



LENDING CLUB CASE STUDY

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Index



PROBLEM STATEMENT &
THE ANALYSIS APPROACH



RESULT OF UNIVARIATE,
BIVARIATE ANALYSIS



SUMMARY OF IMPORTANT
RESULTS

Problem Statement

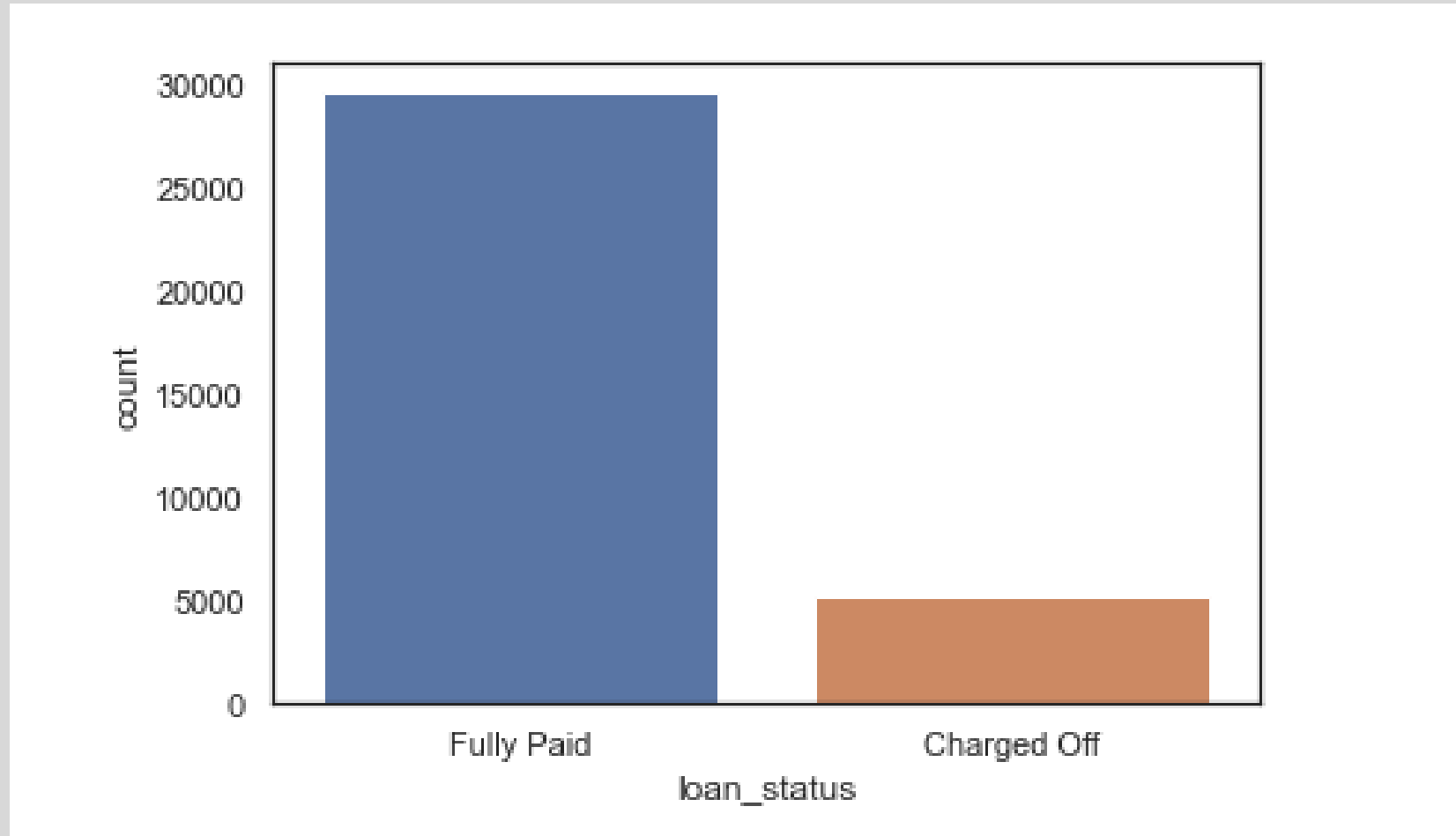
In this case study, using the techniques in EDA, one should gain knowledge of risk analytics in banking and financial services and understand how data is used to

- To identify these risky loan applicants
- To minimise the risk of losing money while lending to customers.
- To understand the driving factors (or driver variables) behind loan default, i.e. the variables which are strong indicators of default.
- To identify patterns which indicate if a person is likely to default, which may be used for taking actions such as denying the loan, reducing the amount of loan, lending (to risky applicants) at a higher interest rate, etc.

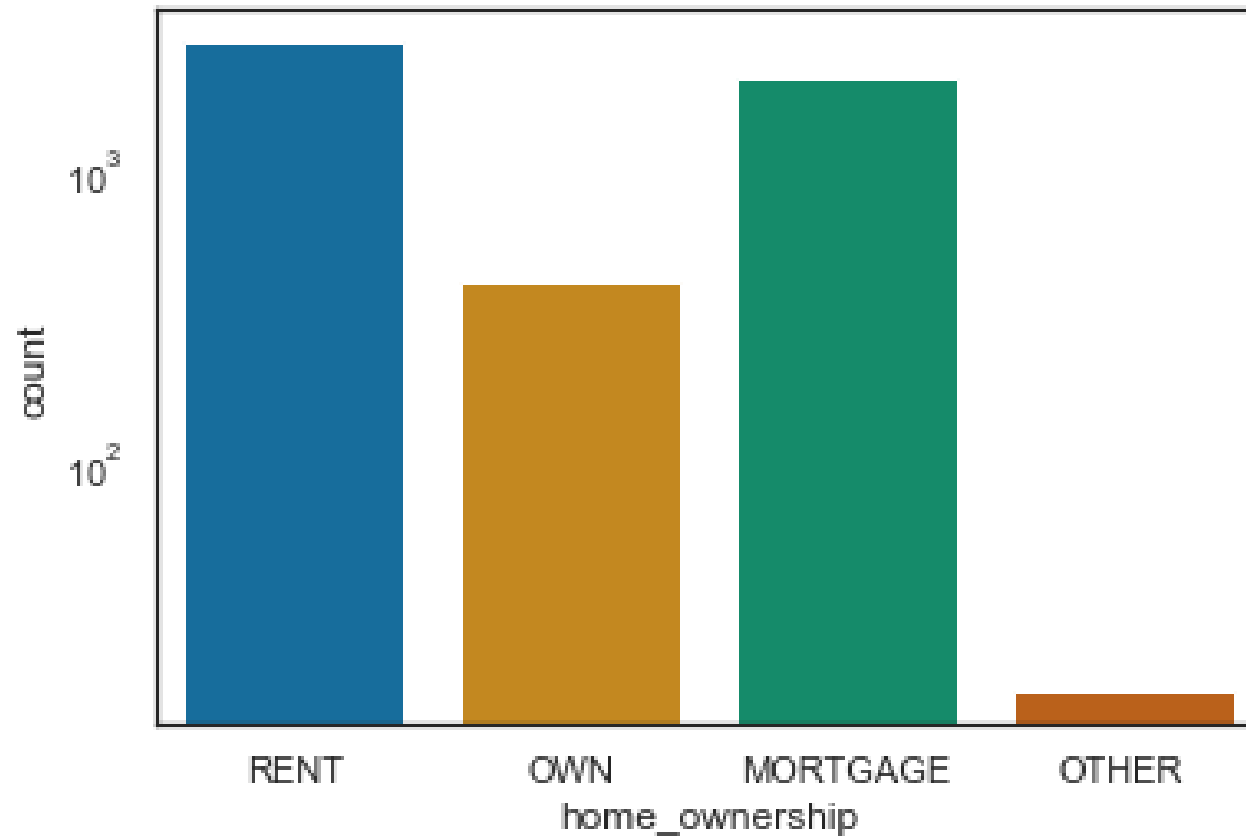
The Analysis Approach

- **Step 1: Data Cleaning 1**
- **Step 2: Univariate Analysis**
- **Step 3: Segmented Univariate Analysis**
- **Step 4: Bivariate/Multivariate Analysis**
- **Step 5: Results**

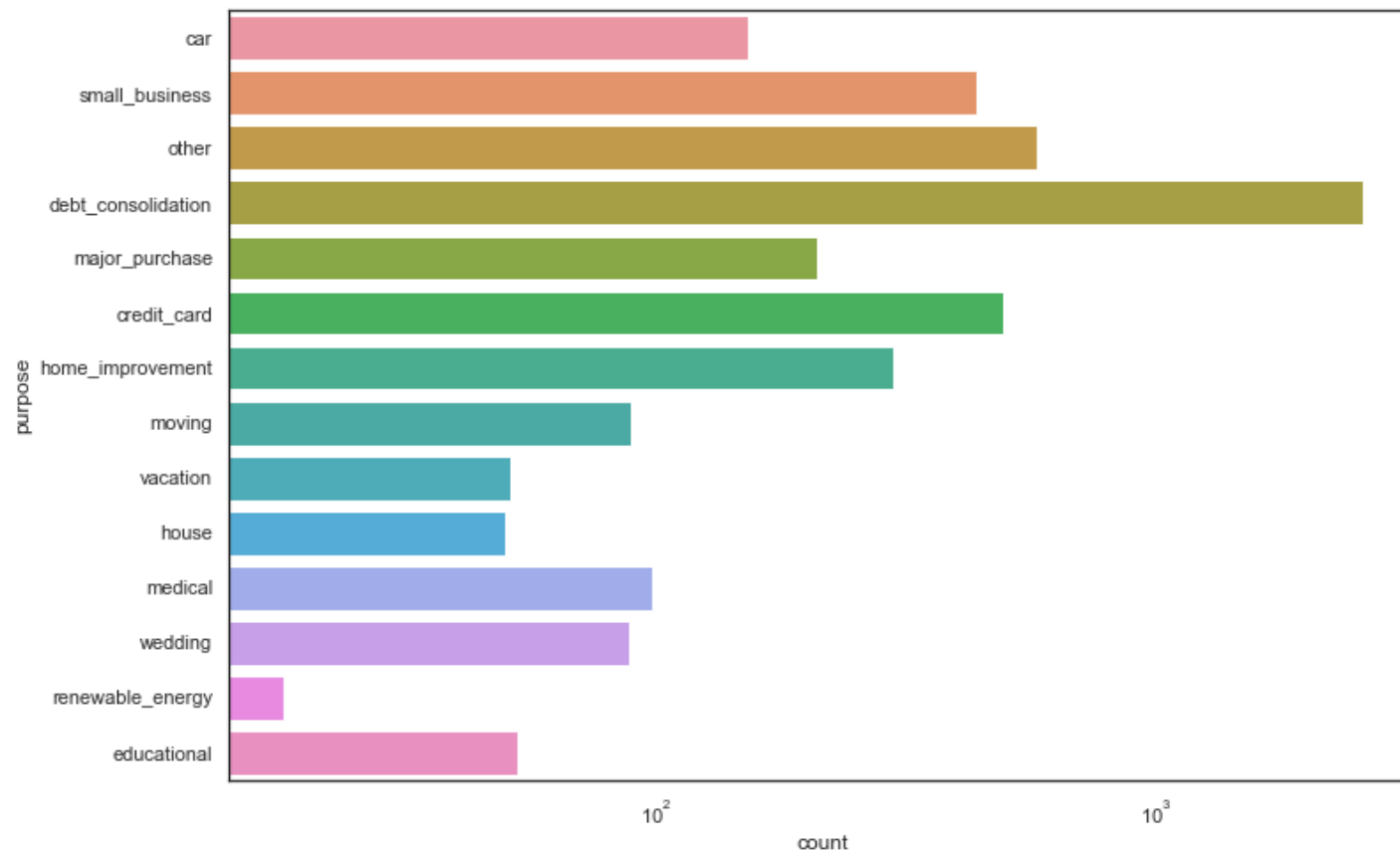
'Charged Off' loan_status



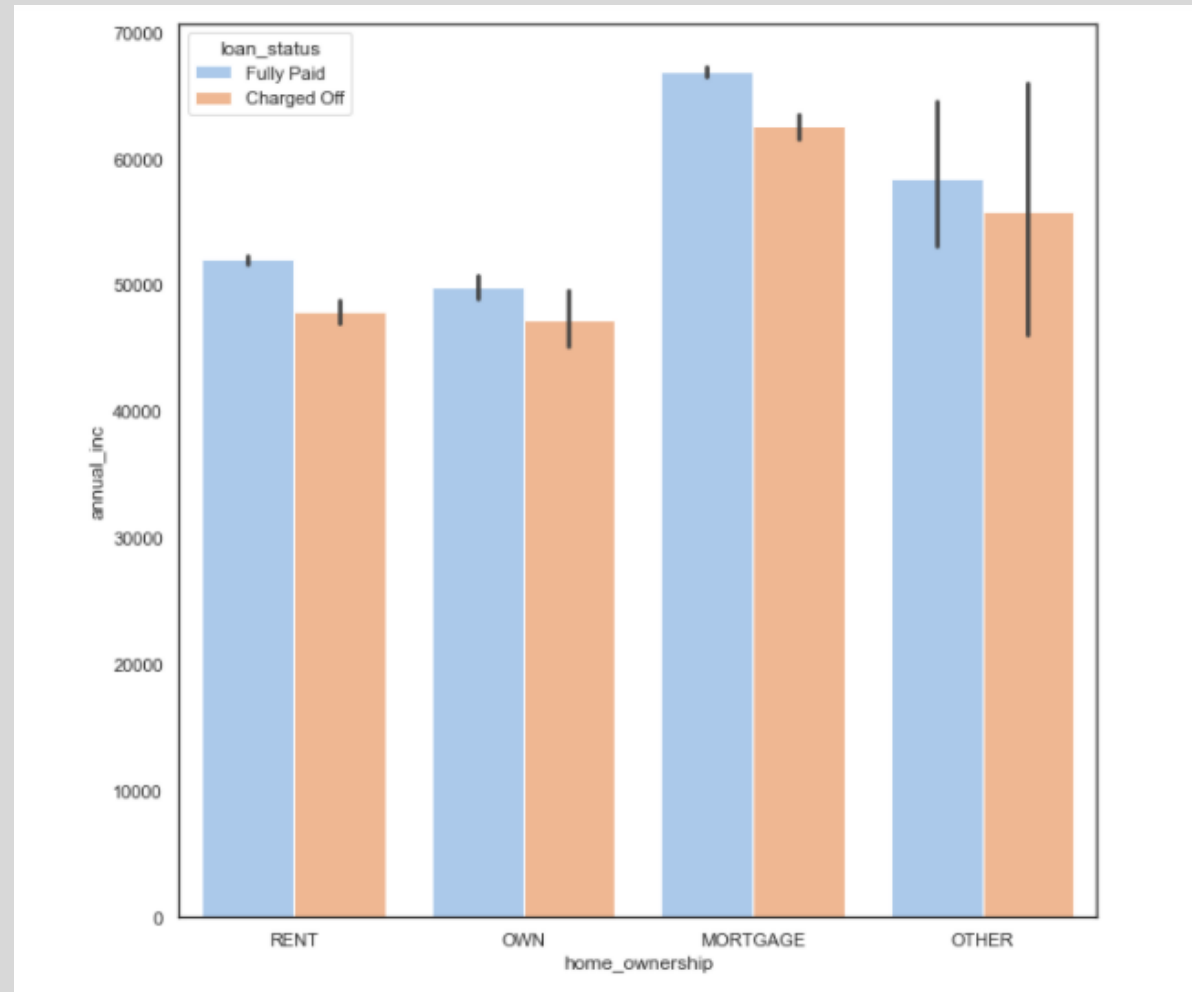
Analyzing home_ownership



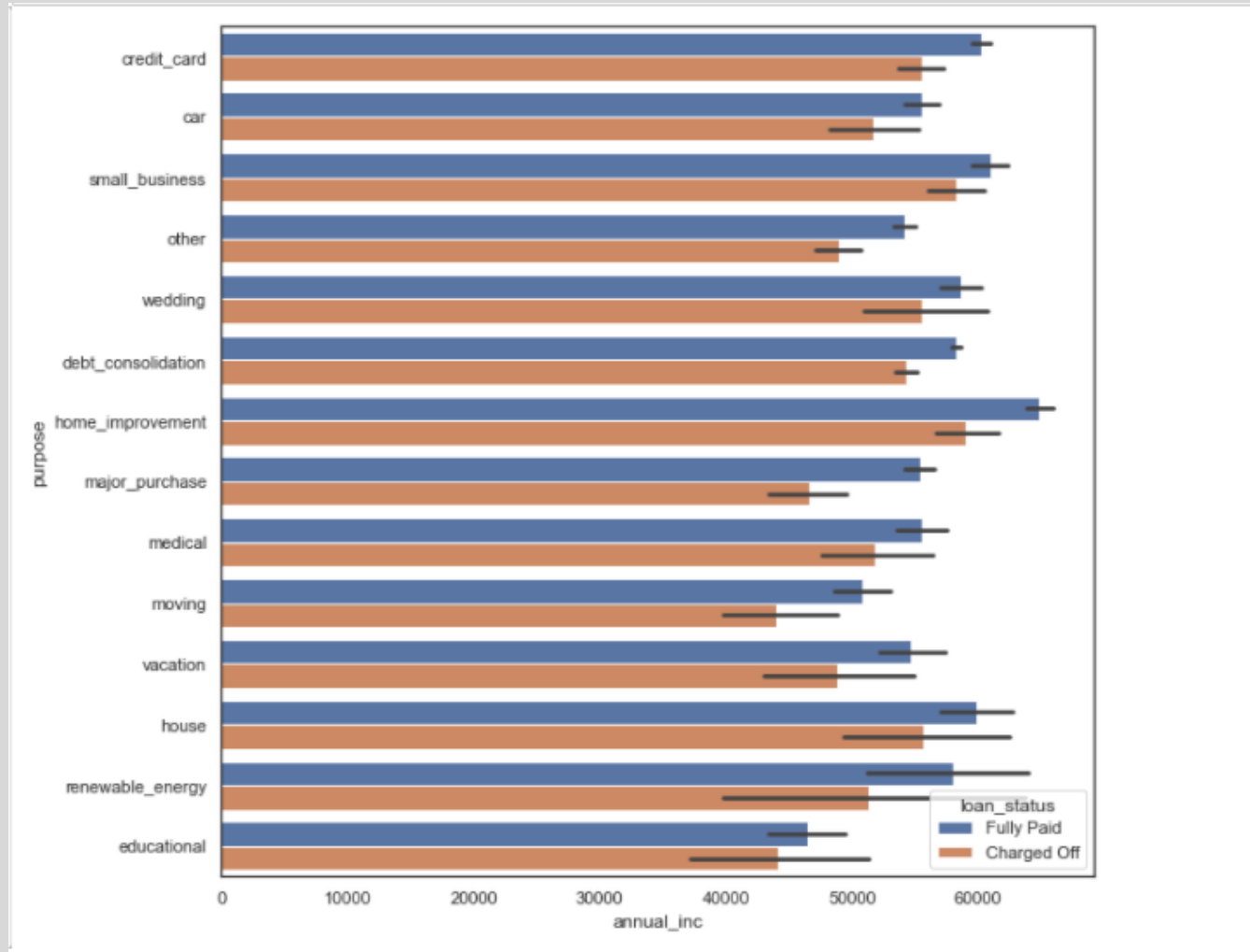
Analyzing purpose



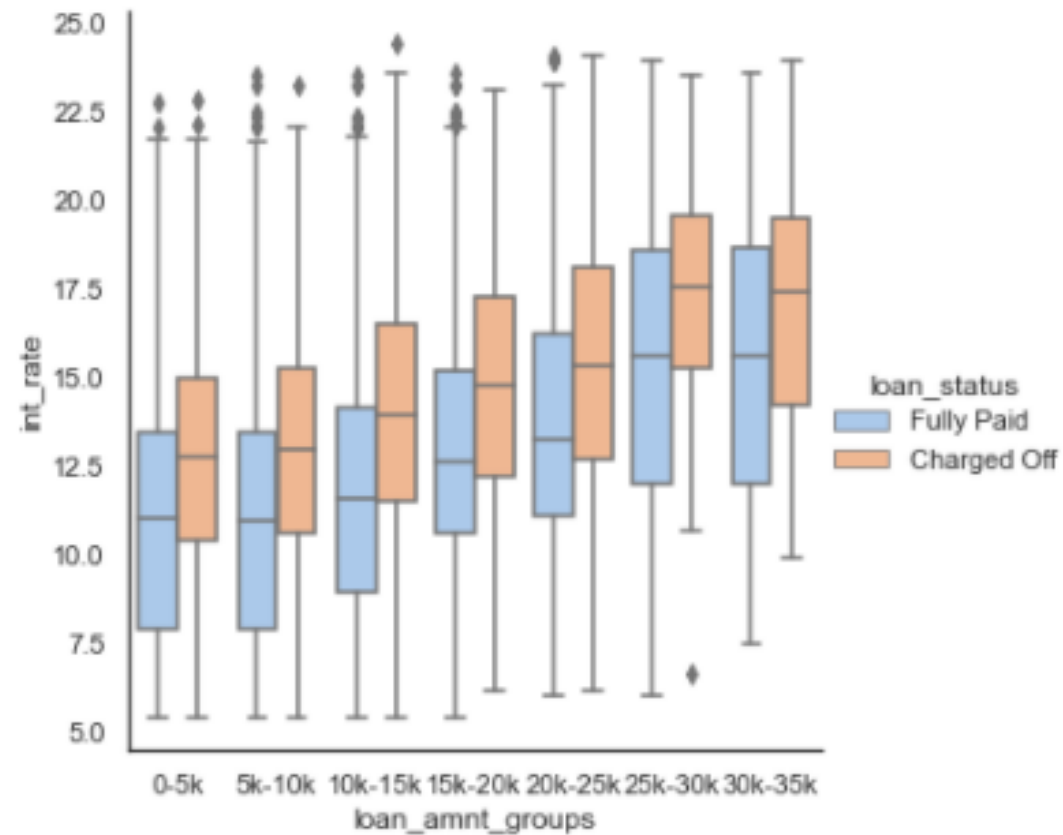
Annual income vs home ownership



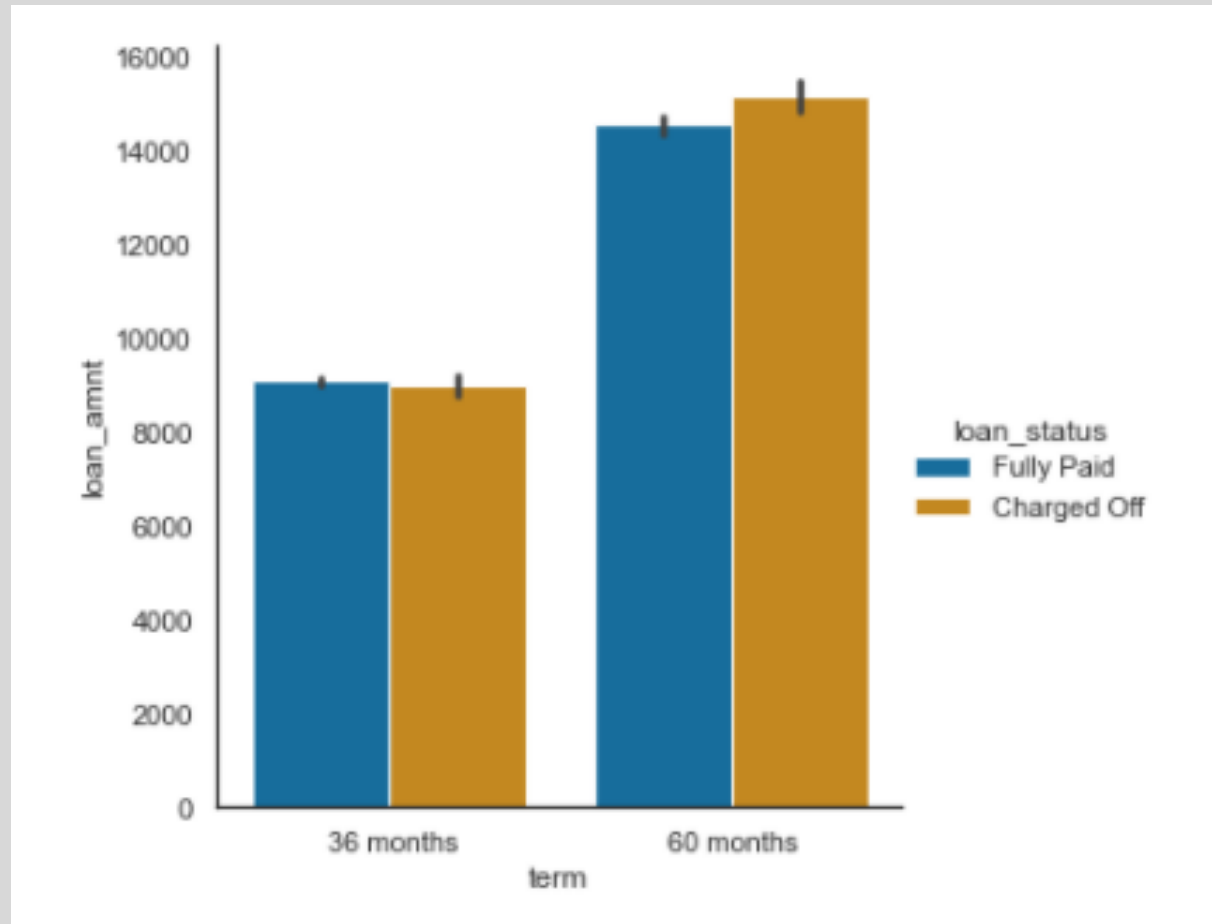
Annual income vs loan purpose



Interest Rate vs Loan Amount



Loan Amount vs Term



Summery of important results

- **The above analysis with respect to the charged off loans. There is a more probability of defaulting when :**
 - Applicants taking loan for 'home improvement' and have income of 60k -70k
 - Applicants whose home ownership is 'MORTGAGE and have income of 60-70k
 - Applicants who receive interest at the rate of 21-24% and have an income of 70k-80k
 - Applicants who have taken a loan in the range 30k - 35k and are charged interest rate of 15-17.5 %
 - Applicants who have taken a loan for small business and the loan amount is greater than 14k
 - Applicants whose home ownership is 'MORTGAGE and have loan of 14-16k
 - When grade is F and loan amount is between 15k-20k
 - When employment length is 10yrs and loan amount is 12k-14k
 - When the loan is verified and loan amount is above 16k
 - For grade G and interest rate above 20%

THANK YOU