

Lending Club Case Study

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Batch:

ML C45

Problem Statement

Lending Club is a marketplace for personal loans that matches borrowers who are seeking a loan with investors looking to lend money and make a return.

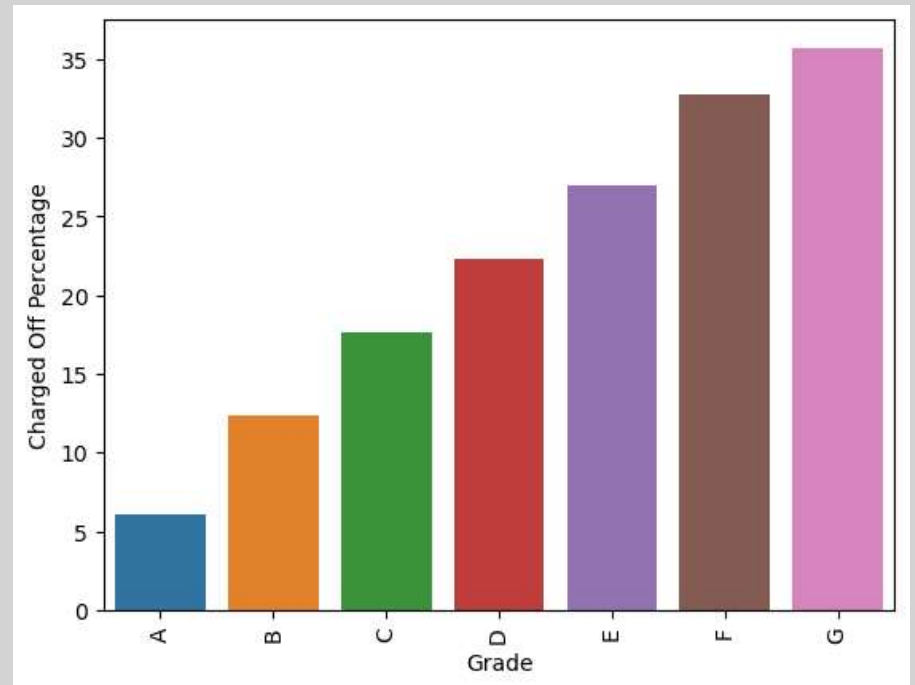
When the company receives a loan application, the company has to make a decision for loan approval based on the applicant's profile. Two types of risks are associated with the bank's decision:

- If the applicant is likely to repay the loan, then not approving the loan results in a loss of business to the company
- If the applicant is not likely to repay the loan, i.e., he/she is likely to default, then approving the loan may lead to a financial loss for the company

Company wants to understand the driving factors (or driver variables) behind loan default, i.e., the variables which are strong indicators of default. The company can utilize this knowledge for its portfolio and risk assessment.

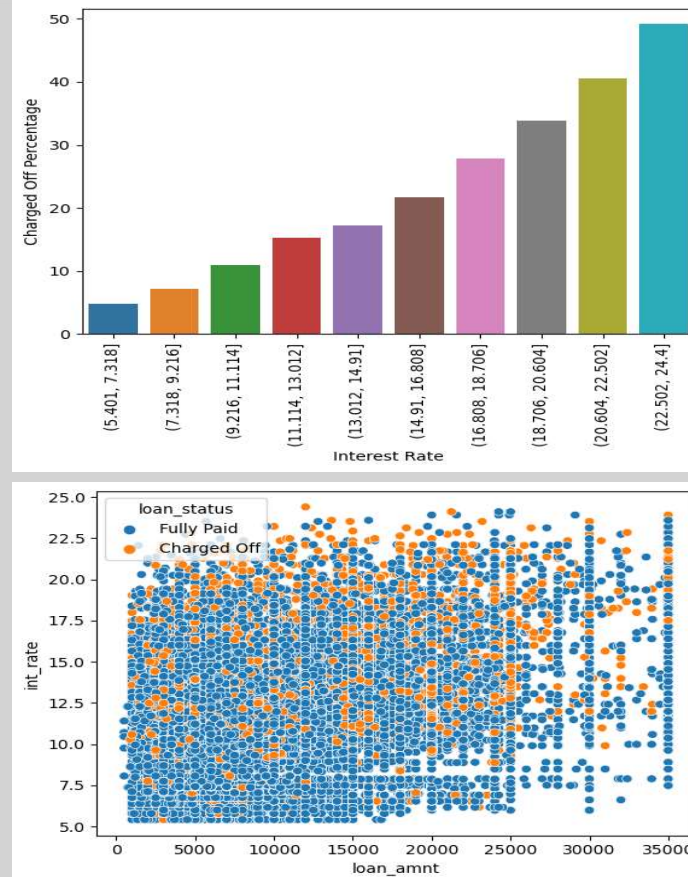
Grade

- Loans with Grades D, E, F, G are Charged off for more than 20%.



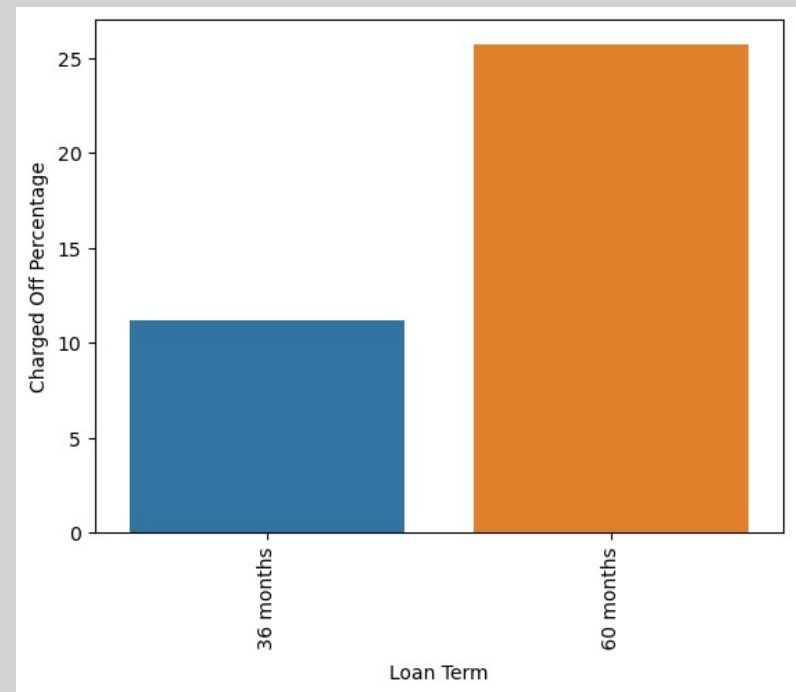
Interest Rate

- Loans with interest rate higher than 14.91 will Charged Off more than 20 %.
- Scatter plot between int rate and loan amount, we can observe that the number of defaulters increases as interest rate increases, irrespective of the loan amount.
- People pay off loans on time when interest and loan amount are low.



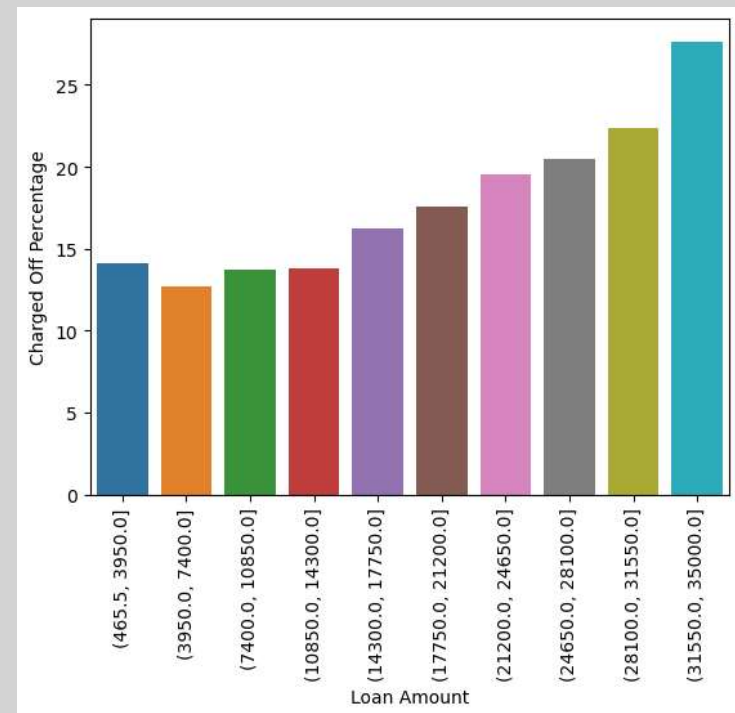
Loan Term

- Loans with Loan Term '60 months' has more than 25% chance to be Charged Off.



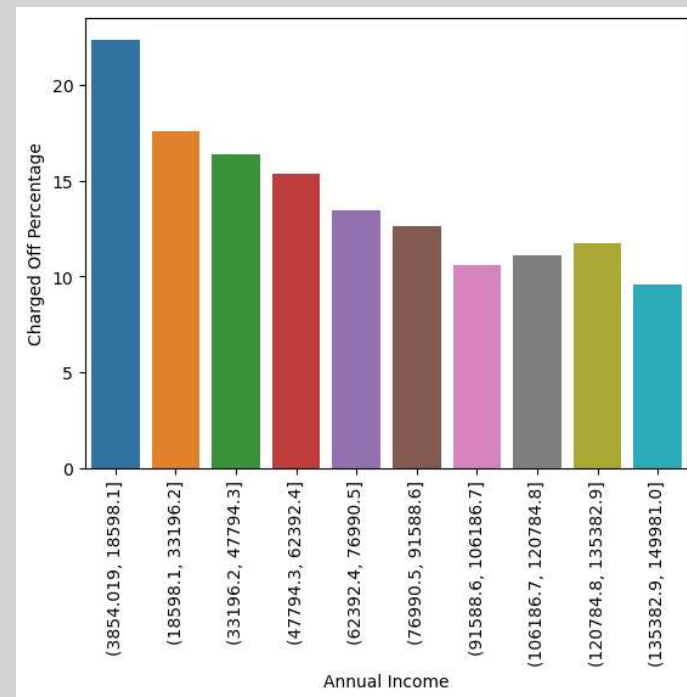
Loan Amount

- Possibility of loan being Charged Off increases as the loan amount goes high.
- Loan amounts above 24,650 has more than 20% chance to be Charged Off



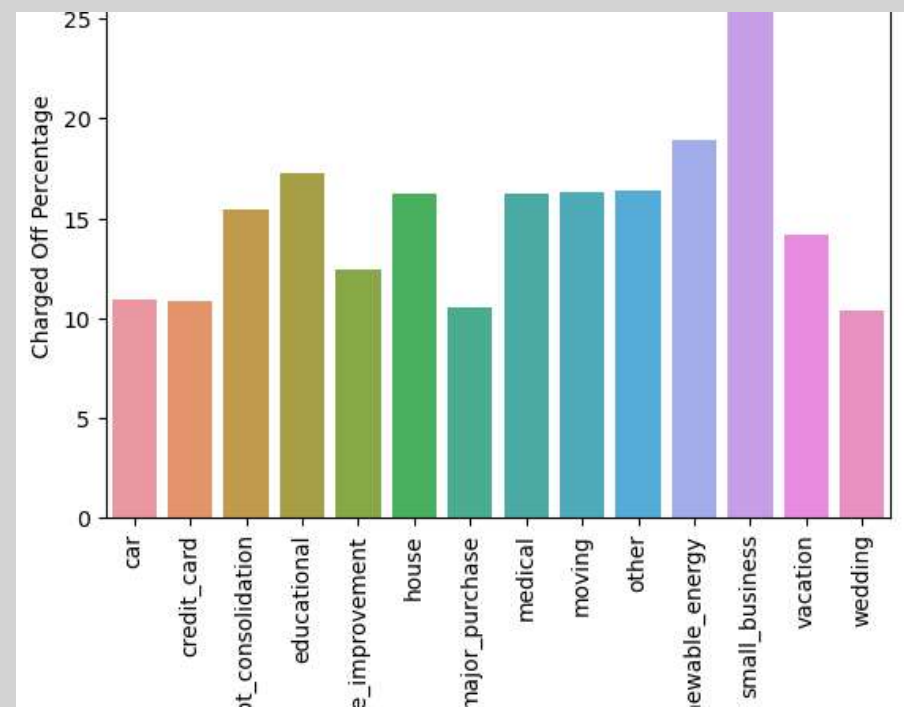
Annual Income

- Loan applicants with Annual Income less than 3854 has more than 20% chance of becoming Charged Off.



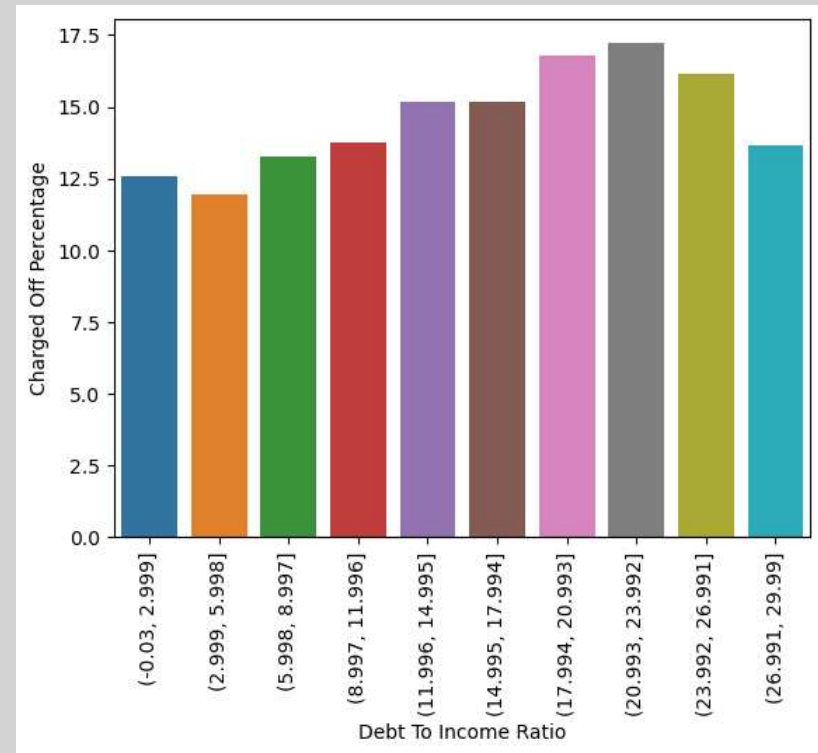
Purpose

- Loans for the purpose of Small Business will be charged off more than 20%.



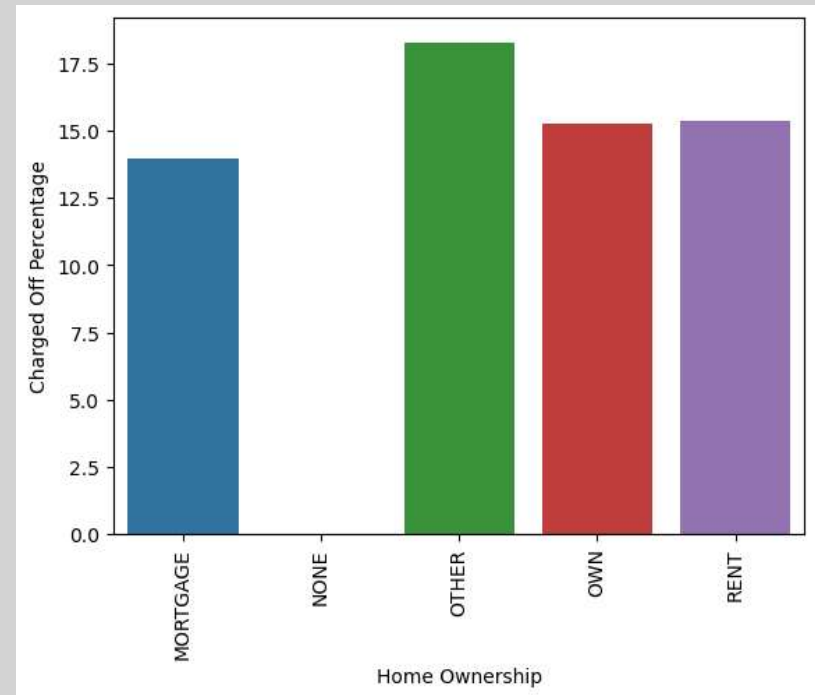
Debt To Income Ratio(dti)

- As the dti ratio goes up, percentage of Charged Off loans also increases.



Home Ownership

- Chances of Charged off is slightly higher when Home Ownership falls in 'Other' category.



Recommendations

Major considerations to reduce number of Charged Off loans are

- ❖ Avoid loans with Grade D, E, F, G.
- ❖ Avoid when interest rate is more than 14.9.
- ❖ Prefer loans with 30 months as term.
- ❖ Avoid loans with amount more than 24,650
- ❖ Avoid loans when applicant has an annual income less than 3854