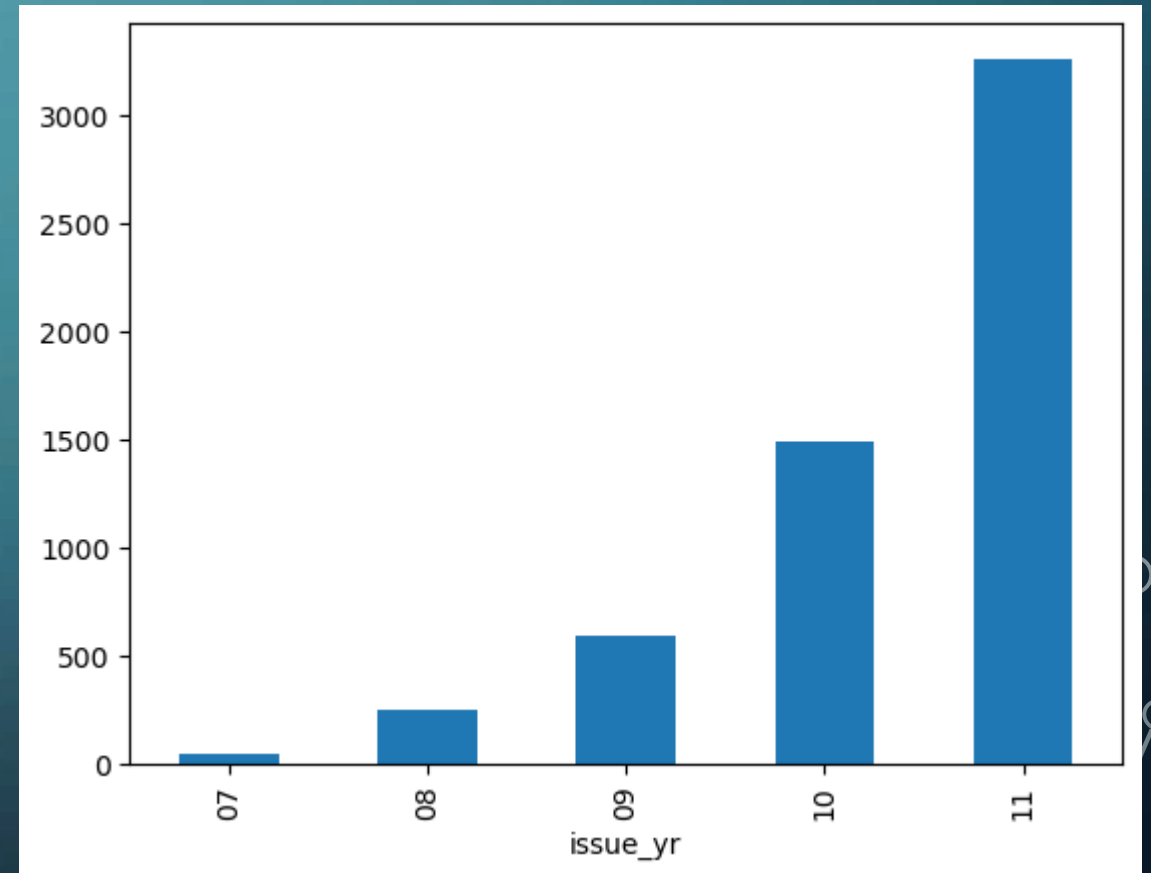
DISTRIBUTION OF LOAN STATUS

- More than 30k loans are fully paid
- Around 5k loans are Charged Off
- Less than a thousand loans are Current



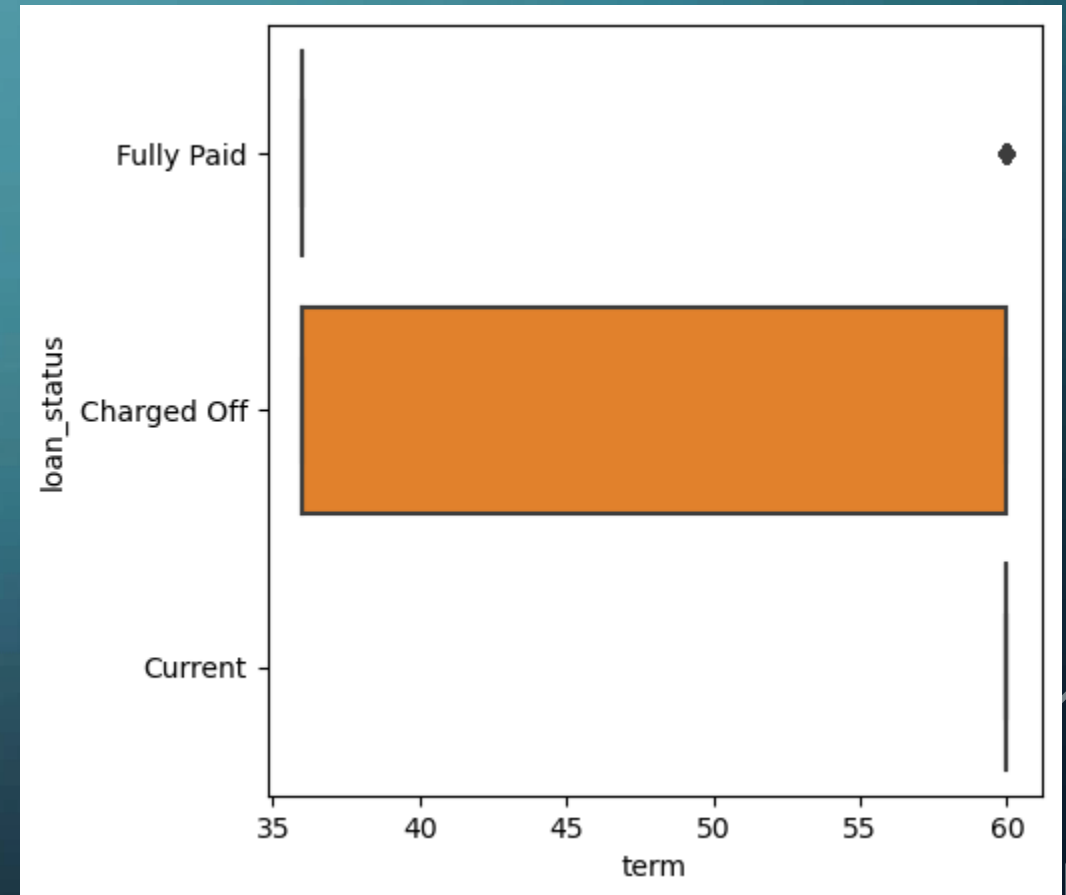
LOANS ISSUED ACROSS YEARS

- Most of Charged Off loans are issued in the year 2010-11



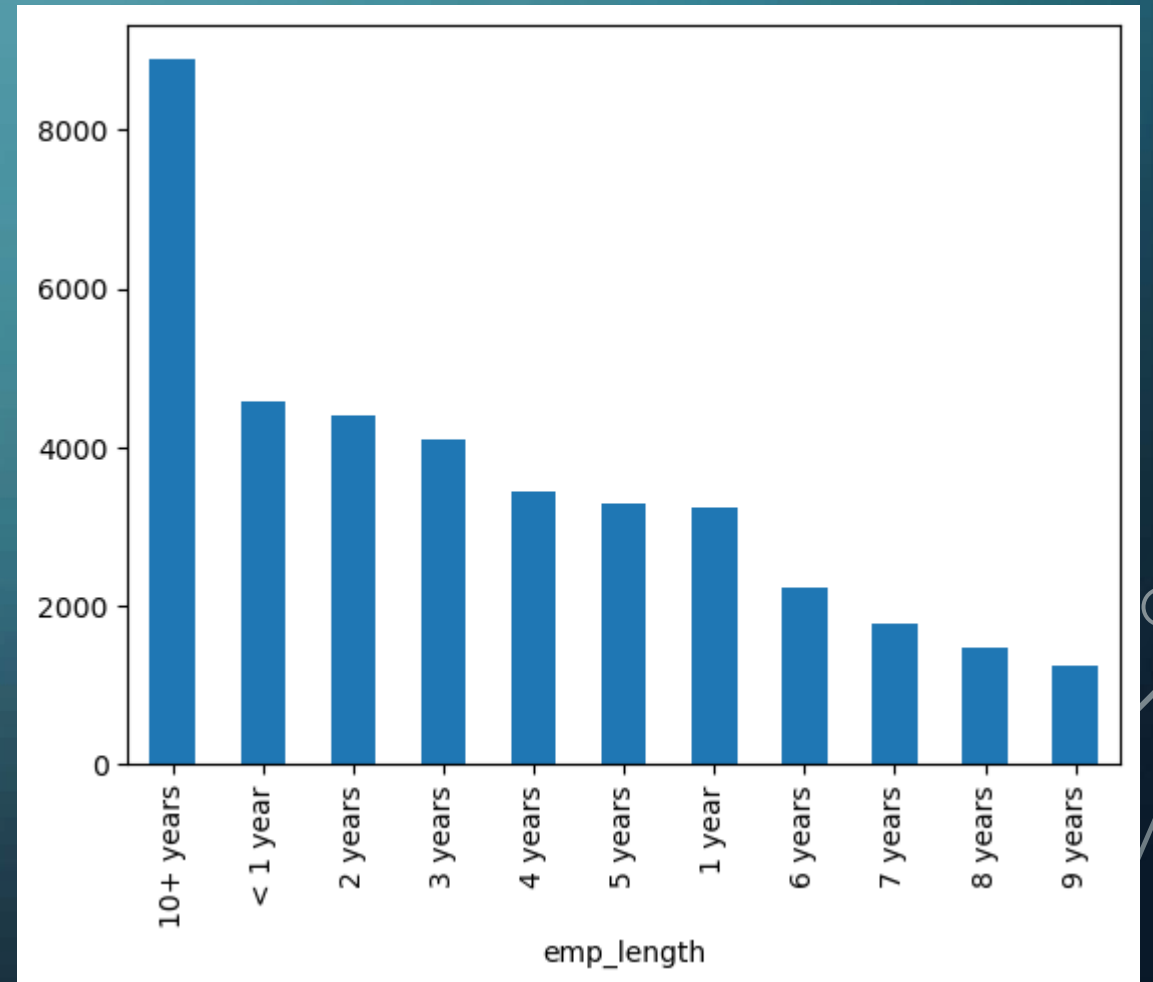
TERM OF CHARGED OFF LOANS

- It is noticed that Charged Off loans typically have a term of 35-60 months
- Loans with shorter term than 35 months and longer than 60 months are fully paid



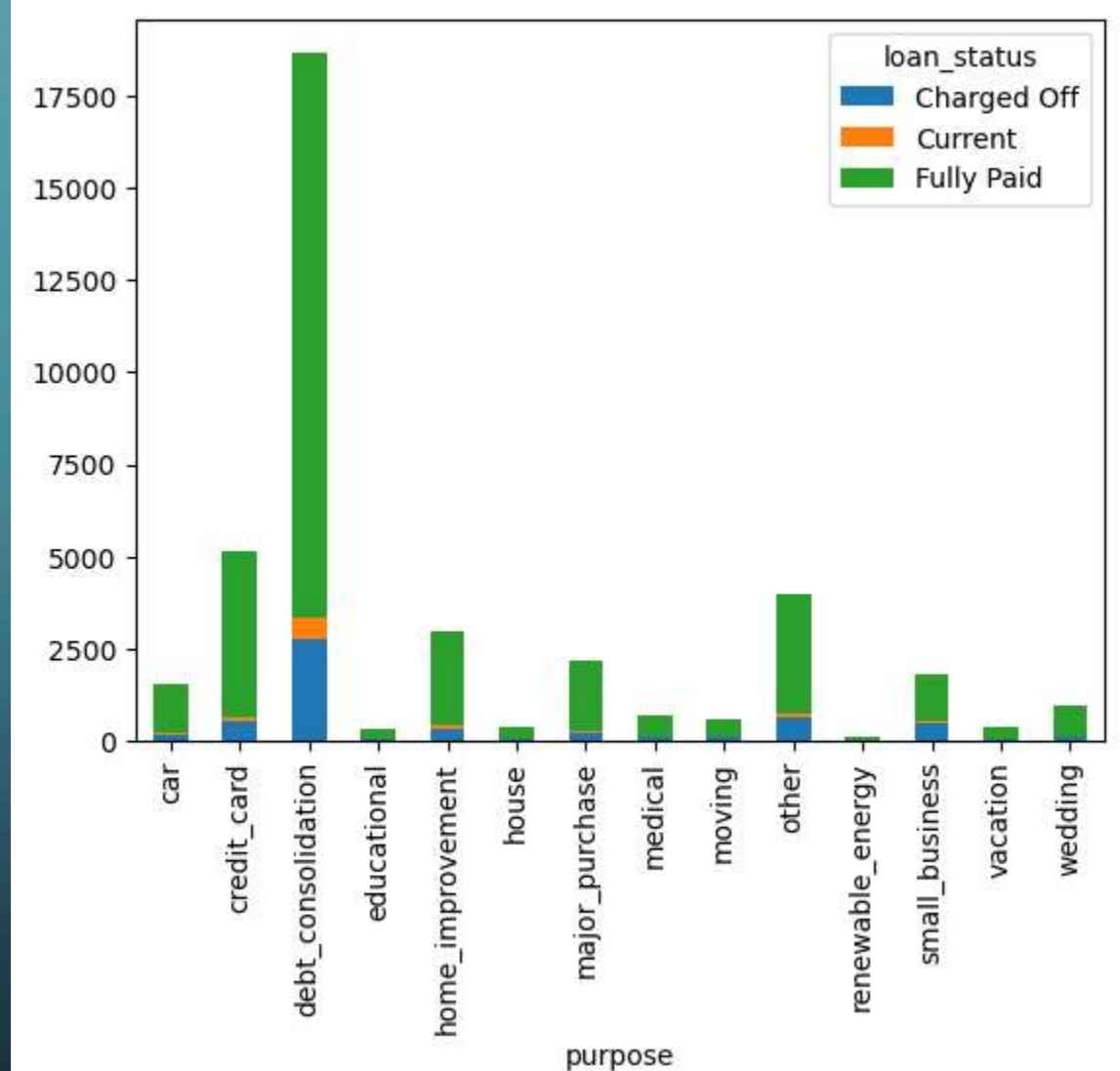
EMPLOYMENT LENGTH

- It is noticed that most loan customers are employed for more than 10 years of tenure.



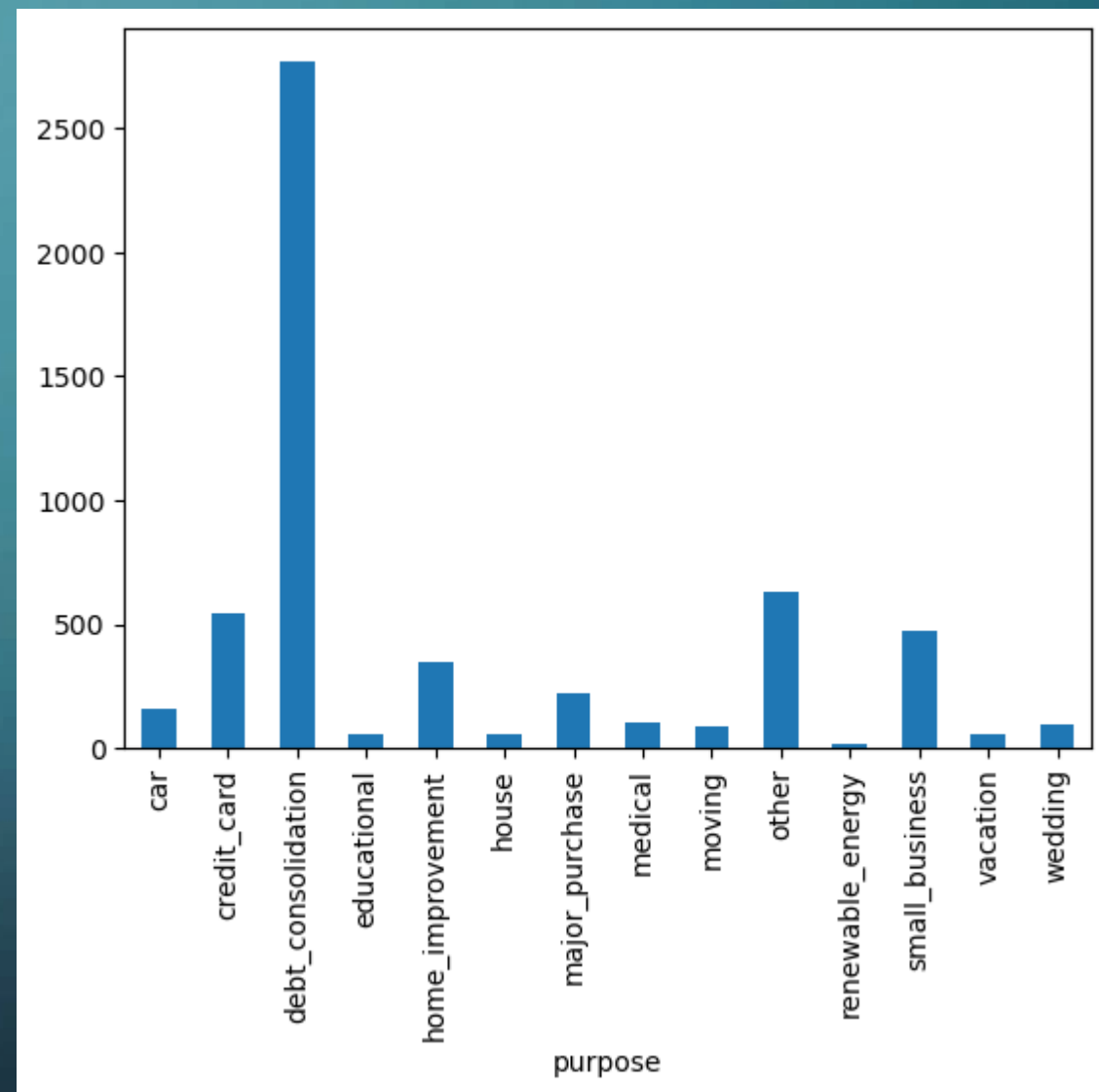
PURPOSE OF LOAN

- It is noticed that the most common purpose of loan among Charged Off loans is debt consolidation



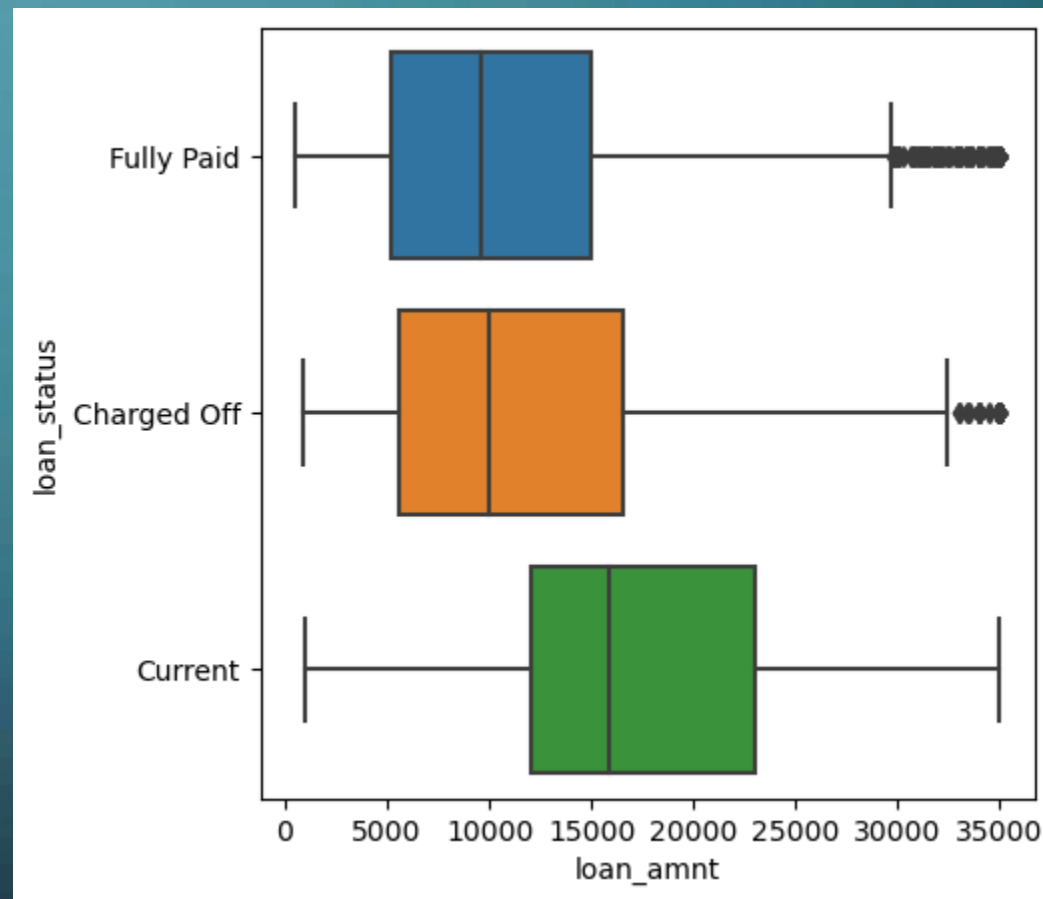
PURPOSE OF LOAN

- After debt consolidation and other, the most purpose of loan is credit card followed by small business.
- Hence, credit card and small business loans need more vigilance during issuance.



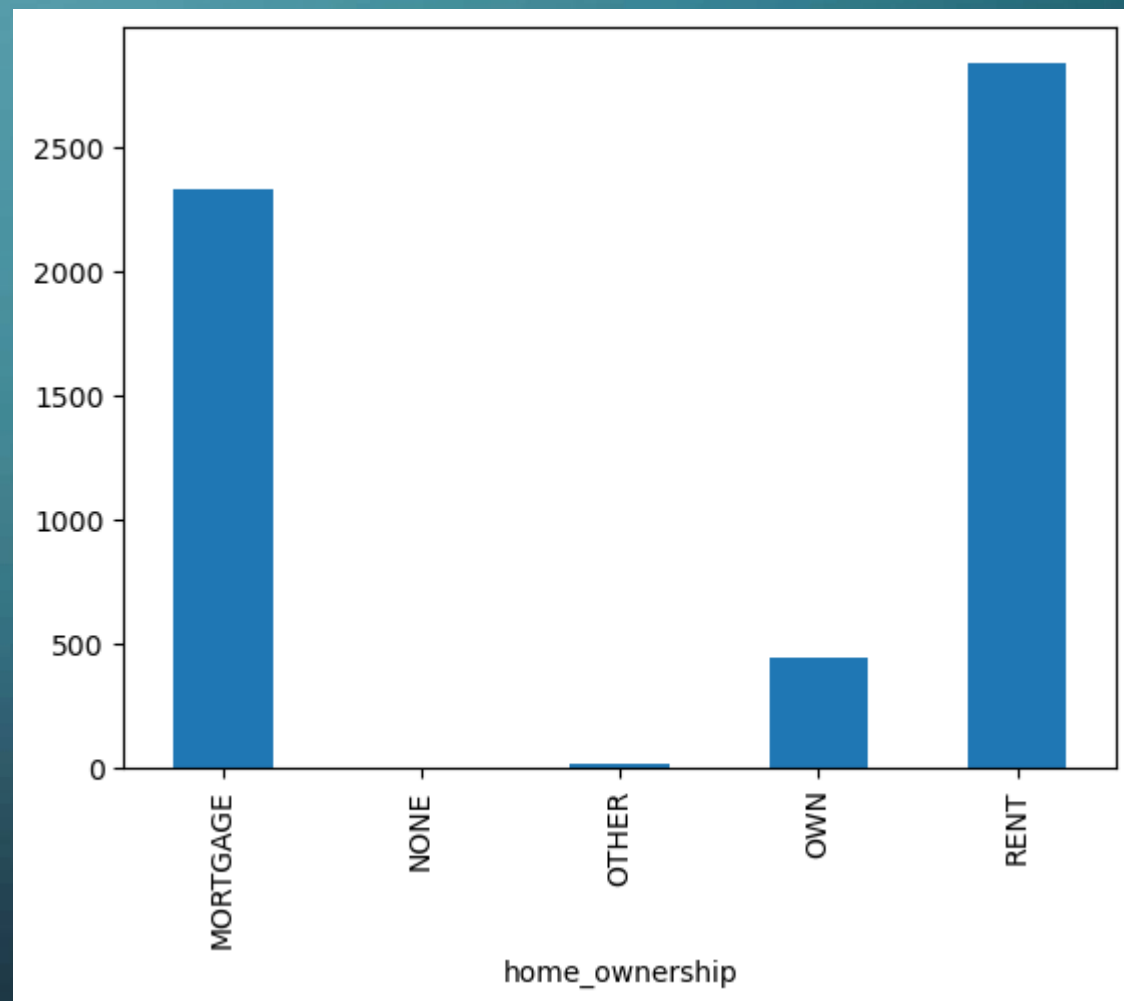
LOAN AMOUNT

- Charged Off loans typically vary between 5k-15k of loan amount.
- There does not seem to be a strong relation between loan amount and loan status



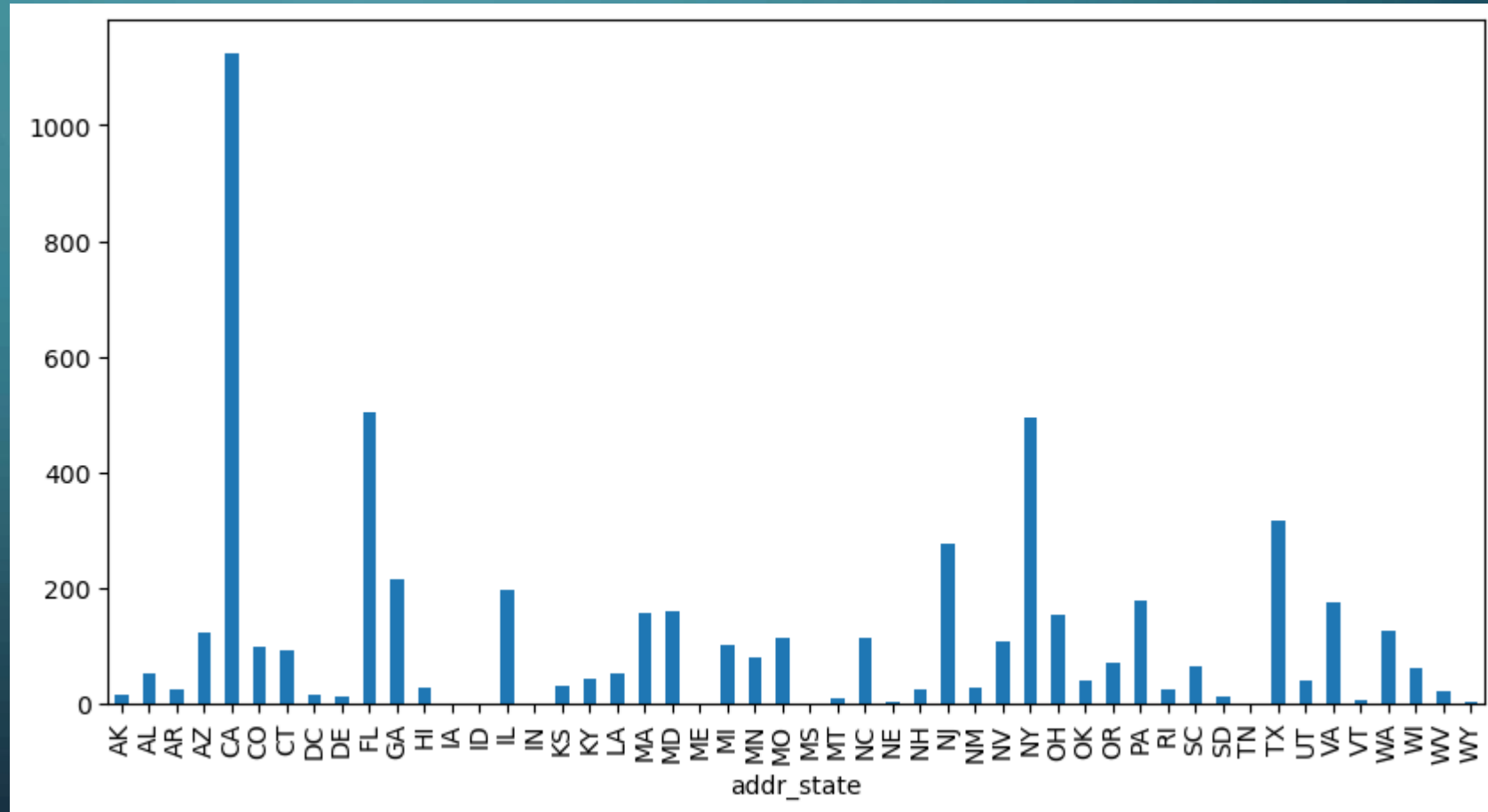
HOME OWNERSHIP

- Loan applicants living in Rented or Mortgaged homes tend to default more than others.



STATE OF ORIGIN

- States California(CA) has most Charged Off loans followed by Florida(FL) and New York(NY).



SUMMARY & RECOMMENDATIONS

- Most of the Lending Club's loan customers are employed for more than 10 years.
- Most Charged Off loans were issued in the year 2010-11. There can be further enquiries into those two years' records.
- Most Charged Off loans are issued for 35-60 months of term. Higher loan terms applications should be more scrutinized.

SUMMARY & RECOMMENDATIONS

- Other than debt consolidation and Other purpose loans, Credit card purpose loans seem to be charged off more often followed Small business. Hence, credit card and small business loan maybe charged with higher interest rates.
- Loan applicants living in rented or mortgage homes tend to default more than others. Hence, these applications may be requested to have collateral support to mitigate risk.

SUMMARY & RECOMMENDATIONS

- State California(CA) have most loan charged off followed by Florida(FL) and New York(NY). Loan applications in these states maybe charged with marginally higher interest rates than others.