

LENDING CLUB CASE STUDY

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Purpose:

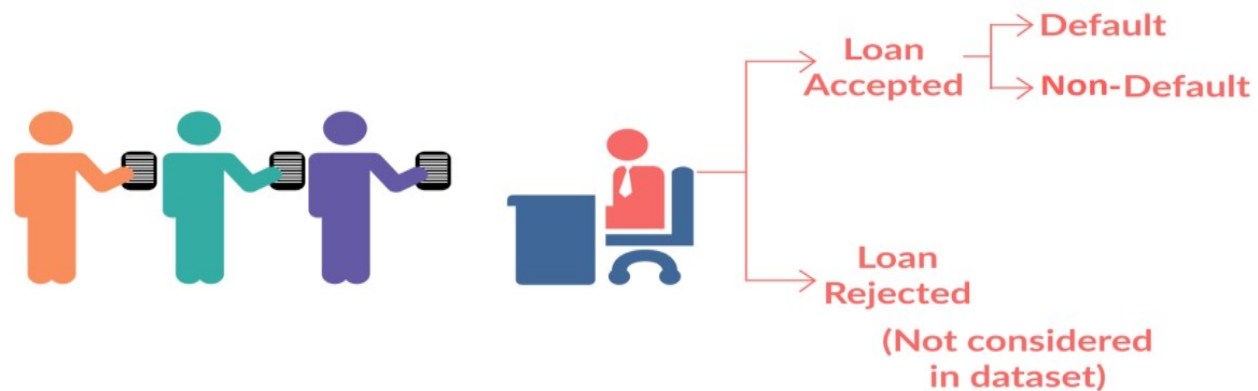
- A **consumer finance company** has to identify risky loan applicants, based on their profile.
- Which controls loss of business of the company and avoid financial loss.

Problem Statement:

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.

LOAN DATASET

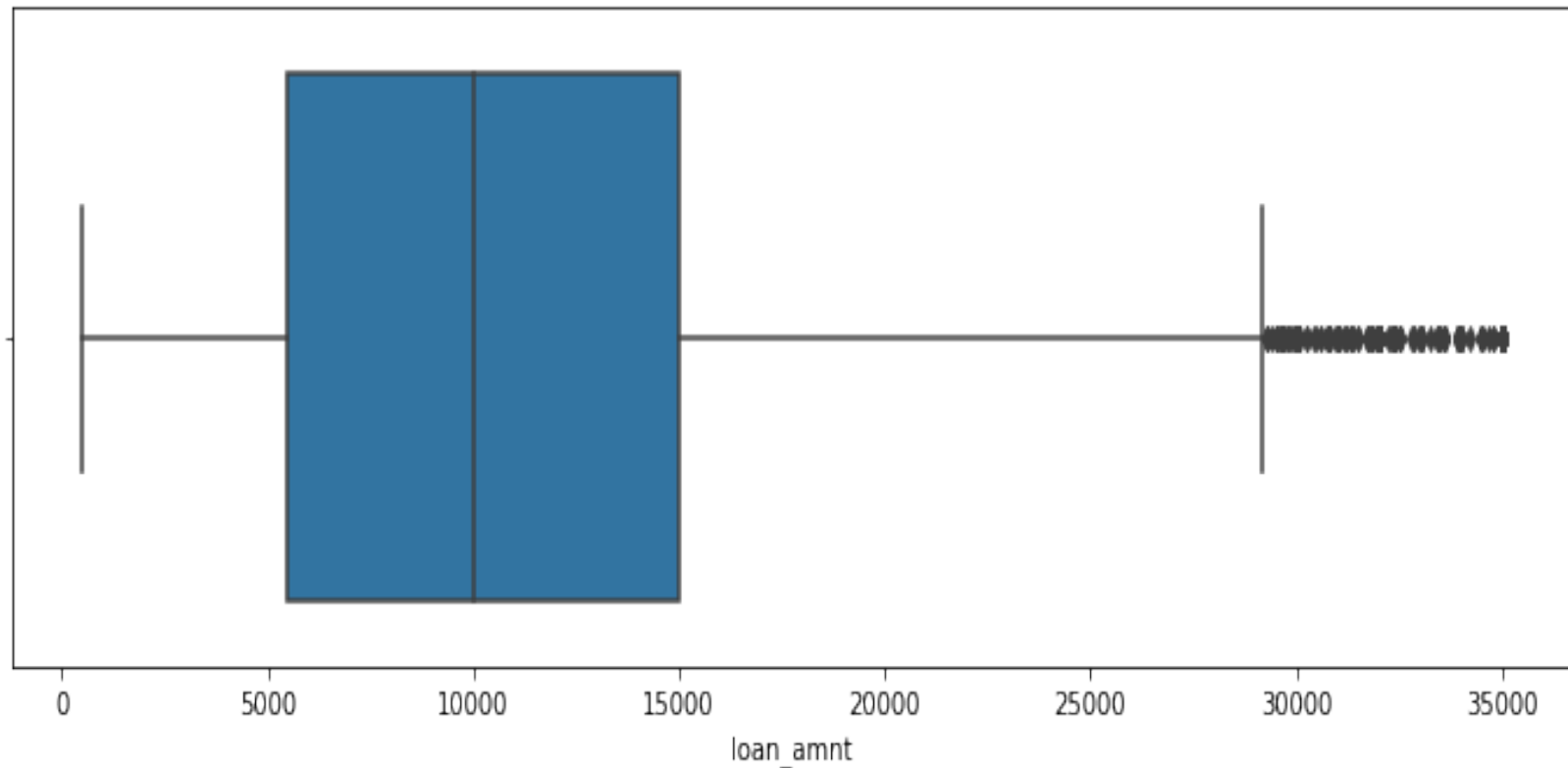


Analysis Performed:

Steps:

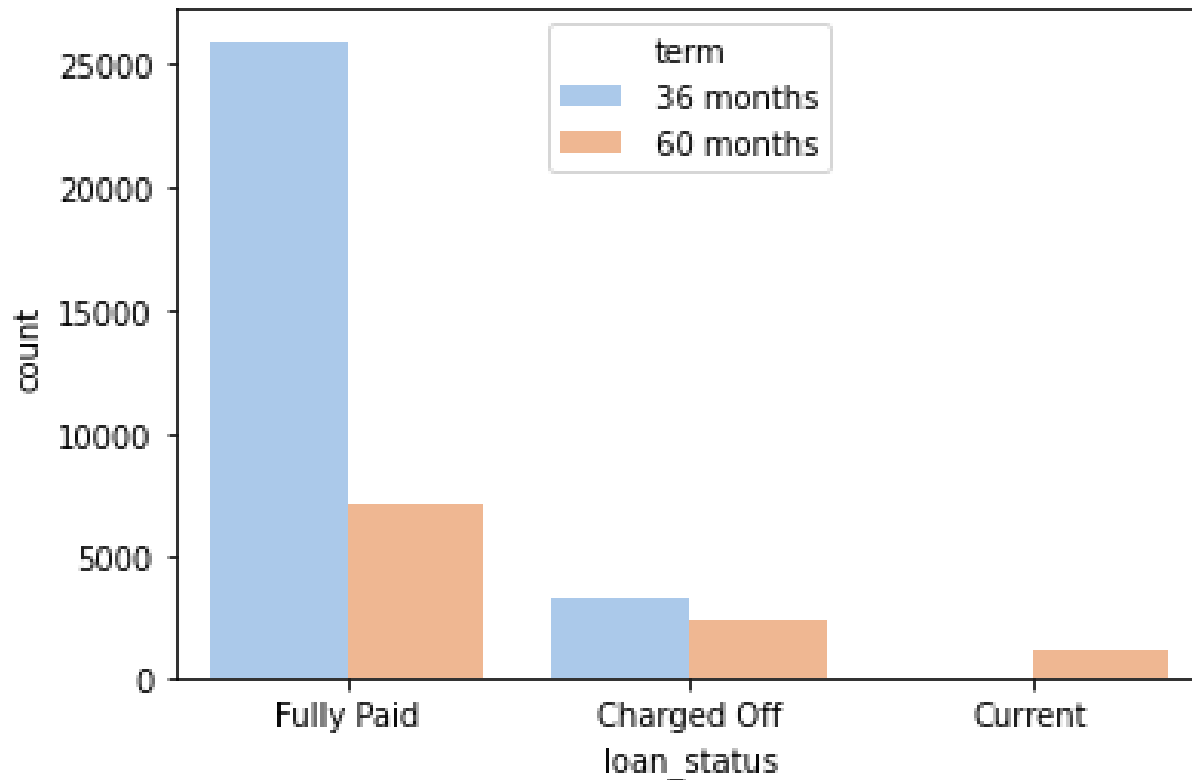
- Understanding of data set and sourcing
- Data cleaning
- Derived Matrics
- Univariate Analysis
- Bivariate/Multivariate Analysis
- Correlation Matrix
- Conclusion

Univariate Analysis (Continuous Variables)



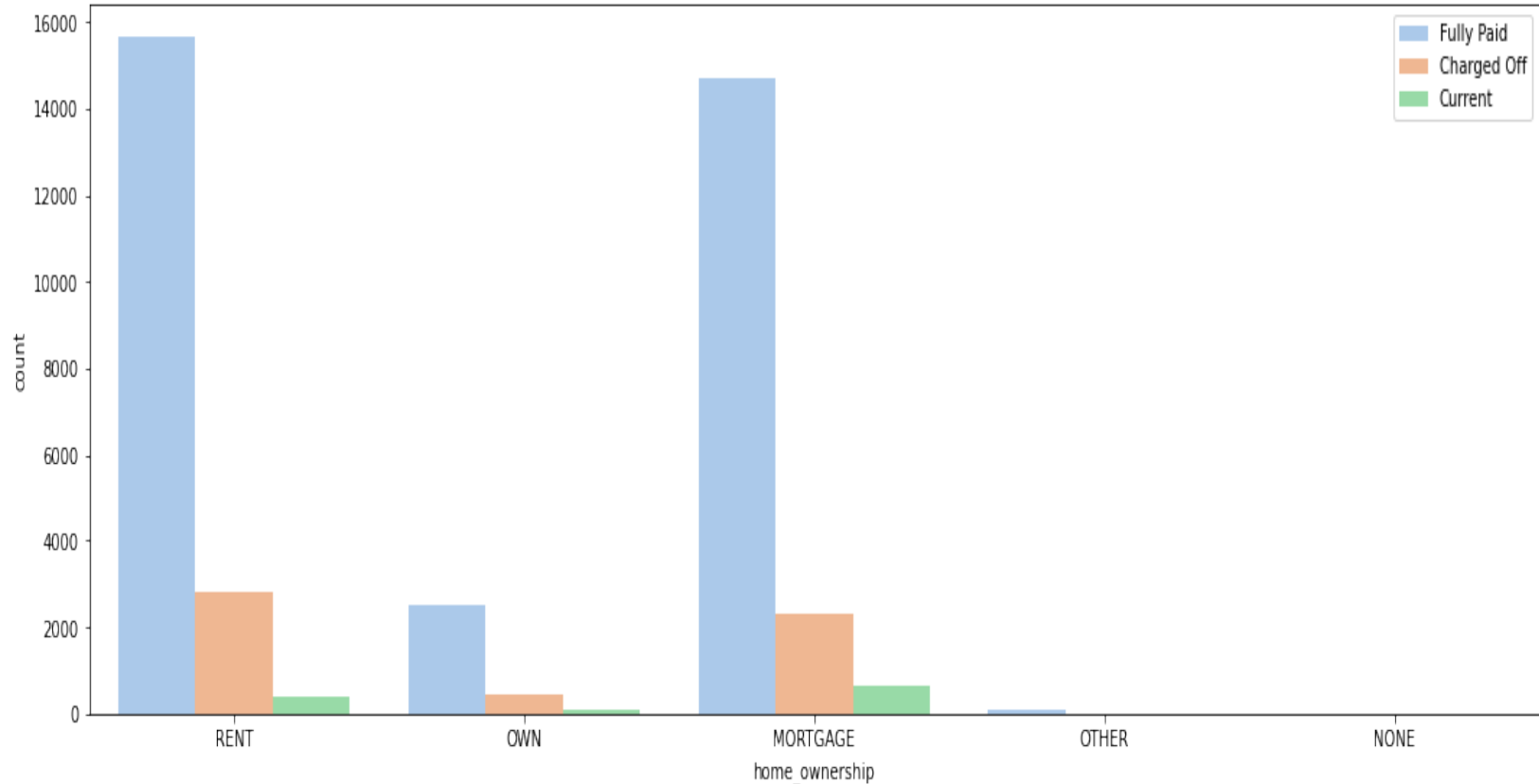
➤ Most of the loan amounts are distributed between 5000 to 15000

Univariate Analysis (Categorical Variables)



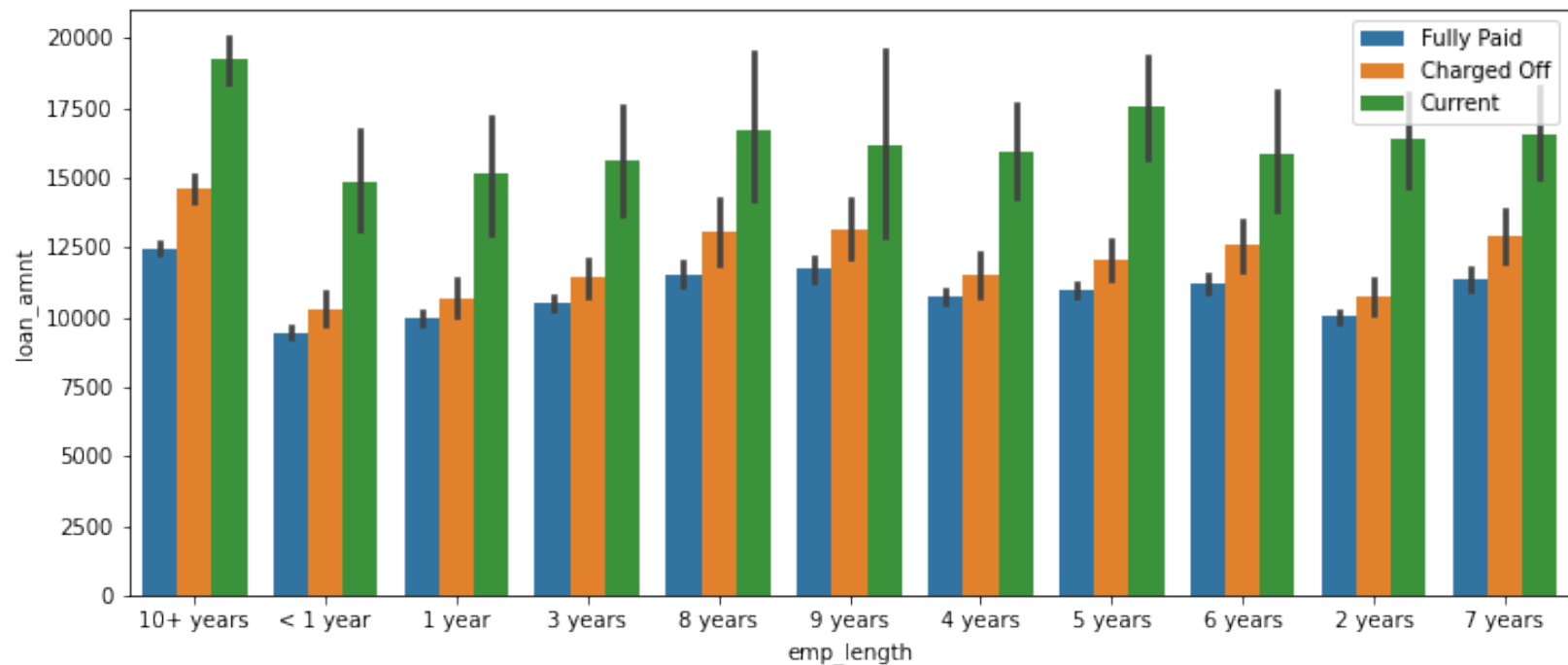
➤ 14% of loan applied are charged Off of which 73% of loan applied are having term of 36 months.

Univariate Analysis (Categorical Variables)



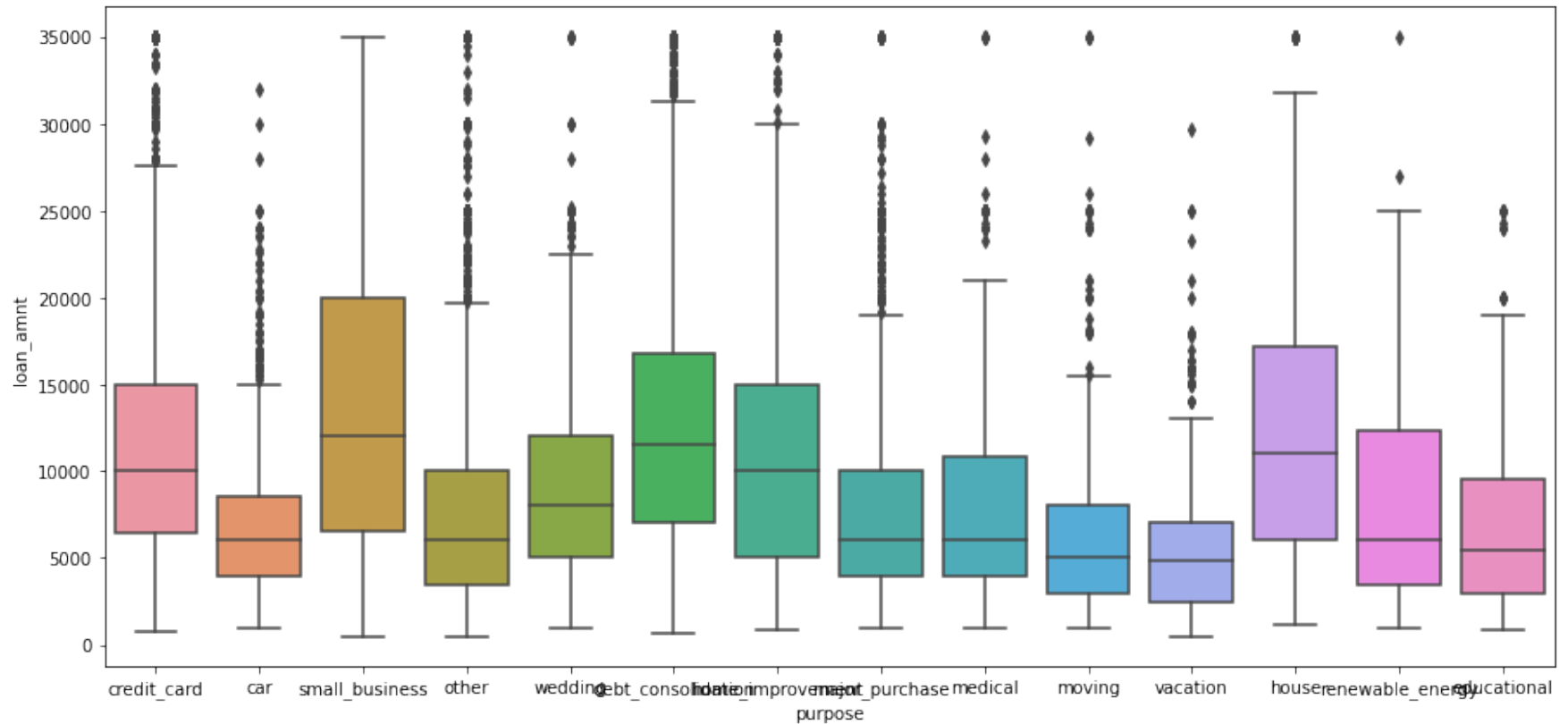
➤ The majority of loan applicant are having home in rent `or mortgage. Also the Charged Off are more in these categories.

Bivariate Analysis



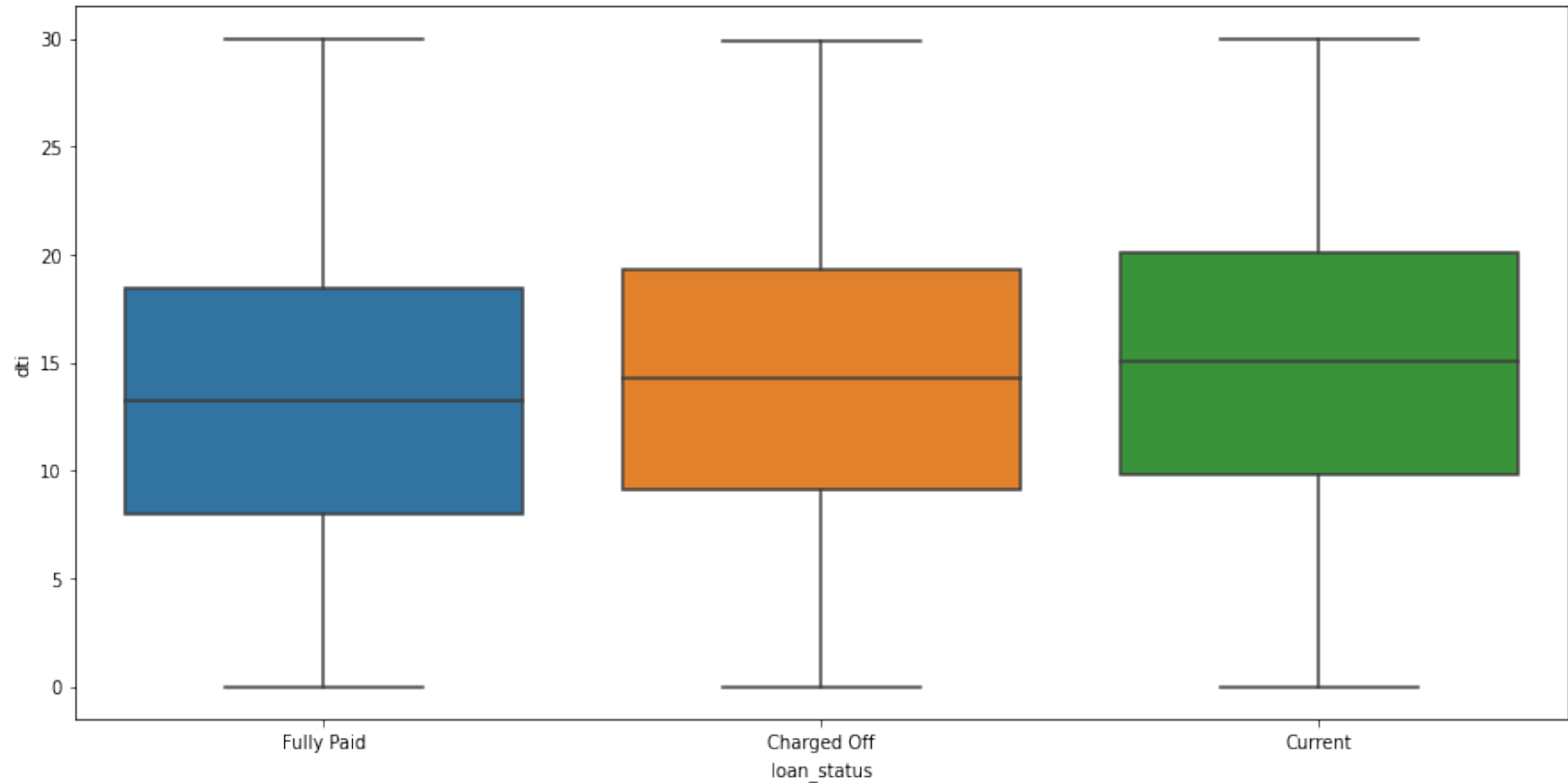
➤ Maximum loan with current status are under 10+ years of employment length.

Bivariate Analysis



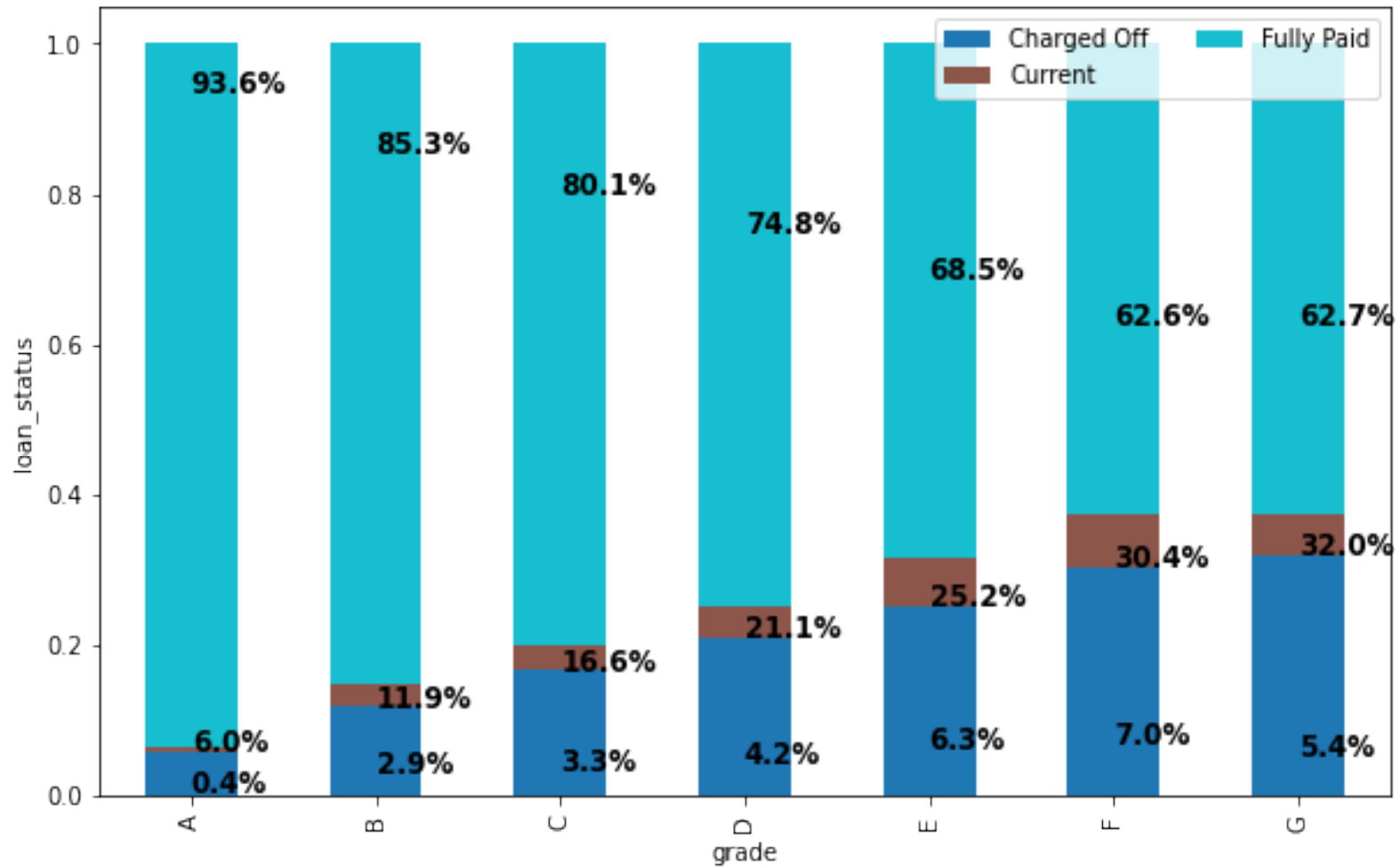
➤ The Small Business are taking the highest loan compared to others.

Bivariate Analysis



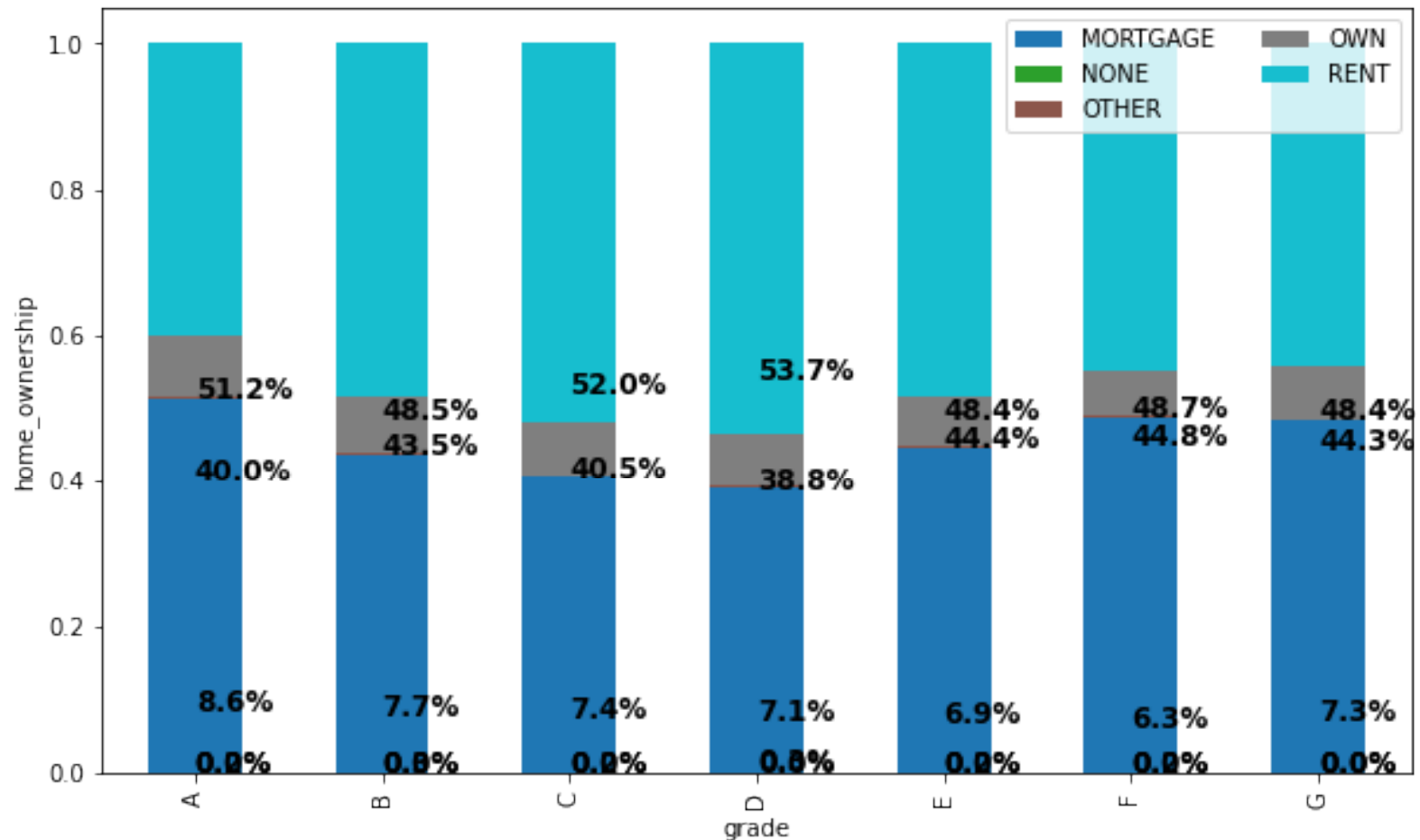
➤ Loans with less instalments are having maximum charged off.

Bivariate Analysis



➤ The % of Charged Off are more than 16% from grade "C" to "G".

Bivariate Analysis



➤ The loan with higher interest rate starting from grade C to G and having Home ownership as Rent & Mortgage are major Charged Off.

Correlation Matrix Analysis



➤ From the Heatmap, the 'loan_amnt', 'funded_amnt' & 'funded_amnt_inv' are closely interrelated.

Correlation Matrix Analysis



➤ With increase in income 'dti' is decreasing. Thus higher loan amount can be sanctioned.

Conclusion:

- As the interest rate is increasing the probability that person will default is increasing with highest of 16% & above.
- Borrowers with more than 10+ years of employment length having “debt_consolidation” purpose are more Charged Off.
- Loans with less instalments are having maximum charged off.
- With increase in income 'dti' is decreasing. Thus higher loan amount can be sanctioned.