LENDING CLUB CASE STUDY

Group members:

Pragathi Ravindranath
Rama Krishna Reddy

Lending Club Case Study

Overview:

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.

Lending Club leverages data and technology to screen borrowers, facilitate the transaction with appropriate interest rates, and service the loan.

Objective :

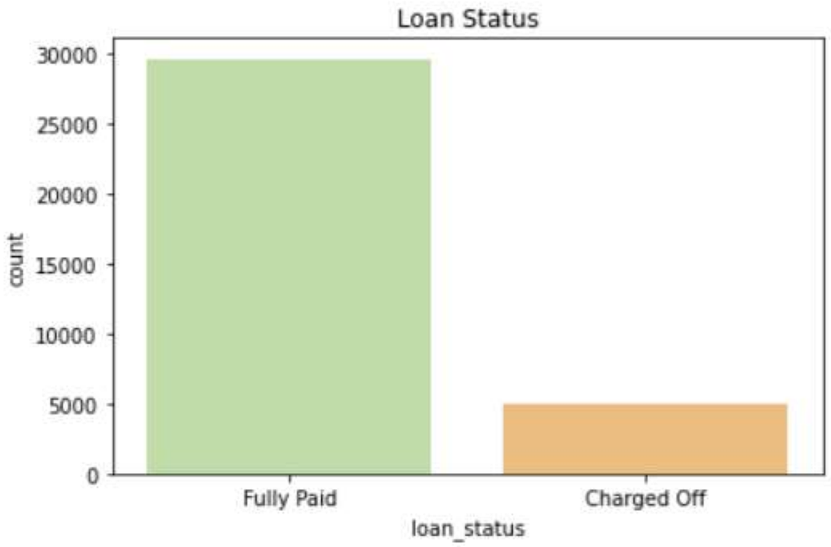
Identify variables that provide strong indicators of potential loan default thus helping Lending club to decide approval/rejection of loan. Two types of risks are associated with the bank’s decision:

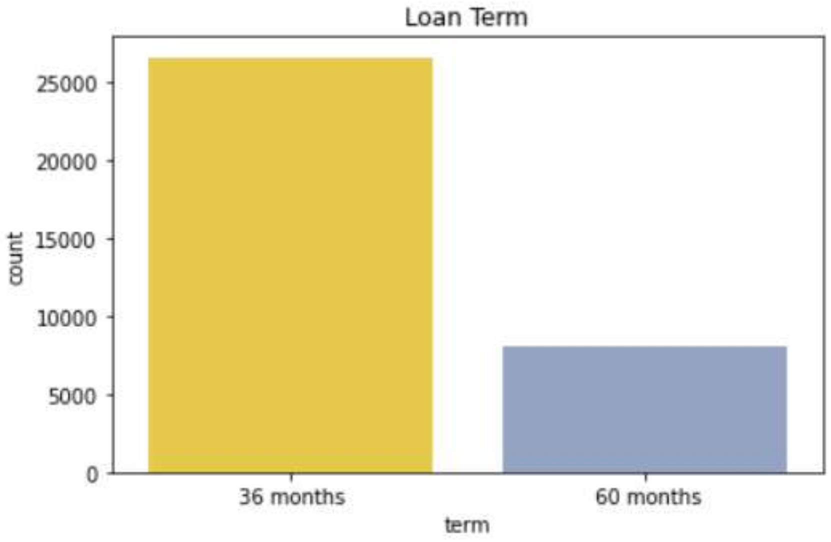
If the applicant is likely to repay the loan, then not approving the loan results in a loss of business to the company

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

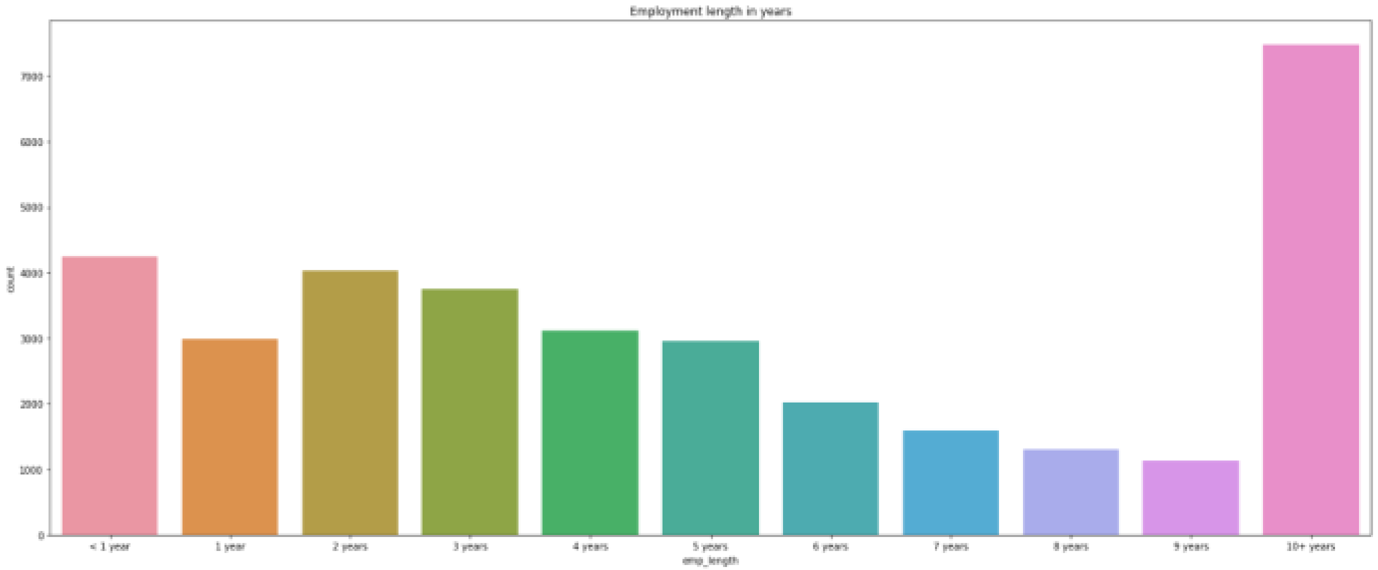
Univariate Analysis: Insights

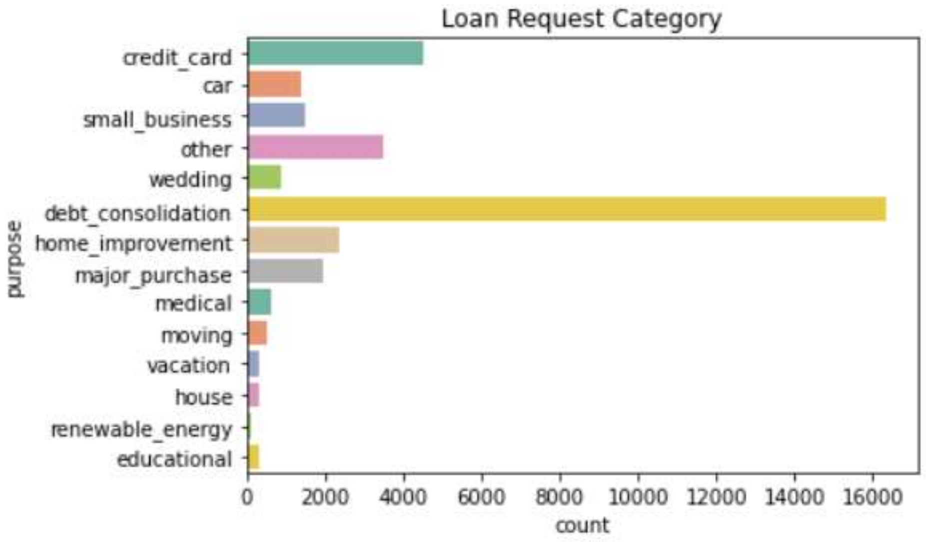
- Among the loan applicants most of have fully paid their loans
- Among the loan applicants most of them opt for 36 months of Loan Term



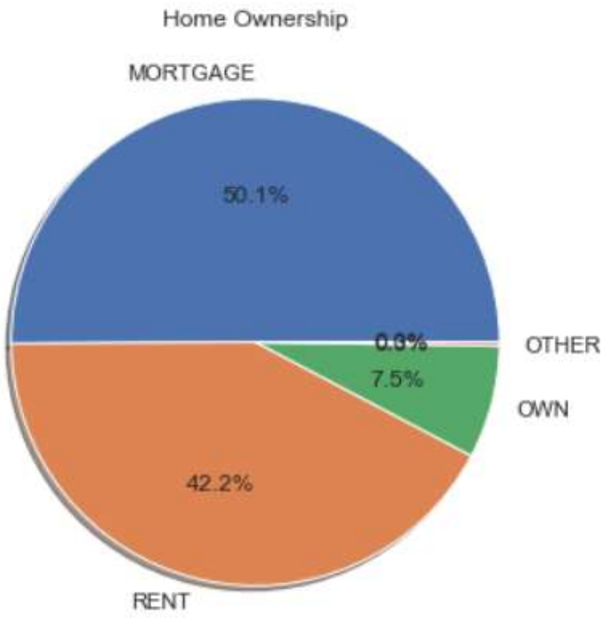


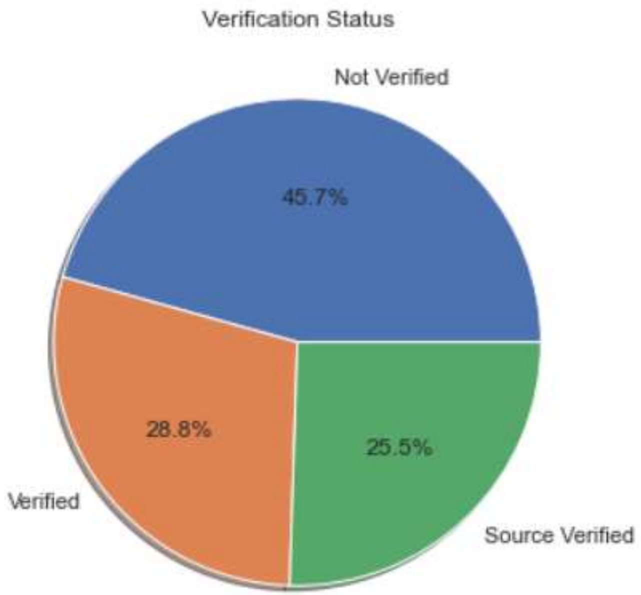
- ❖Among the loan applicants maximum employees having experience 10+ years.
- ❖‘Debt Consolidation’ followed by ‘Credit card’, are the top two reasons for loan applications



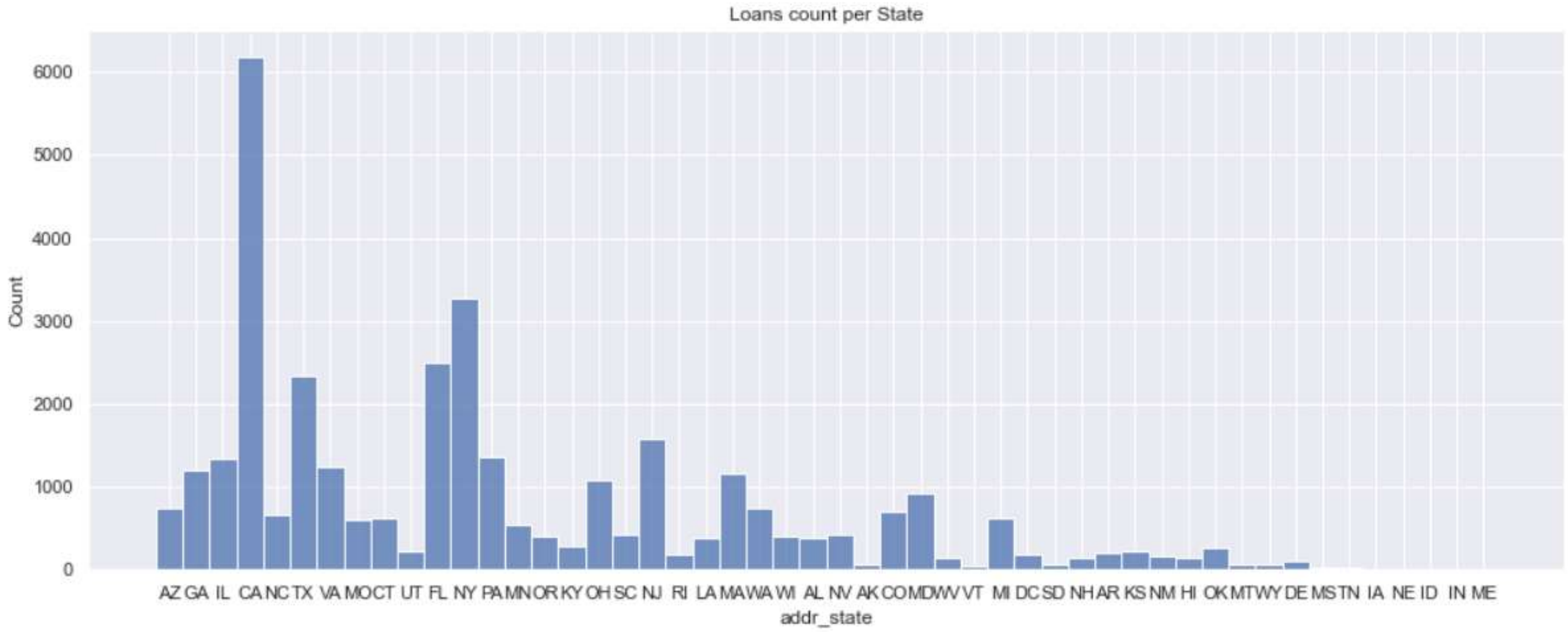


- Most of the loan applications have mortgaged or rented their home
- Almost 50% of the loan applicants are not verified

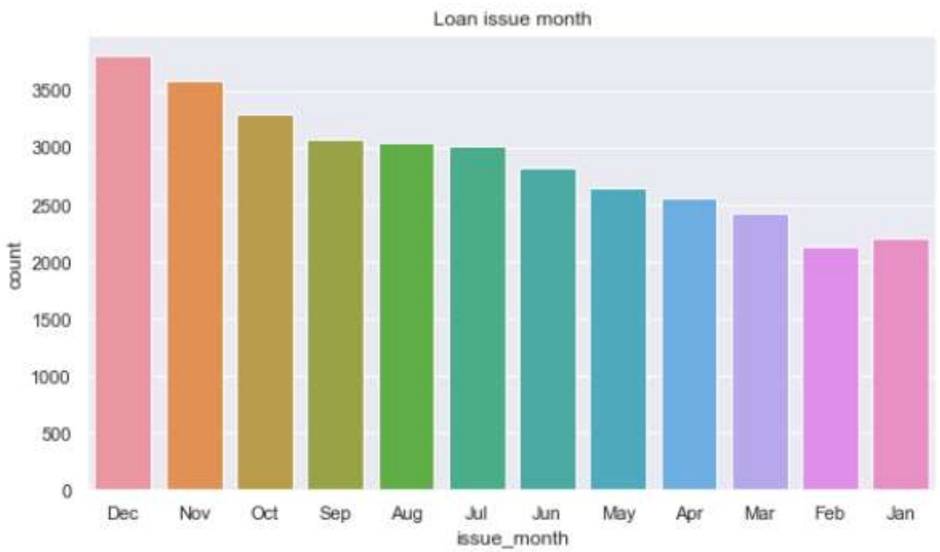


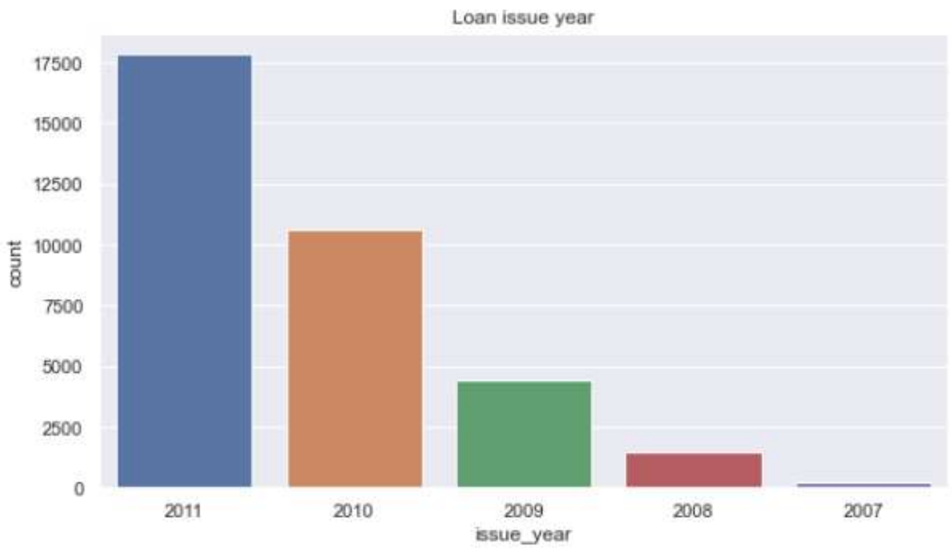


- Most of the loan applications are from 'California' and ‘New York' state

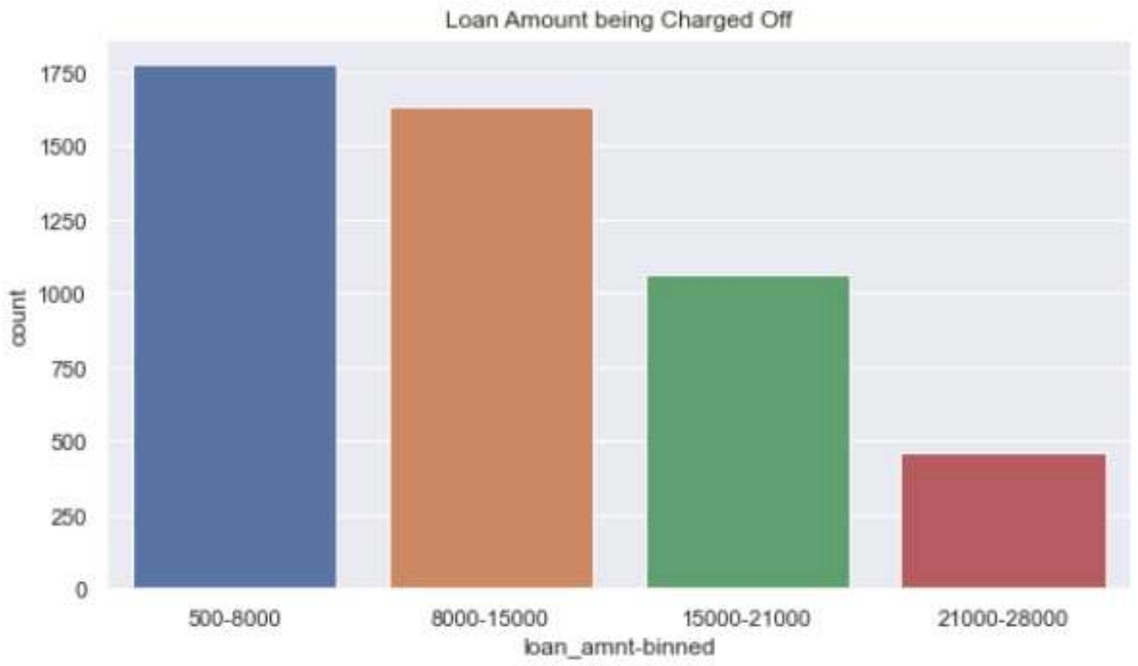


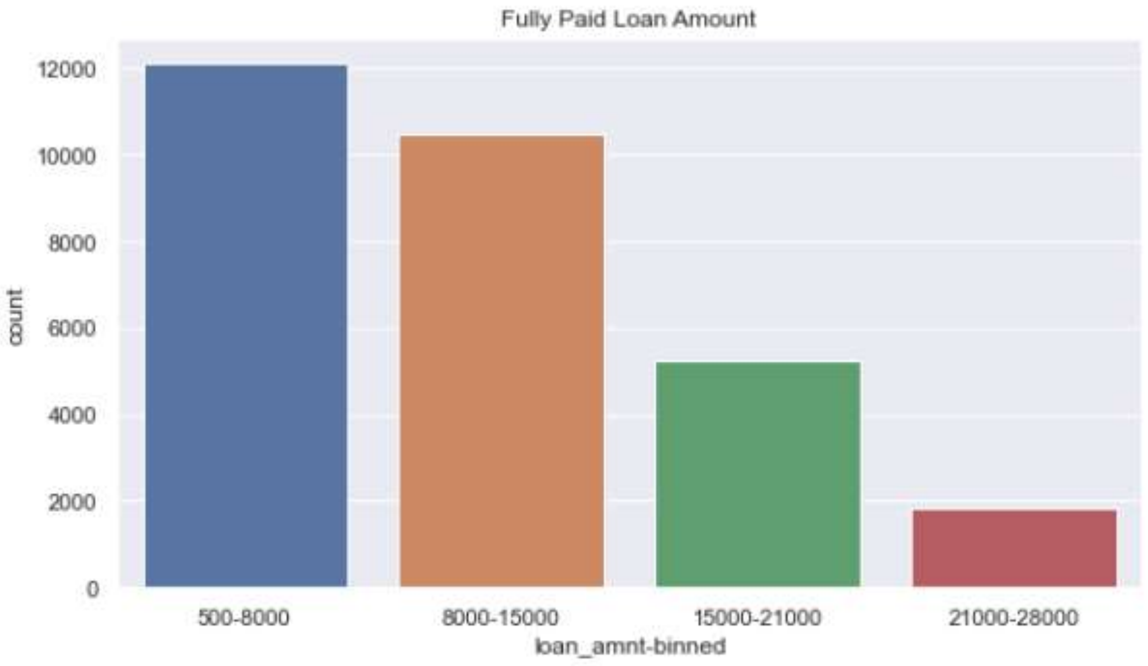
- Loan applicants doubled by the passing years
- Maximum loan applicants applied in the fall as compared to spring

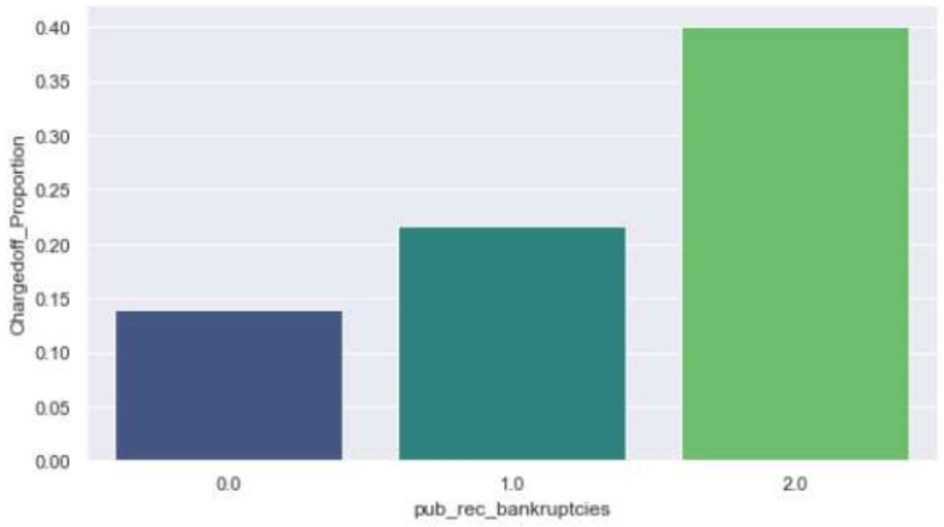


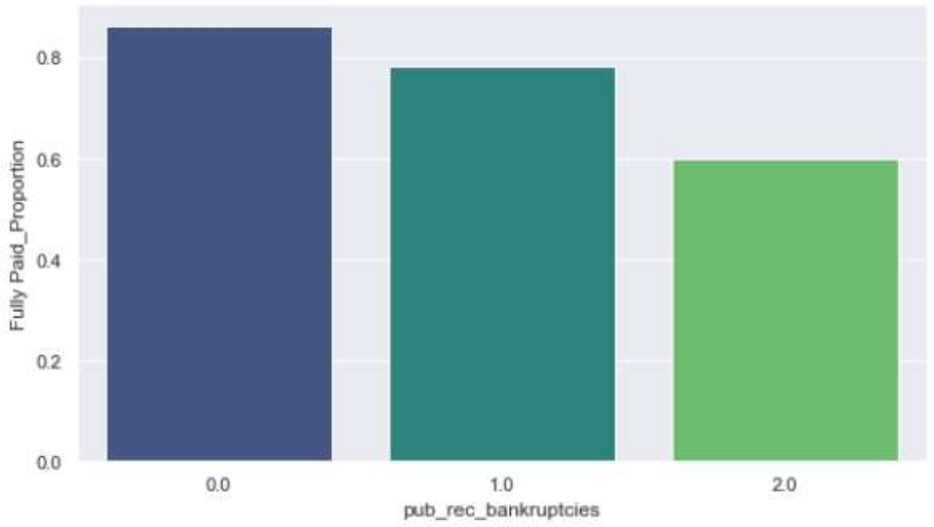


- Loan applicants being Charged off is found maximum in the loan amount range 500-8000k
- Loan applicants being Charged off is found minimum in the loan amount range 21000-28000k
- Fully paid Loan applicants is found minimum in the loan amount range 21000-28000k and maximum in range 500-8000k



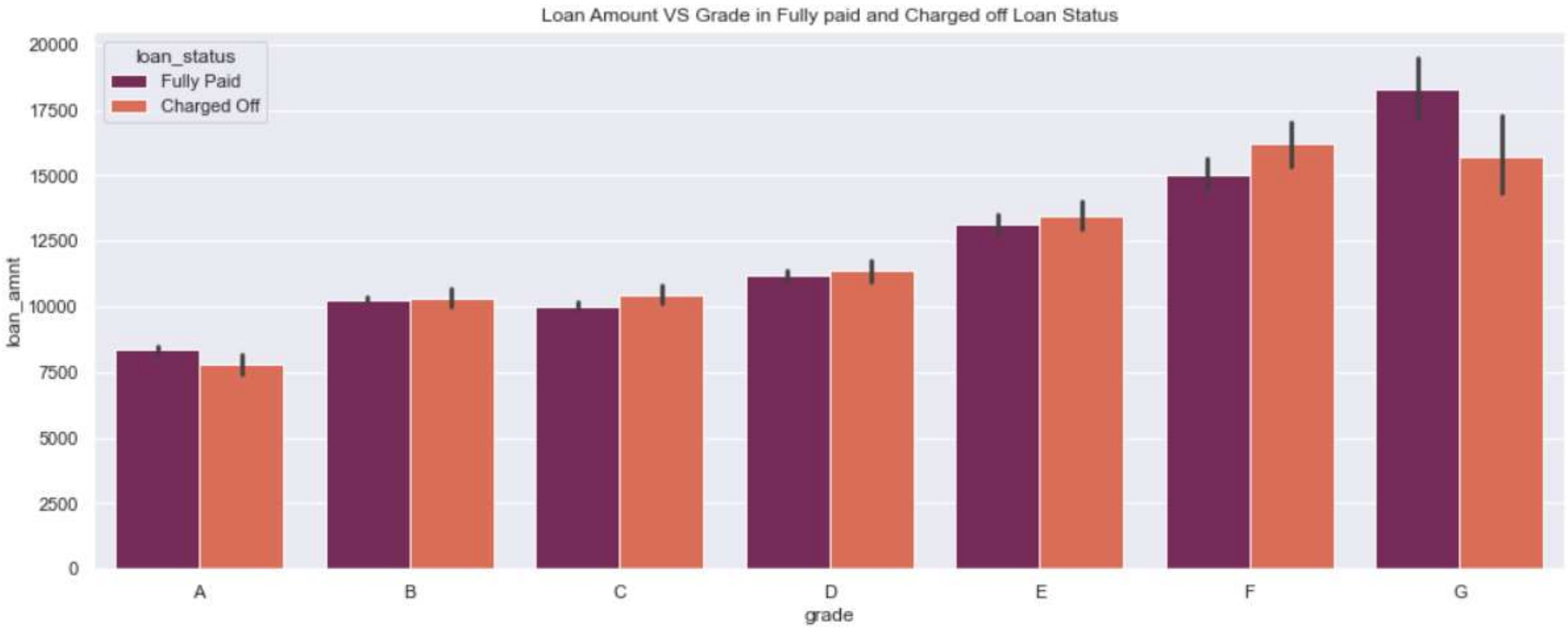




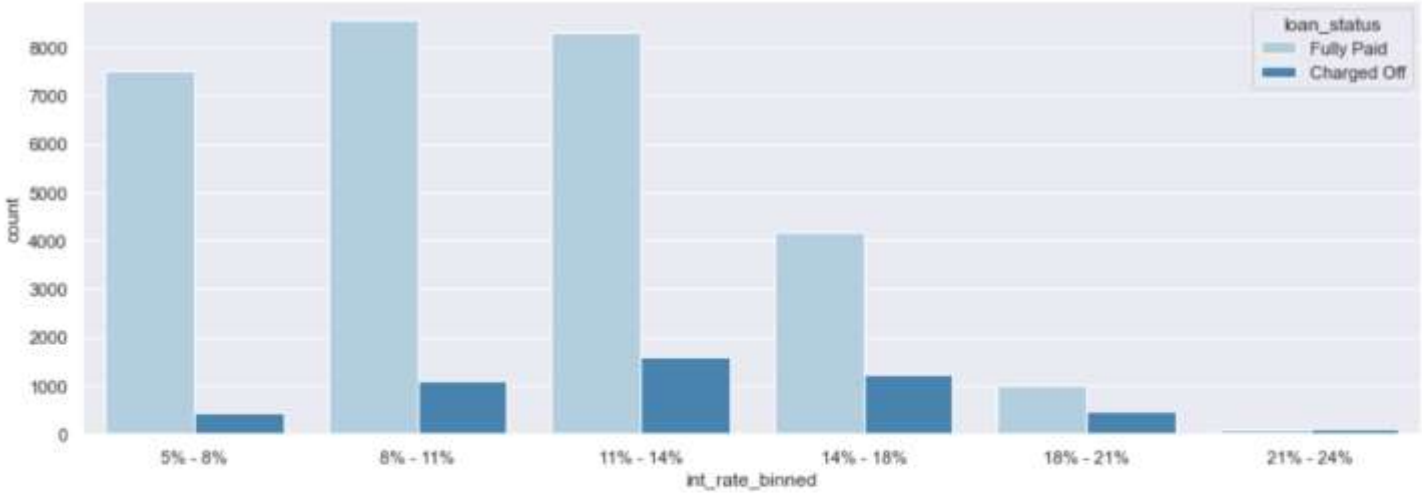


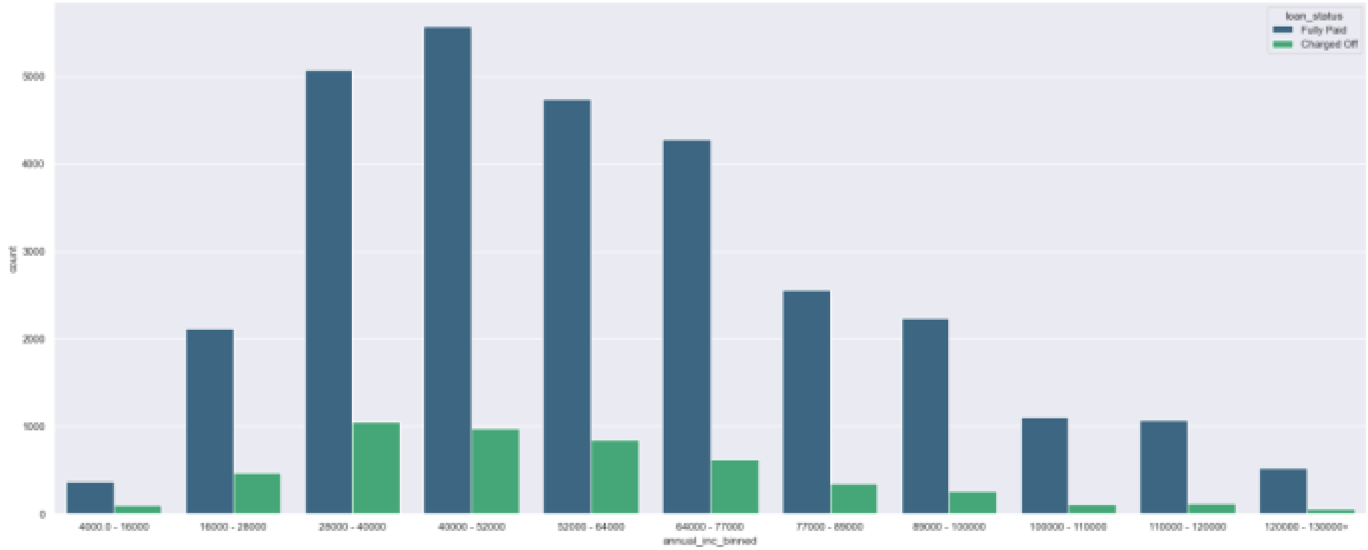
- Loan applicants having more public records of bankruptcies are less likely to fully pay the loan resulting in being detained

Bivariate Analysis

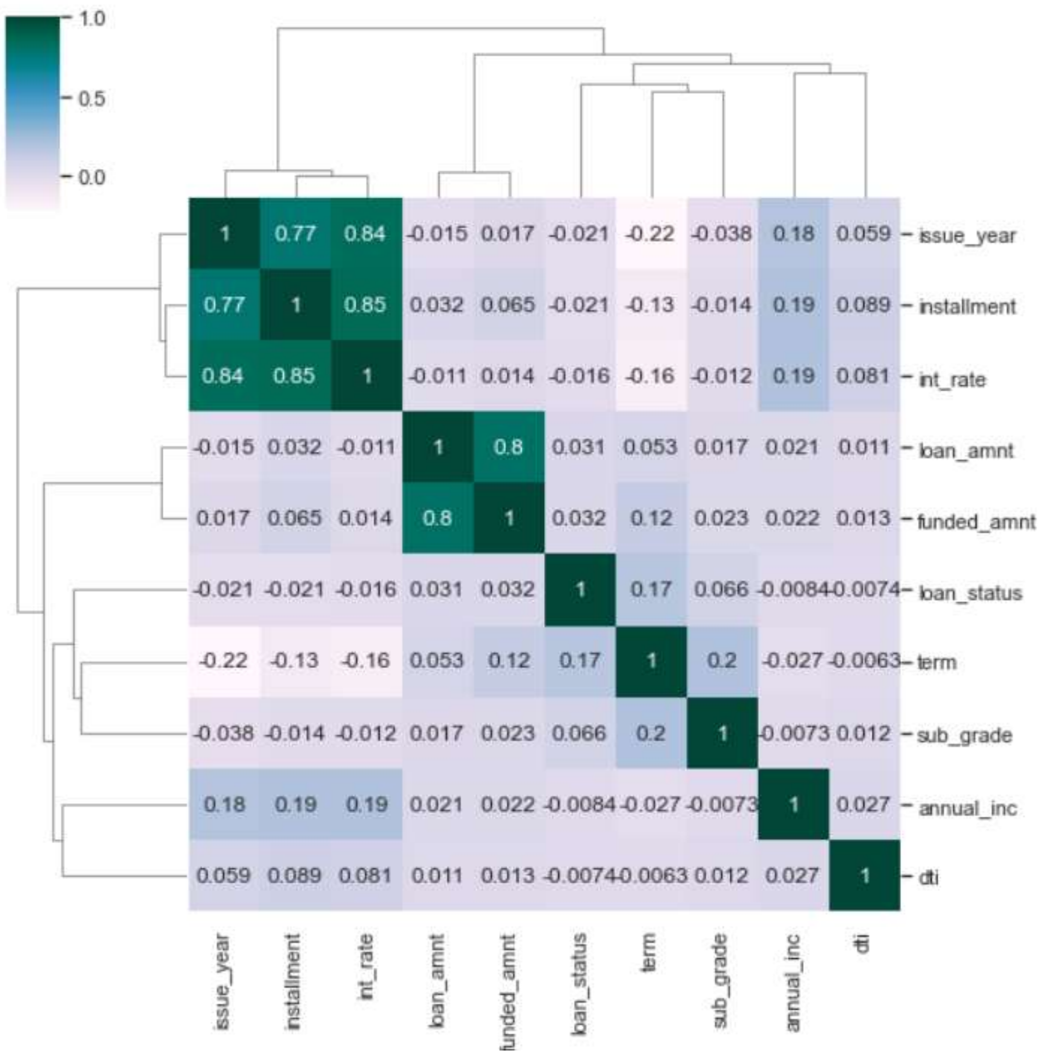


- Number of defaulters are significantly increases within grade 'B' and 'F'.
- As the Grades define the interest rate it is evident that there is an increase in defaulters



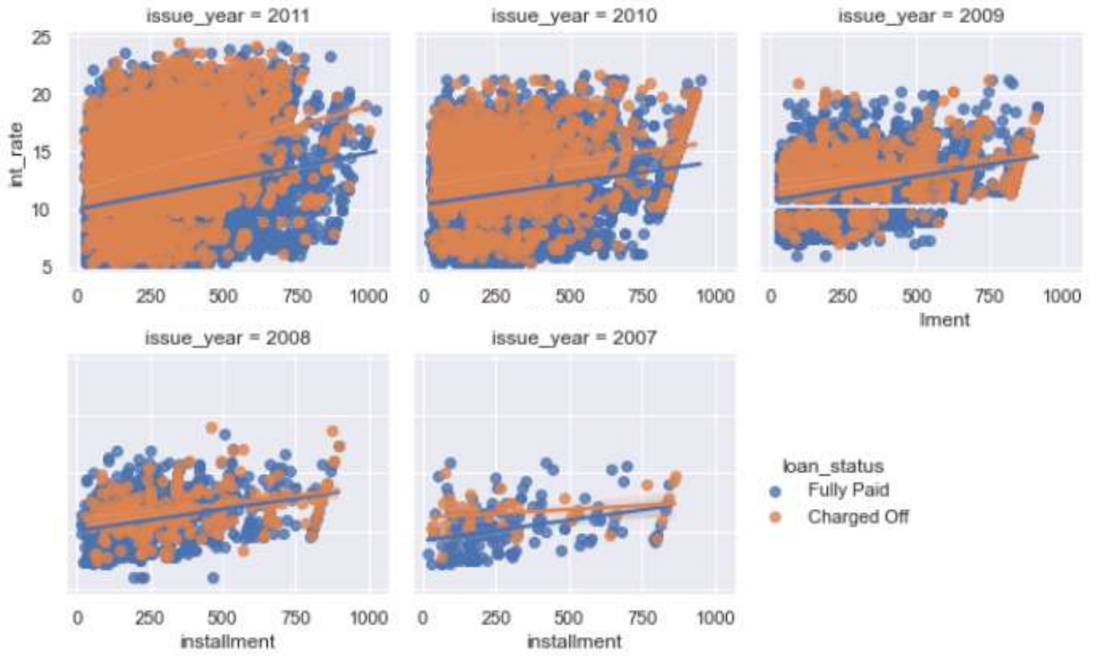


- Number of defaulters are significantly high between the interest rate 8% to 18%
- Number of defaulters are least in the interest range 21% - 24%
- Income range 100000+ has less chances of charged off.
- Income range 16000-80000 has high chances of charged off.
- Increase in annual income decreases applicants being charged off.



- Loan amount, funding amount are strongly correlated.
- Issue year, Installment and interest rate are strongly correlated.

- Correlation between the Installment and the Interest rate is shown
- Interest rate and Installment are positively correlated and increasing the passing year



Conclusion:

DRIVING FACTORS for Defaulters

Grade: Number of defaulters are significantly increases within grade 'B' and 'F'. As the Grades define the interest rate it is evident that there is an increase in defaulters

Public Records of Bankruptcies: Loan applicants having more public records of bankruptcies are less likely to fully pay the loan resulting in being detained

Interest Rate: Number of defaulters are significantly high between the interest rate 8% to 18% . Number of defaulters are least in the interest range 21% - 24%

Annual Income: Income range 100000+ has less chances of charged off. Income range 16000-80000 has high chances of charged off. Increase in annual income decreases applicants being charged off.