LENDING CLUB CASE STUDY

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Strategy and Business Objective

Business Objective

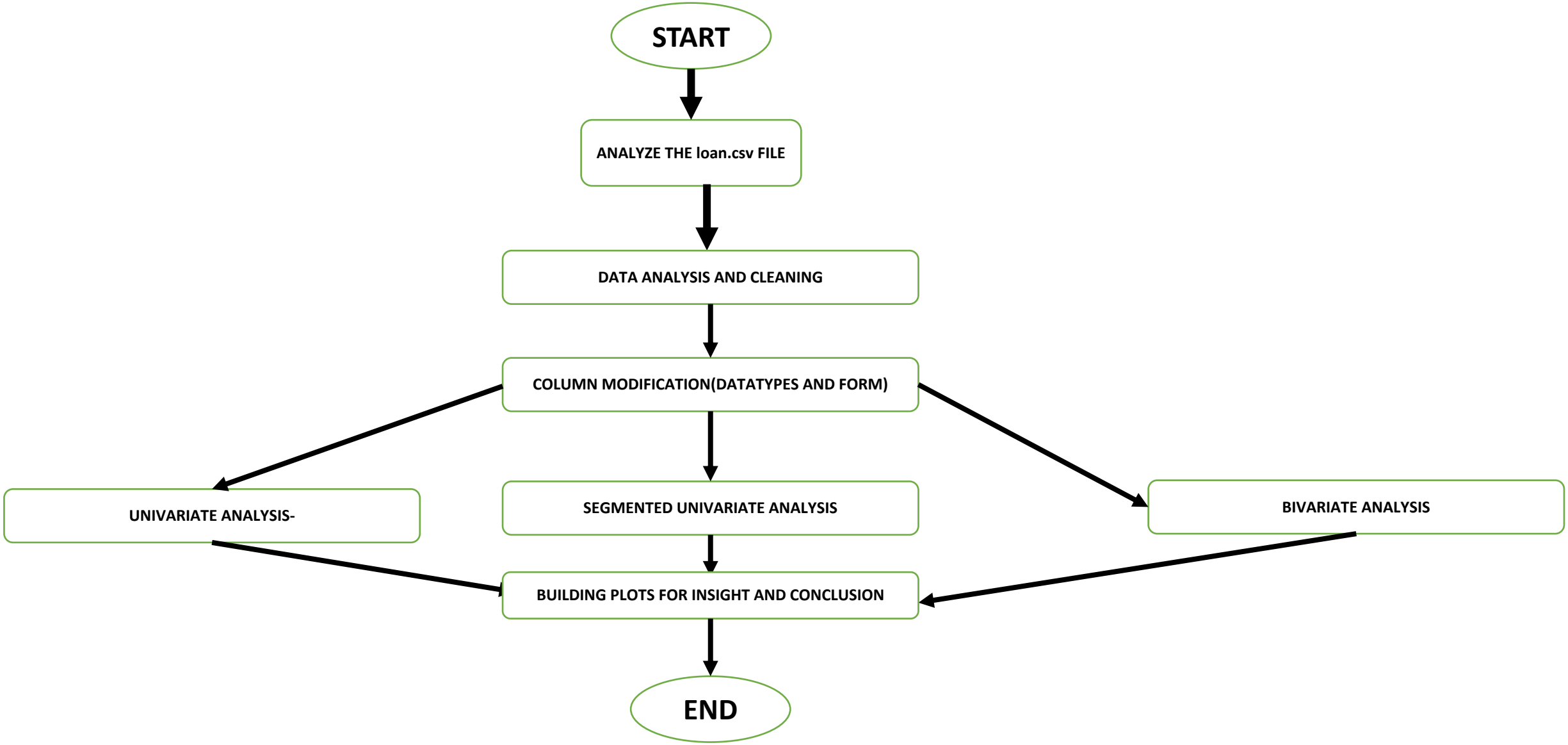
- **This company is the largest online loan marketplace, facilitating personal loans, business loans, and financing of medical procedures. Borrowers can easily access lower interest rate loans through a fast online interface.**

- **Like most other lending companies, lending loans to ‘risky’ applicants is the largest source of financial loss (called credit loss). The credit loss is the amount of money lost by the lender when the borrower refuses to pay or runs away with the money owed. In other words, borrowers who default cause the largest amount of loss to the lenders. In this case, the customers labelled as 'charged-off' are the 'defaulters'.**

- **If one is able to identify these risky loan applicants, then such loans can be reduced thereby cutting down the amount of credit loss. Identification of such applicants using EDA is the aim of this case study.**

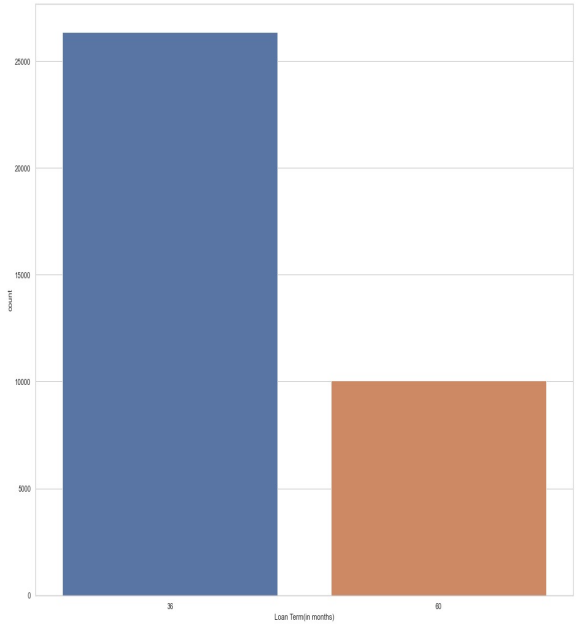
- **In other words, the company wants to understand the driving factors (or driver variables) behind loan default, i.e. the variables which are strong indicators of default. The company can utilise this knowledge for its portfolio and risk assessment.**

Flow chart of Assignment

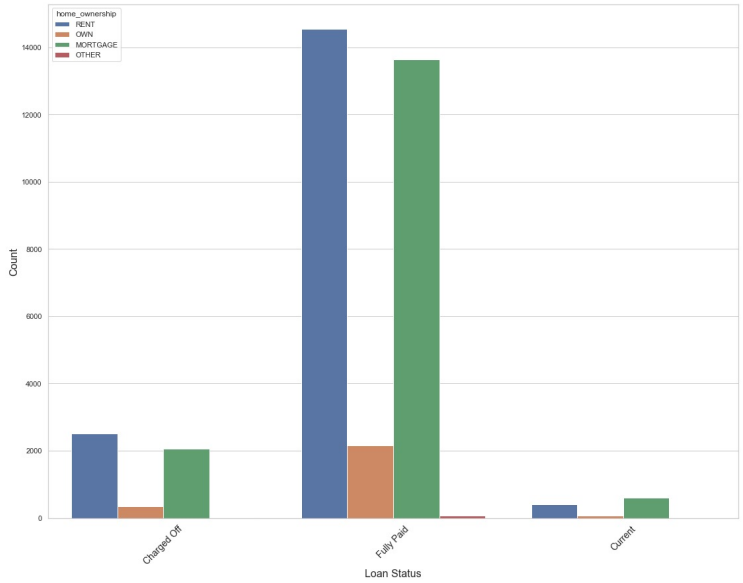


UNIVARIATE ANALYSIS

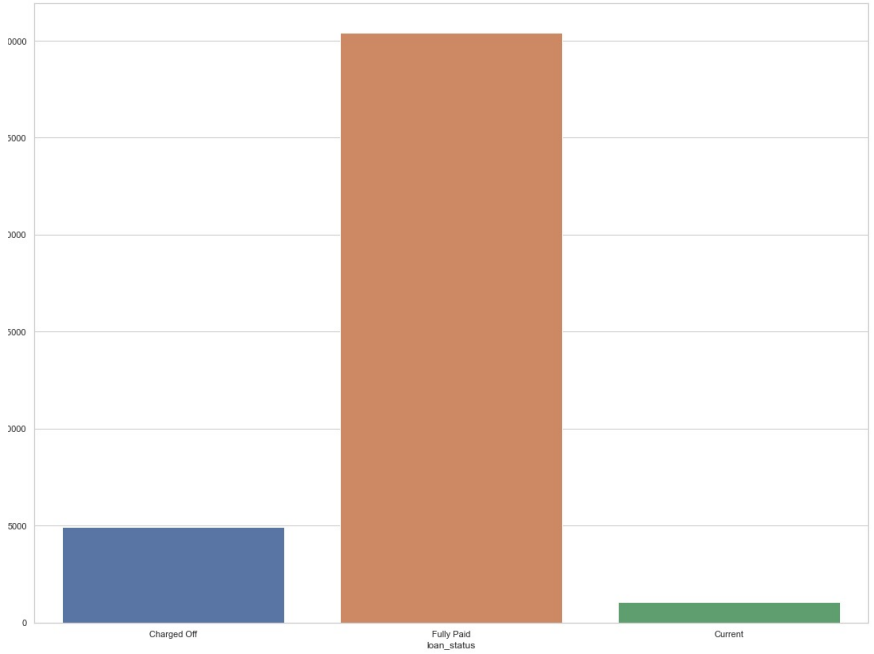
Loan Term Preferences



Loan status vs home ownership

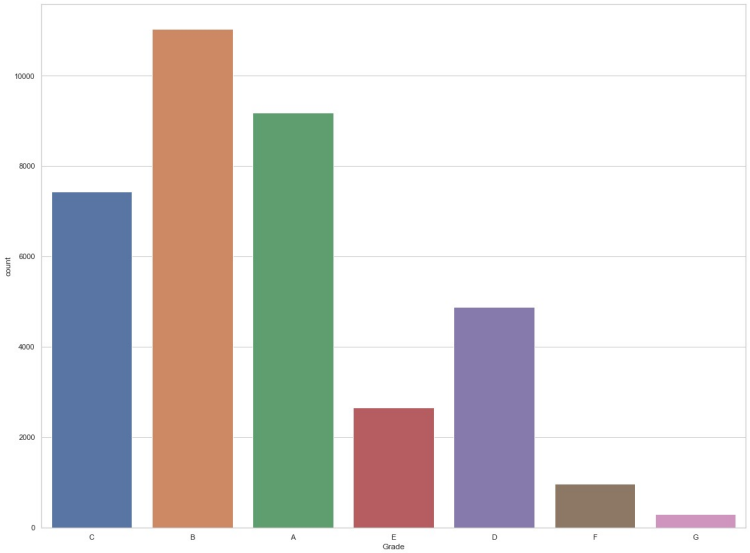


Loan status Count

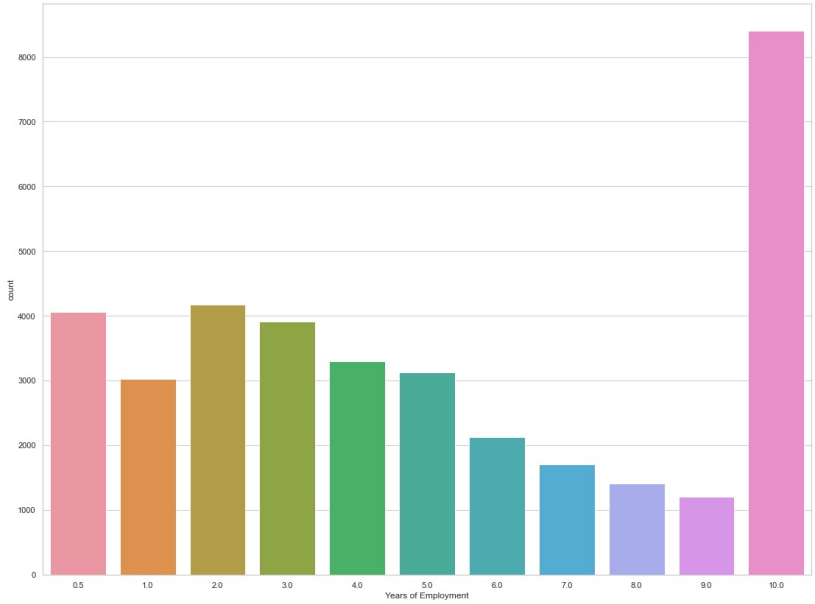


UNIVARIATE ANALYSIS

Grade wise count



Candidates count WRT to work experience(in years)

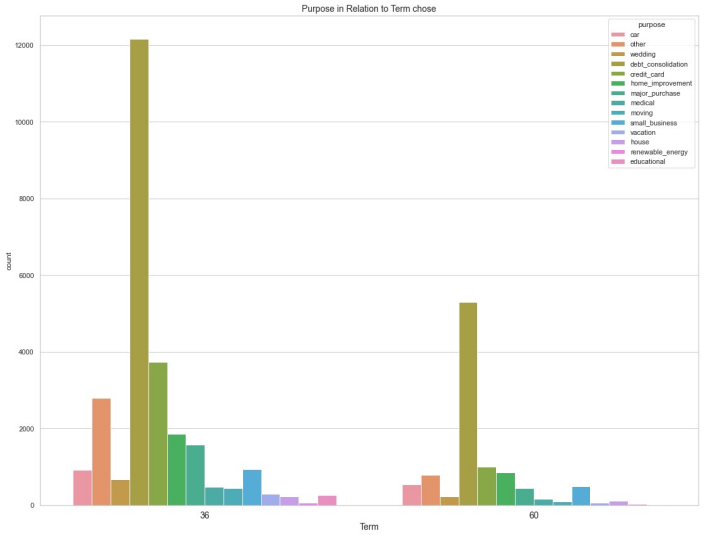


CONCLUSIONS

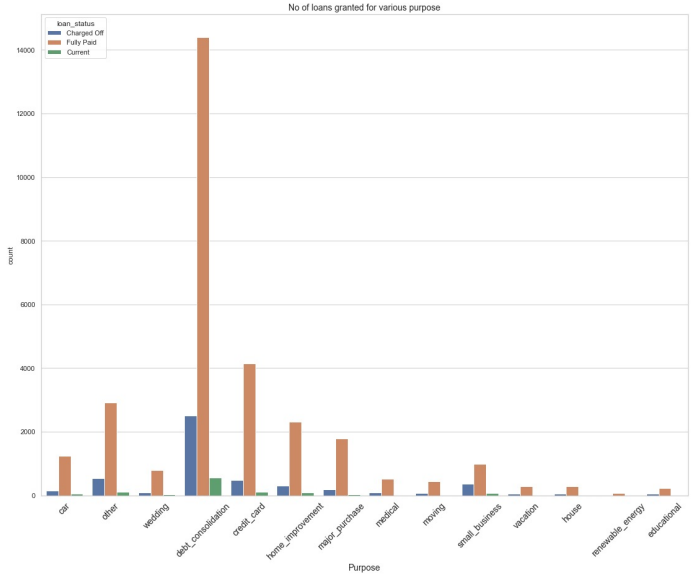
- The percentage of Fully Paid people is: 83.51% The percentage of Defaulted people is: 13.57%
- Finding: The loan amount varies from 500 to 35,000 USD with a mean of 11,308 USD
- Maximum number of borrowers have 10+ years of experience : 23.08%,
- Minimum number of borrowers have 9 years of experience : 3.31%
- Maximum loans are granted for high graded loans. Equivalent to 76% for grades A, B & C
- Only 2 values cross the value of 3 million USD, Most candidates have an income of less than 1 million USD

SEGMENTED UNIVARIATE ANALYSIS

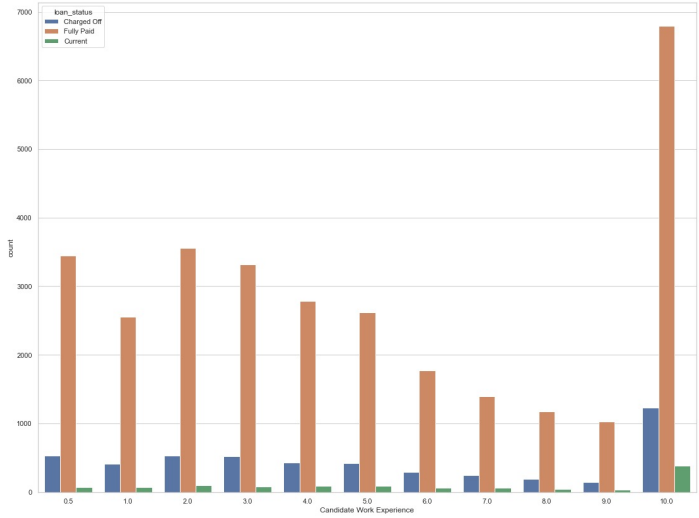
Purpose wrt to the Term chosen



Loan count Purpose-wise

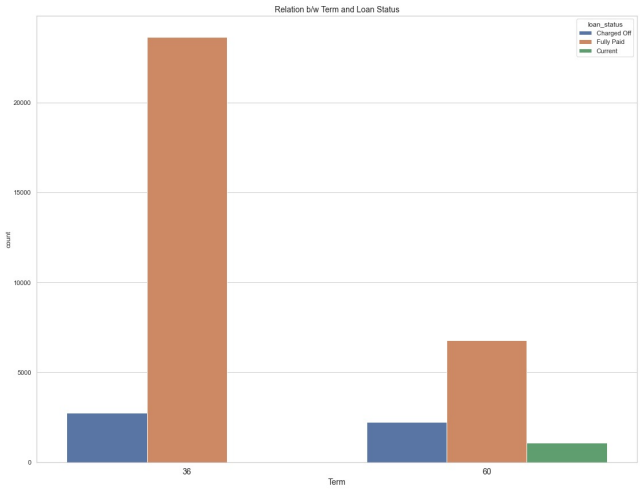


Work exp. wrt Loan Status

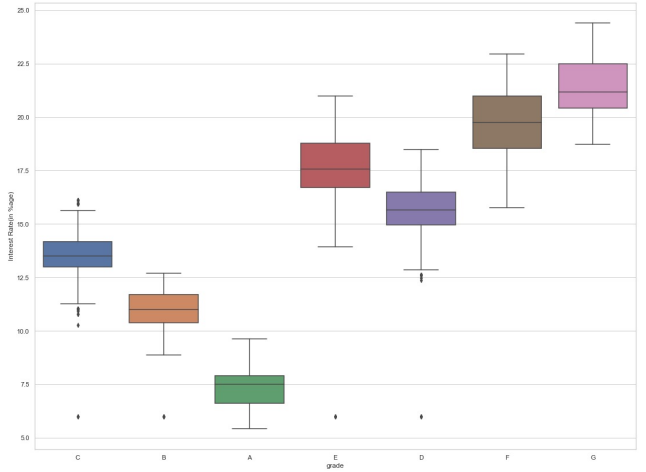


SEGMENTED UNIVARIATE ANALYSIS

Term vs Loan status



Grade vs Interest Rate

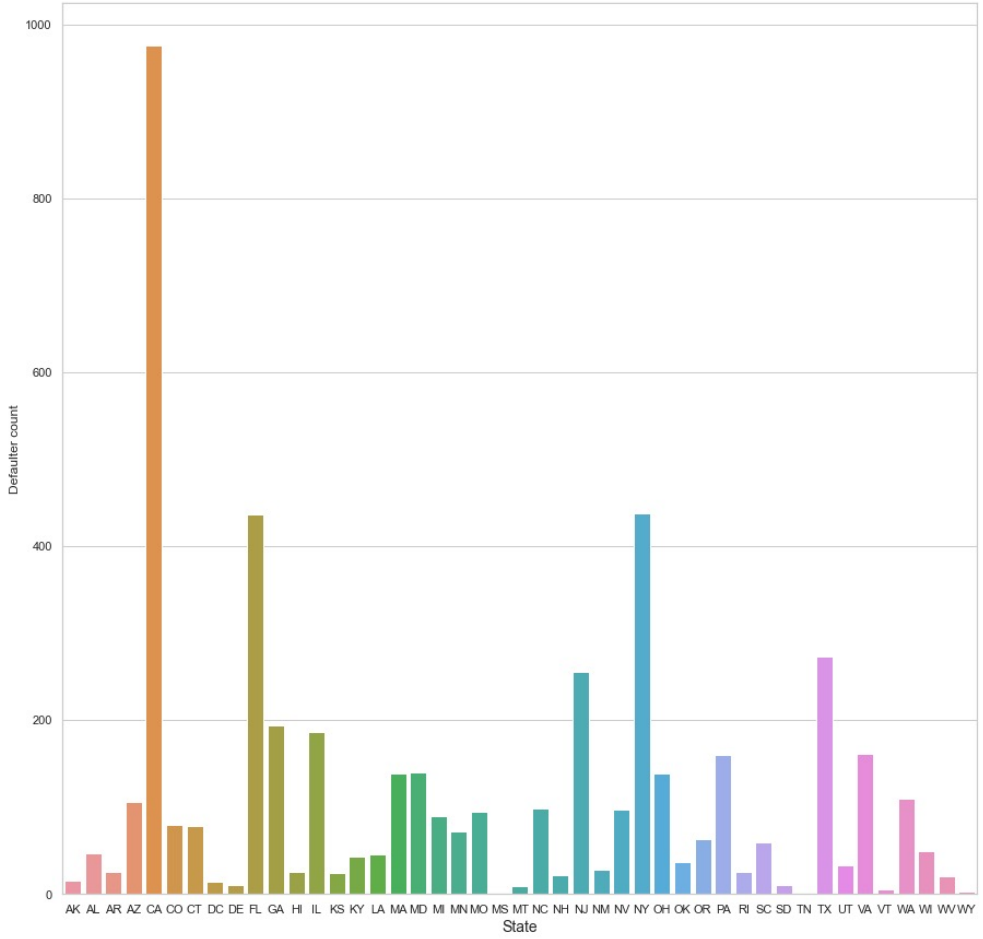


CONCLUSIONS

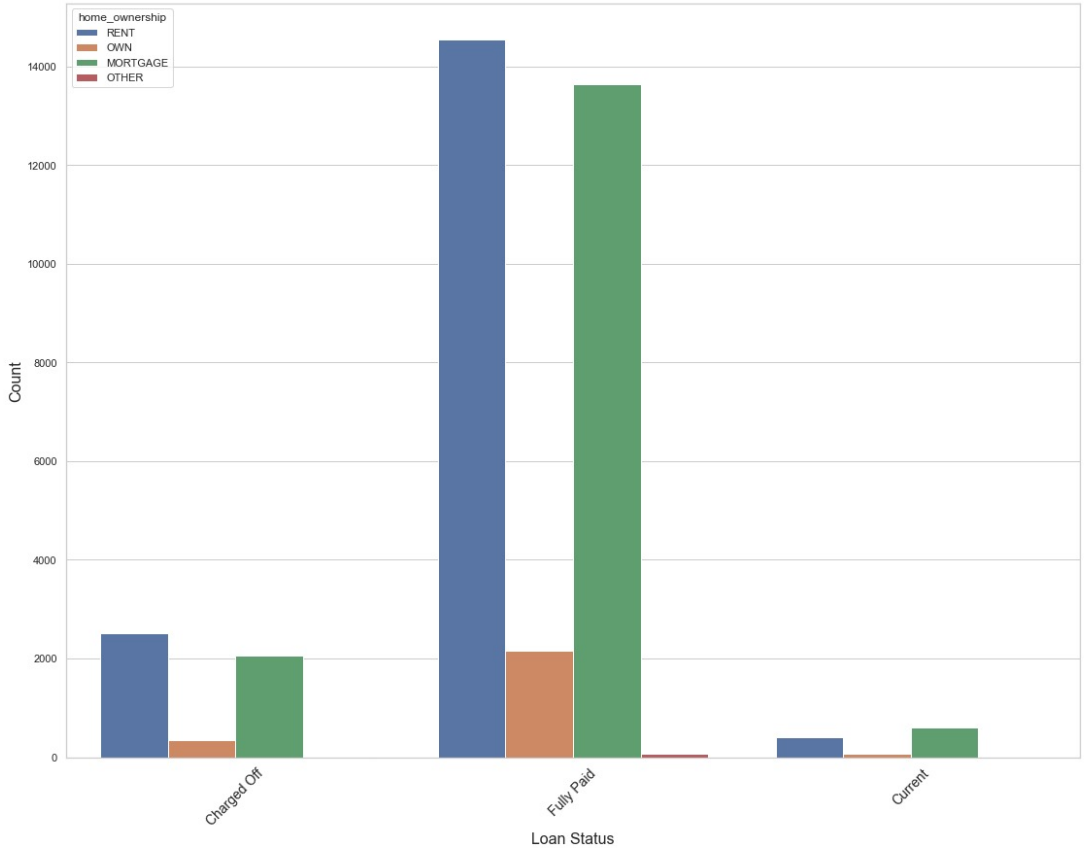
- Maximum number of defaulters are the people with 10+ years of experience
- Interest Rate increases as the Grade is lowered
- Maximum defaulters are the ones taking loan for debt consolidation
- Maximum number of candidates go for 36 months tenure for loan repayment

BIVARIATE ANALYSIS

State-wise Defaulters



Loan status vs home ownership

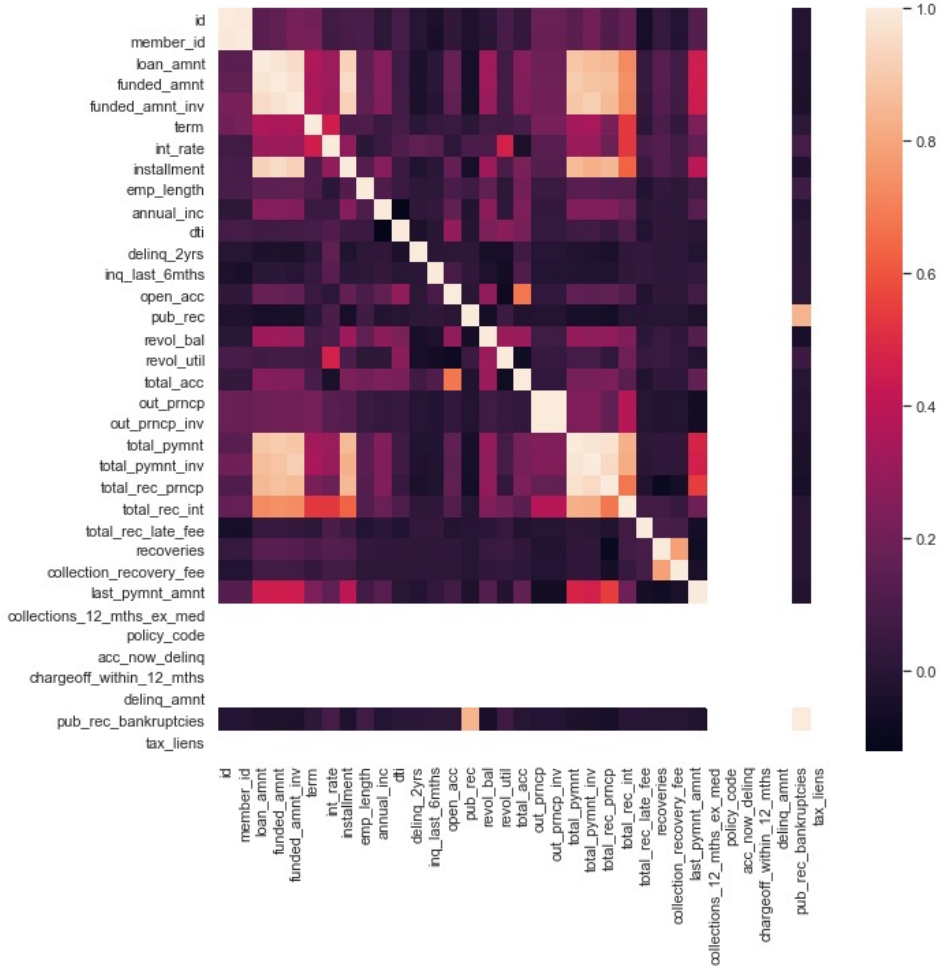


BIVARIATE ANALYSIS

CONCLUSIONS

- Loan_amnt, funded_amnt and funded_amnt_inv have very high correlation
- Installment has high correlation with above mentioned variables.
- State CA has maximum number of defaulters
- Defaulters are mostly the candidates with Rented or Mortgaged Apartments

FINAL VERDICT:

Loan should preferably not be approved for a candidate from the state CA, who is living in a rented apartment and has 10+ years of work experience.

CORRELATION MATRIX