

Lending Club Case Study

Group Members:

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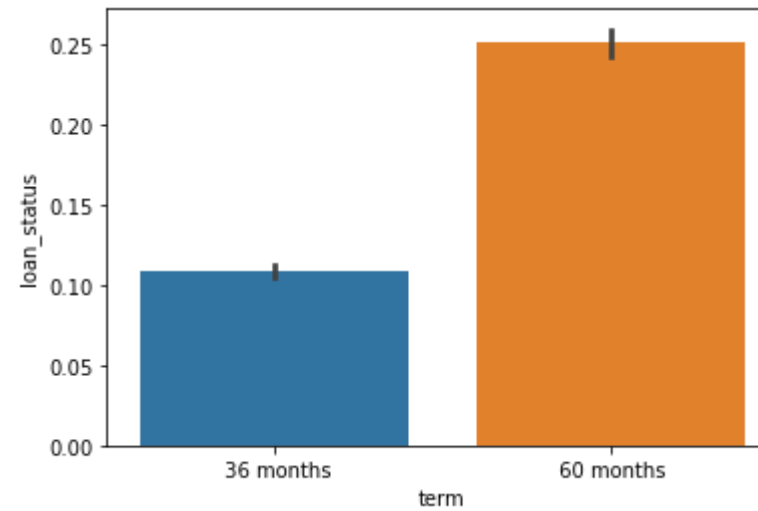
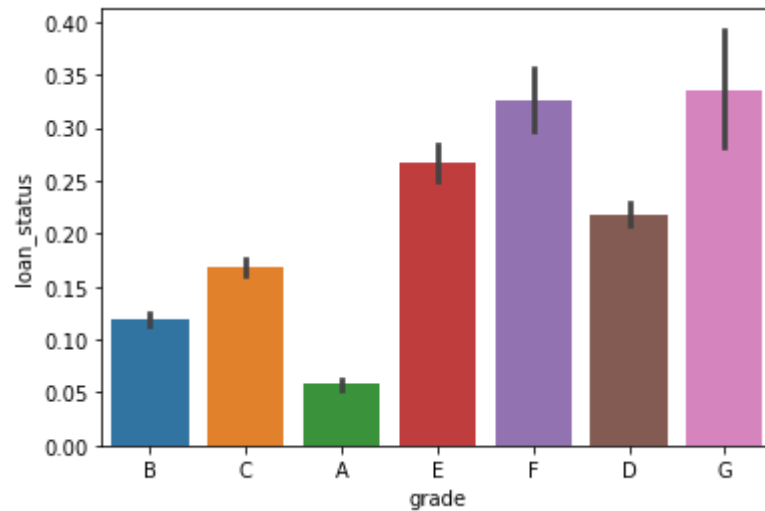
Purpose of Case Study

- Lending Club is the largest peer-to-peer marketplace connecting borrowers with lenders. Borrowers apply through an online platform where they are assigned an internal score.
- Lending decide
 - Whether to lend or not
 - Terms of loan such as interest rate, monthly installment, tenure etc.
- This will control financial loss for any lending company or bank.

Steps involved in this EDA process to identify defaulters

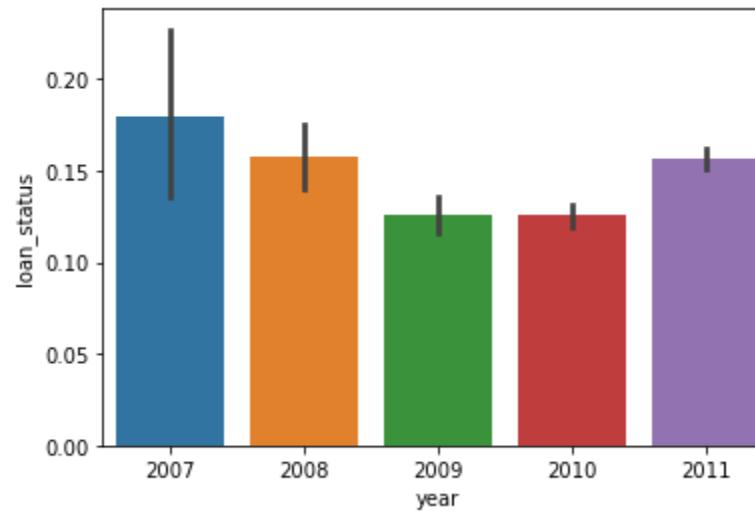
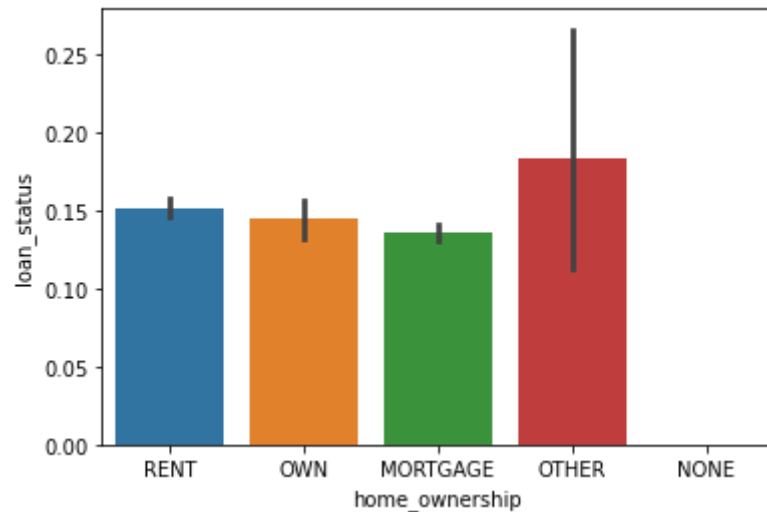
- Data sourcing and Loading data to data frame.
- Data understanding and cleaning
 - To know name of columns, size of each columns.
 - Fix data quality issues and binning.
- Perform univariate, segmented univariate and bivariate analysis to identify the correlation.
- Assess the risk and have recommendation on correlations on defaulters.

Univariate Analysis



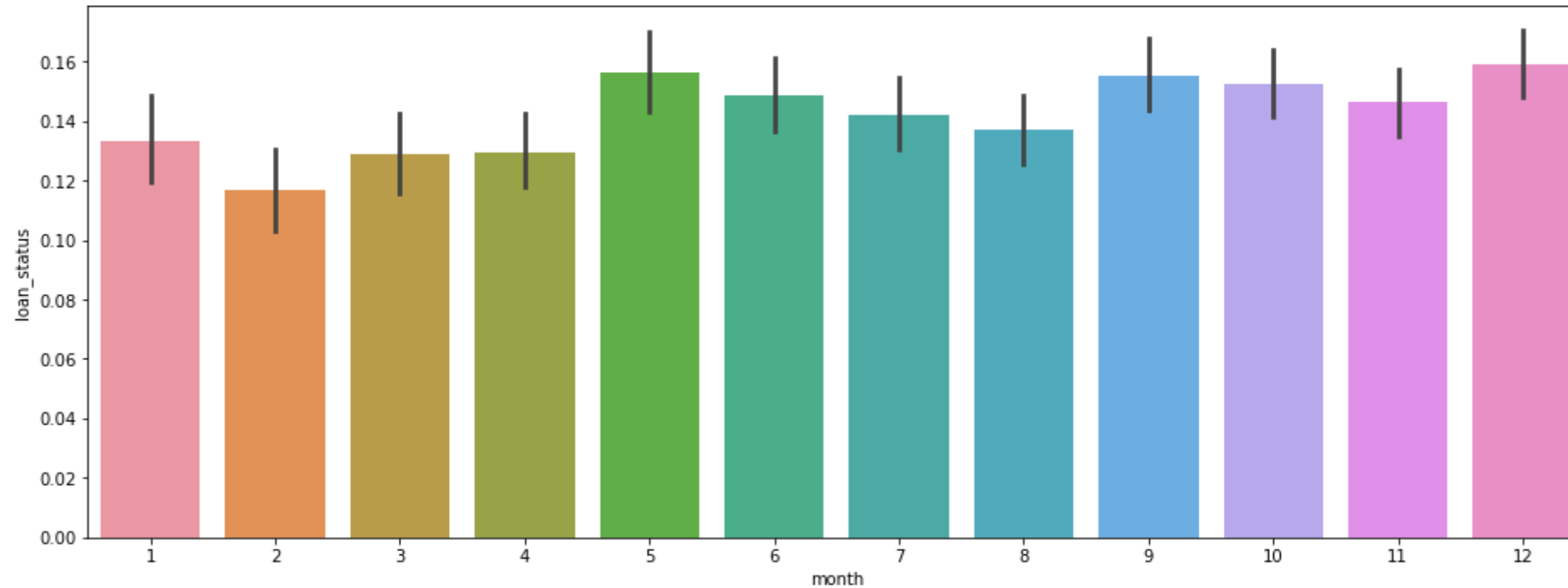
- More Borrowers fall under Grade G and F.
- We have two loan terms only 36 and 60 months. Tenure of 60 months have been approved more.

Univariate Analysis



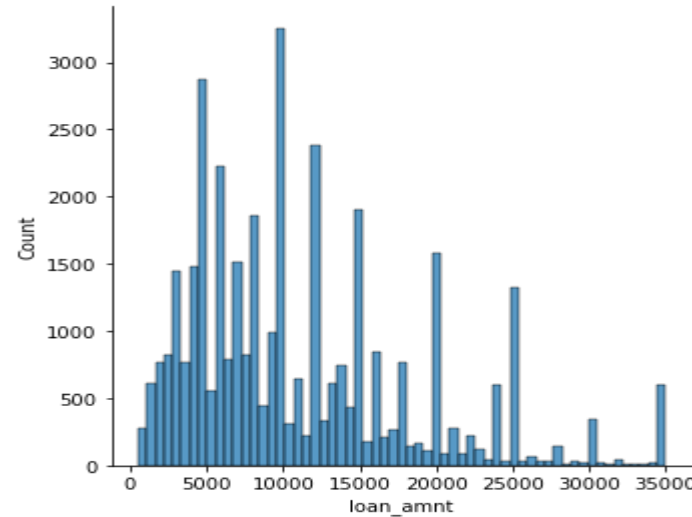
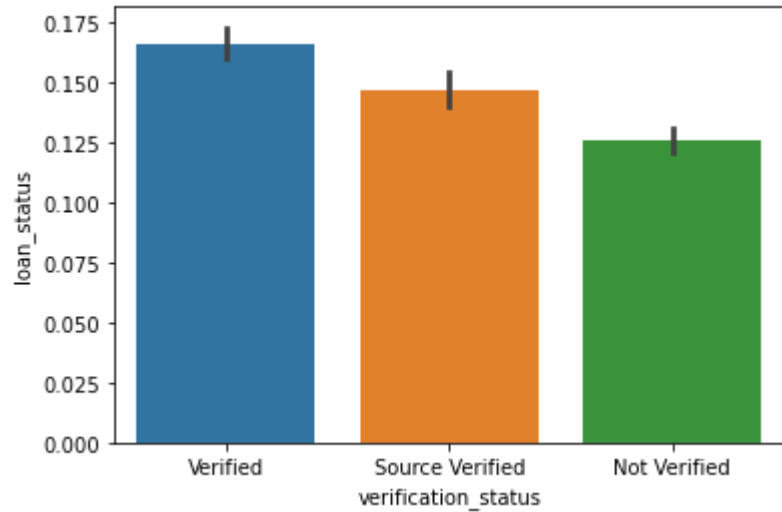
- Loan borrowers are mostly other than having rented, own or mortgage houses.
- As per the data set given loan approval from 2007 till 2010 declined but from 2011 started increasing.

Univariate Analysis



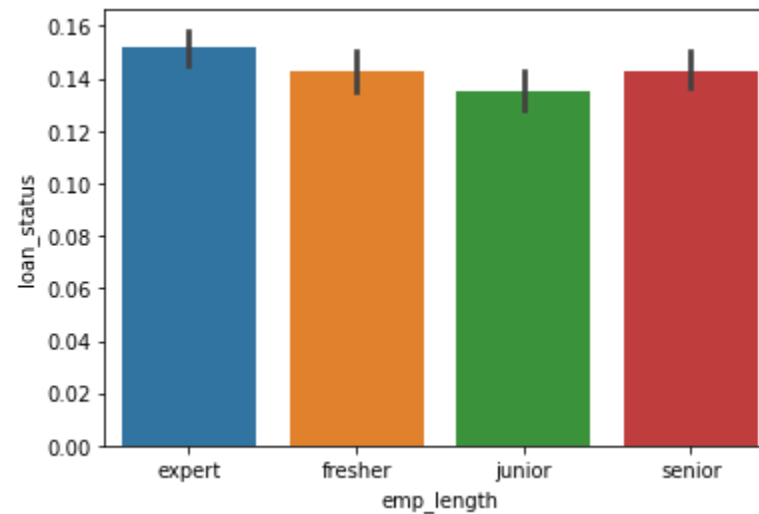
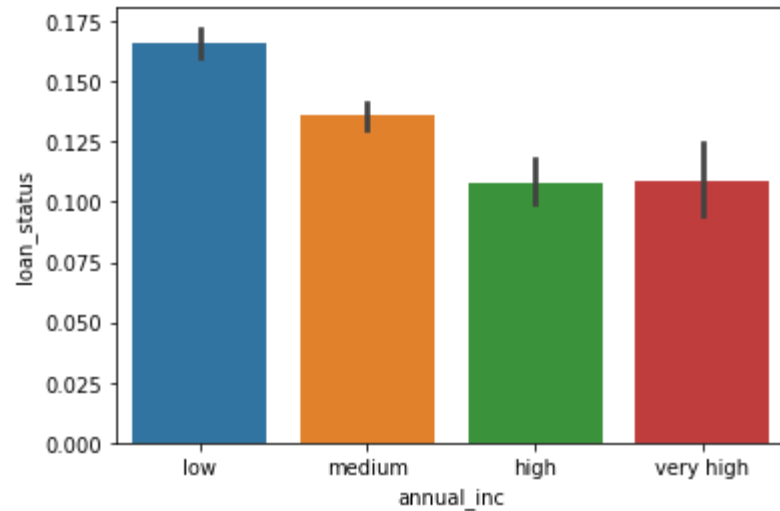
- More number of loan's were approved and credited in May, Sep & Dec.

Univariate Analysis



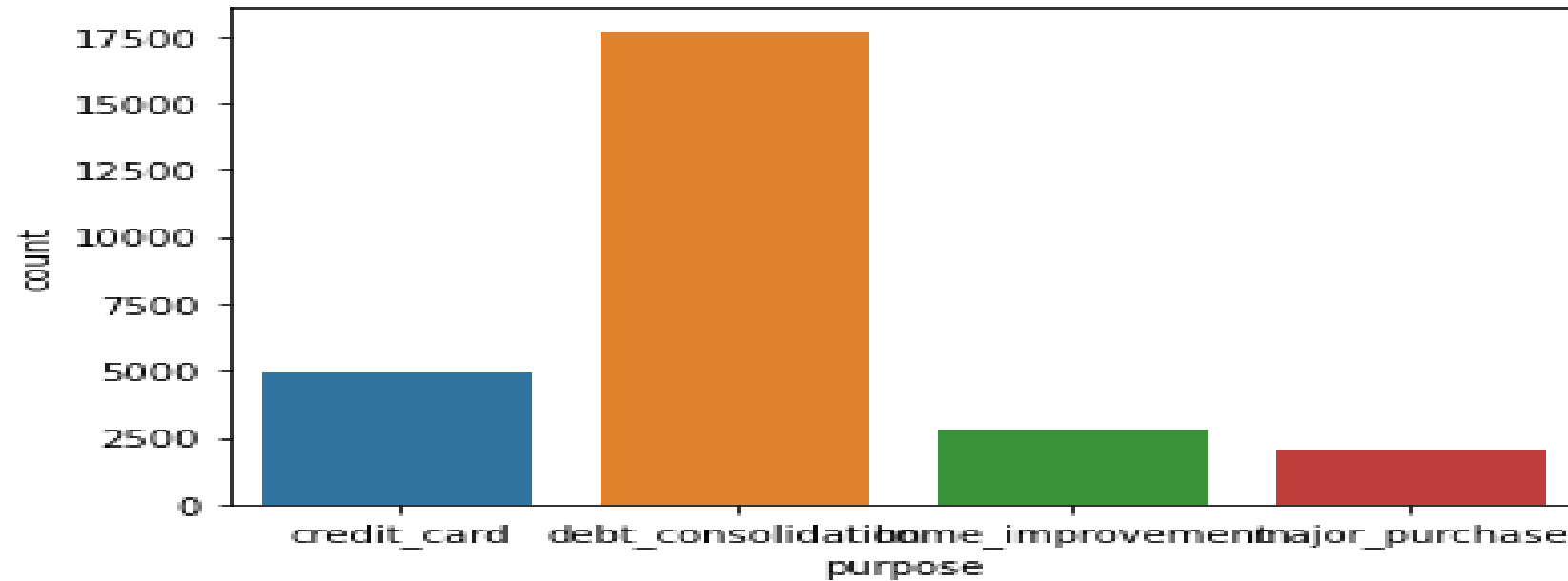
- Majority of loans given were with verifications of applicant's details.
- More number of borrows were having loan amount between 5000 to 15000.

Univariate Analysis



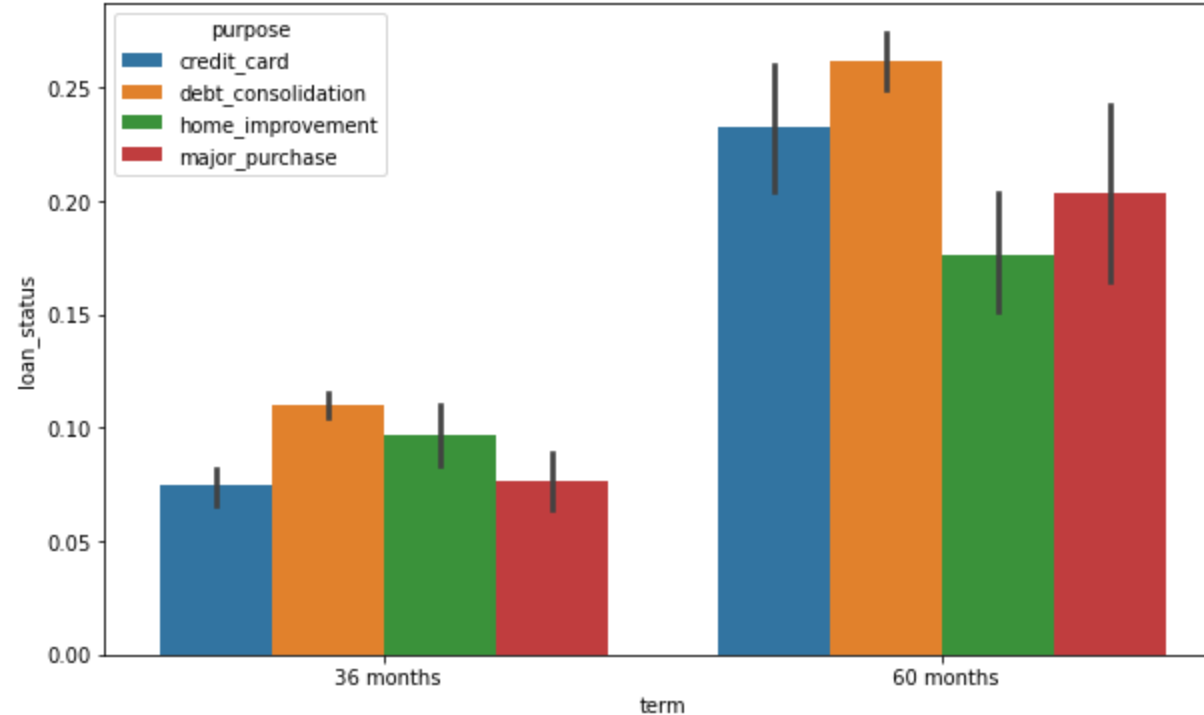
- More borrows annual income falls below 50000.
- Not much difference on customers looking for loan based on employment length or experience. Could see equally distributed among all age groups.

Segmented Univariate Analysis



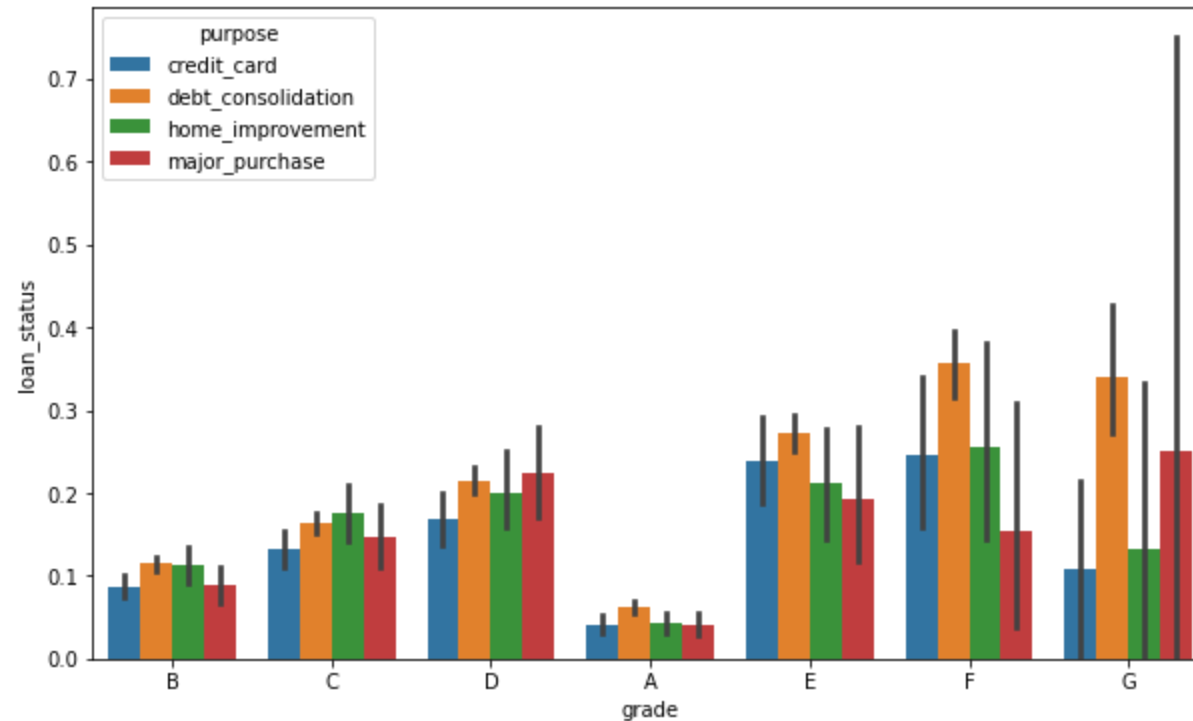
- More number of borrows are for debt_consolidation purpose.

Segmented Univariate Analysis



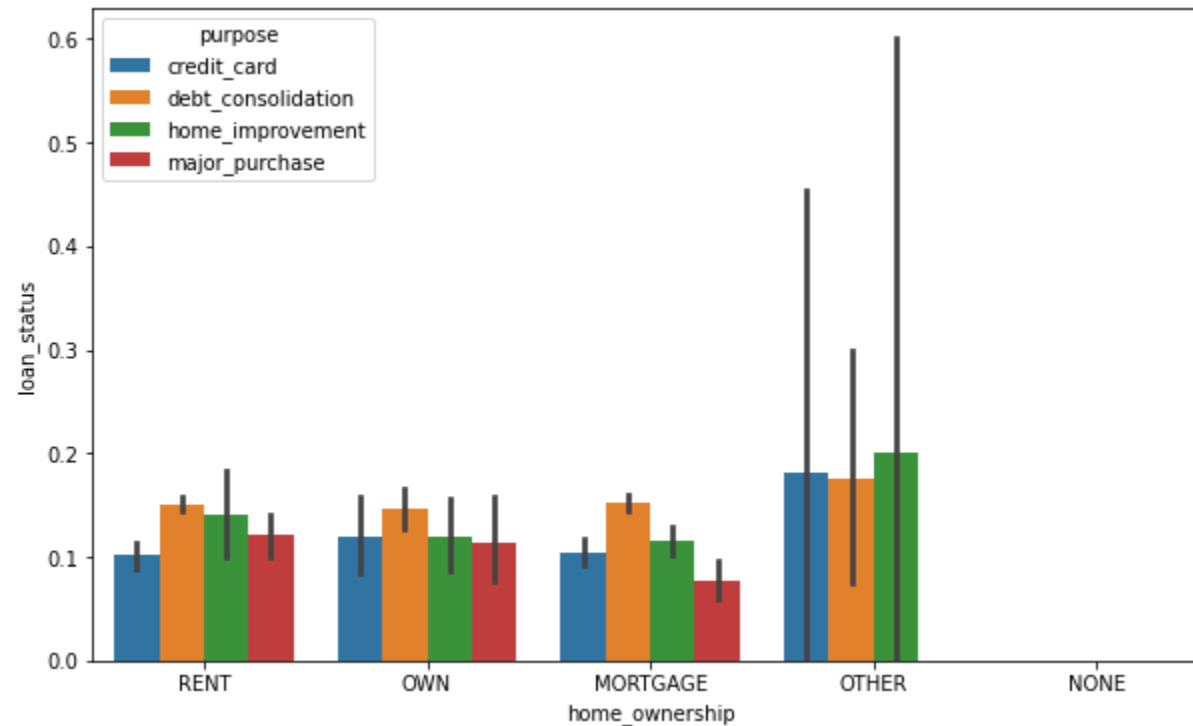
- Applicants with 60 months tenure have more loans under debt consolidation.

Segmented Univariate Analysis



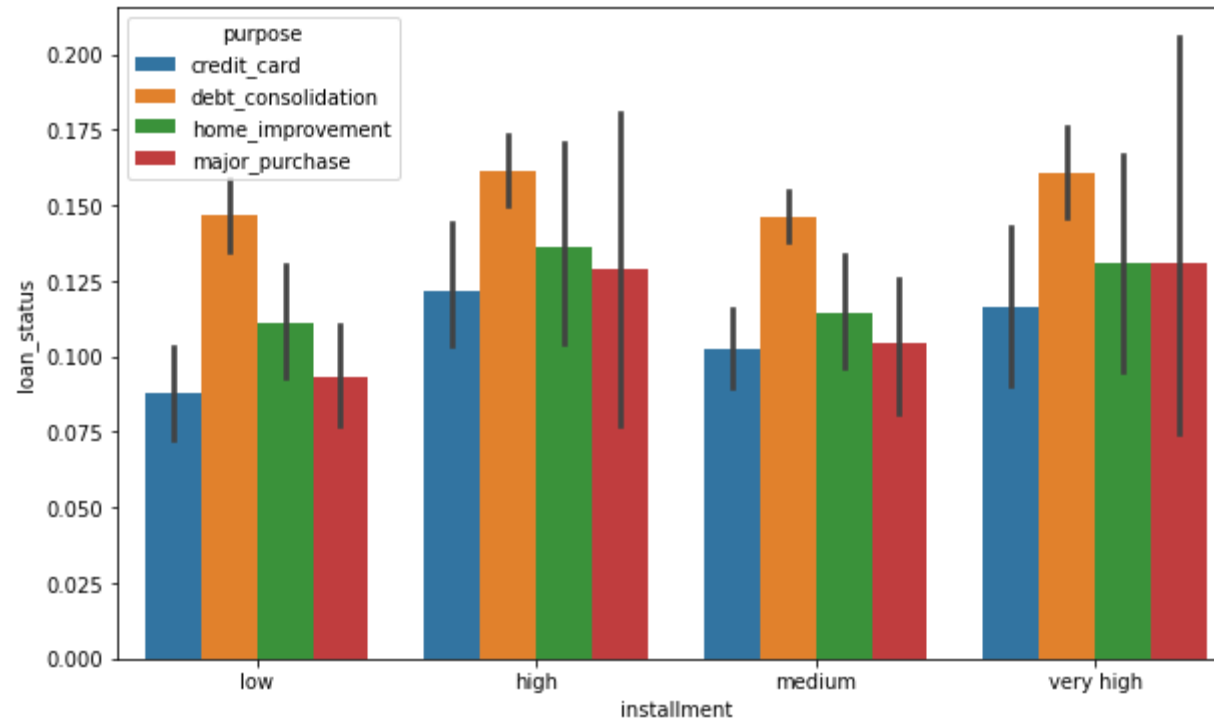
- Applicants with Grade F and G have more loans under debt consolidation. This is match with univariate analysis as well.

Segmented Univariate Analysis



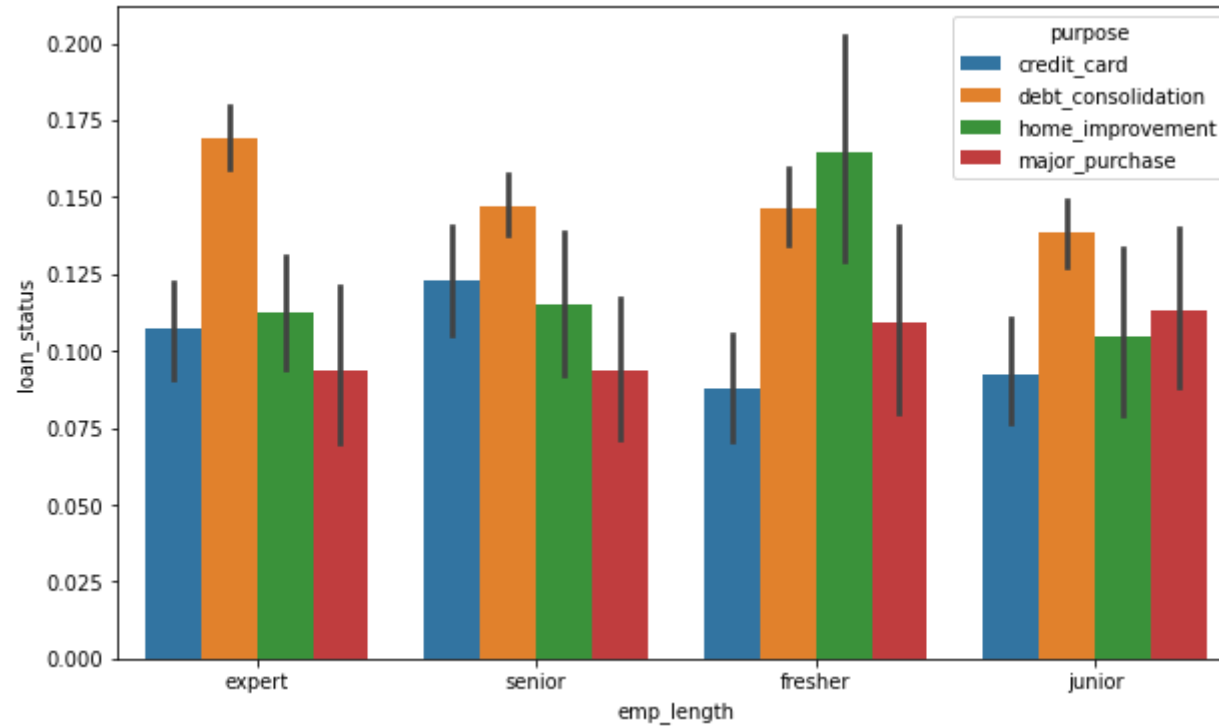
- Loan borrowers are mostly other than having rented, own or mortgage houses under debt consolidation.

Segmented Univariate Analysis



- Borrowers' installments have spread across all range of repayments. Most are with debt consolidation only.

Segmented Univariate Analysis



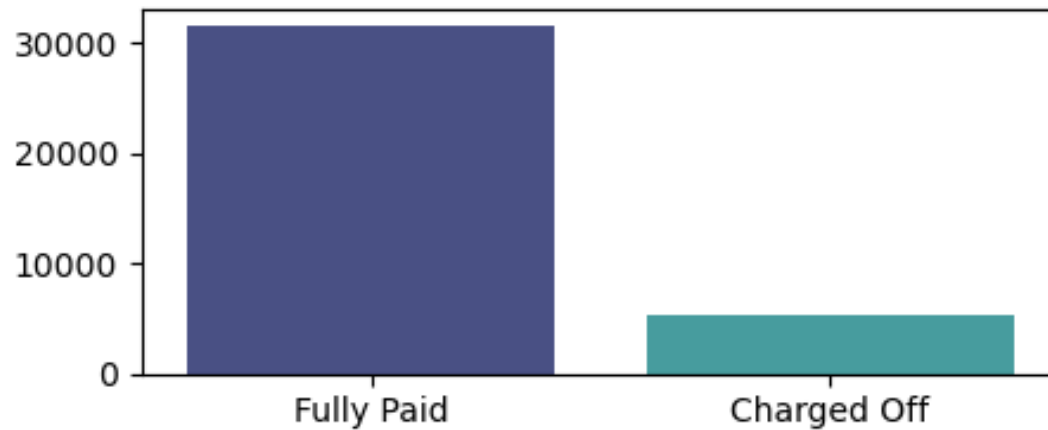
- Borrowers' with employment length of less than or equal to 1 year spend more on Home improvements.
- Borrowers' with employment length of greater than or equal to 1 year spend more on Debt consolidation.

Analysis

1. We could see very a smaller number of Charged off among the approved loan. More customers tend to pay the EMI/loan amount.
2. Similarly, customers with rental and mortgage have borrowed more, paying loan amounts

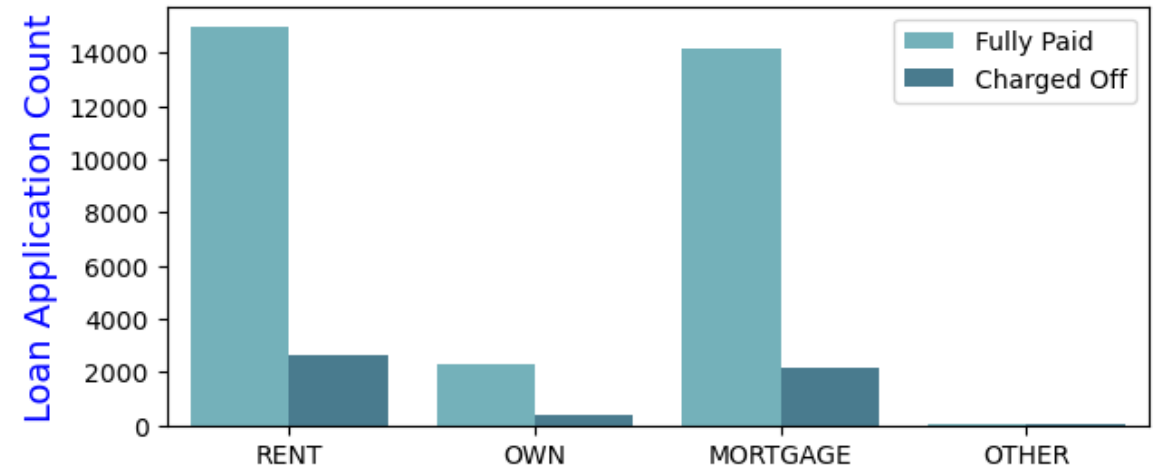
Loan Application Count

Loan Status



Loan Status

Home Ownership



Home Ownership

Conclusion

1. Have more chance of charged off on below cases,
 1. Loan amount is high
 2. Tenure is long
 3. Interest rate is more
 4. People with low income