

# LENDING CLUB CASE STUDY PROJECT

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- Prepared by: Talha Anwar
- Email: [talha800@gmail.com](mailto:talha800@gmail.com)

# INTRO:

- 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



# SCENARIO:

- When the company receives a loan application, the company has to make a decision for loan approval based on the applicant's profile. Two types of risks are associated with the bank's decision:
  - a) If the applicant is likely to repay the loan, then not approving the loan results in a loss of business to the company
  - b) 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

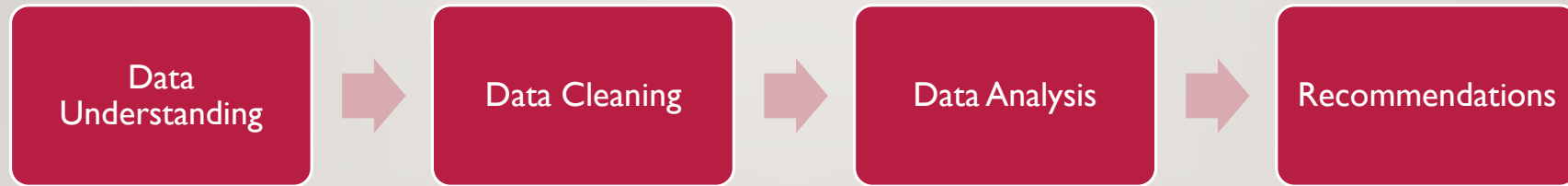


# AIM & OBJECTIVE:

- If one is able to identify the 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.
- 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 utilize this knowledge for its portfolio and risk assessment.

# WORK FLOW:

There are four major parts that are needed to be done for this case study

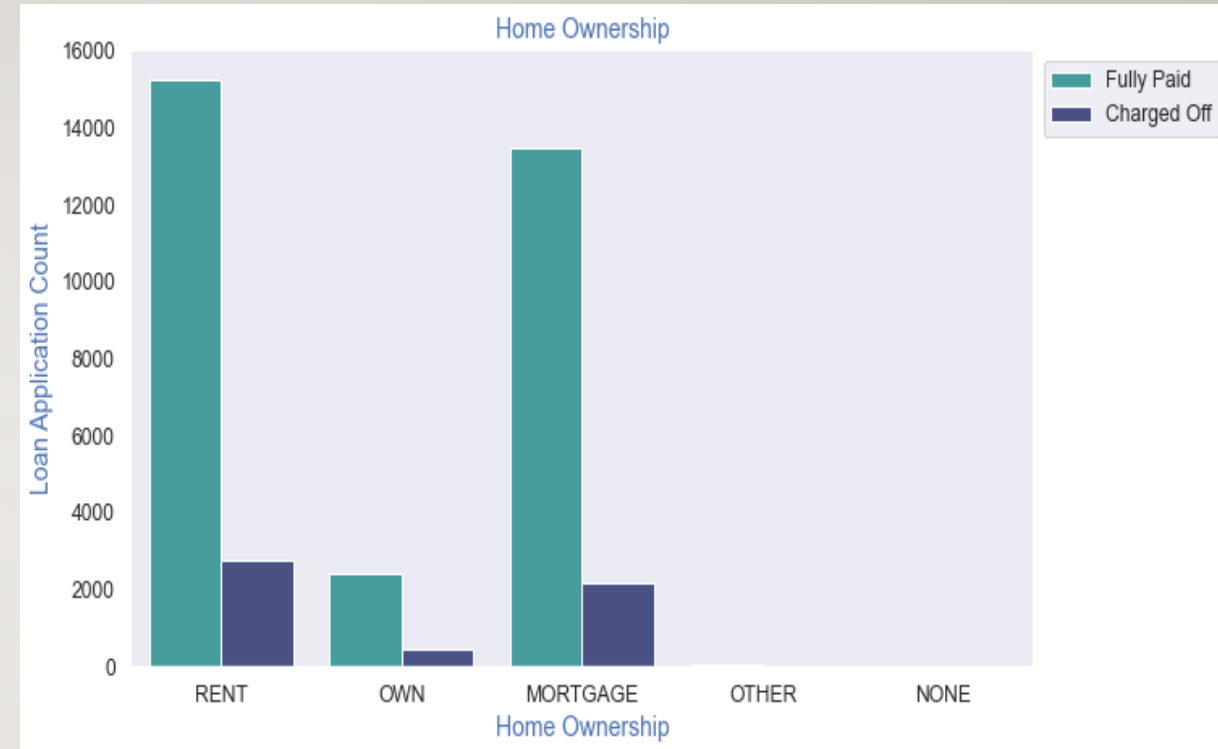
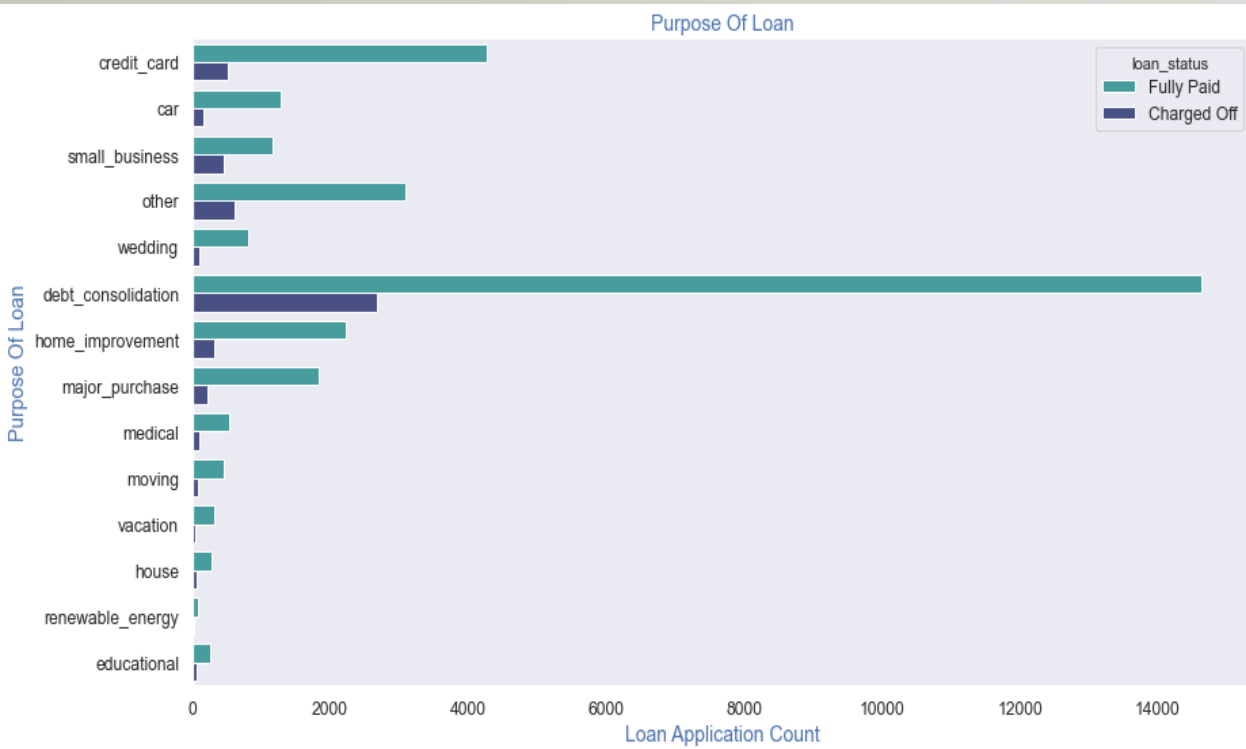




# ANALYSIS:

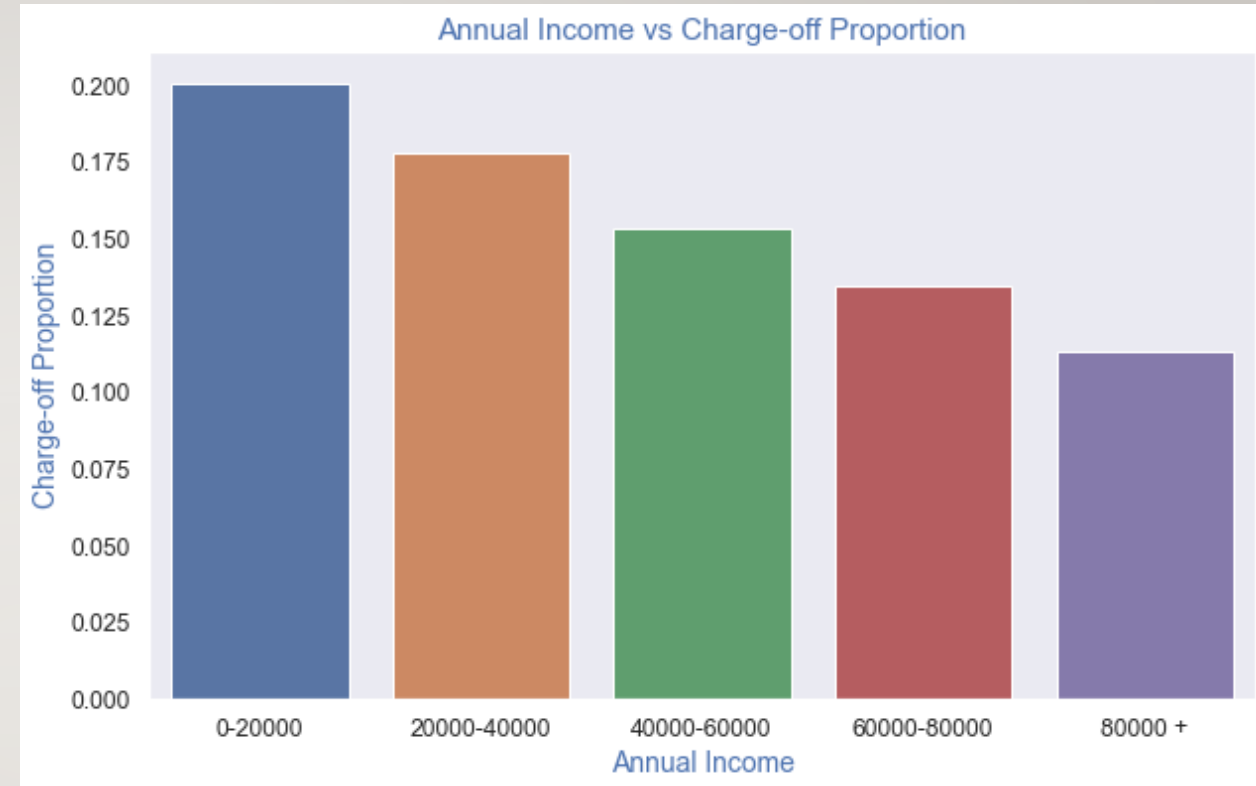
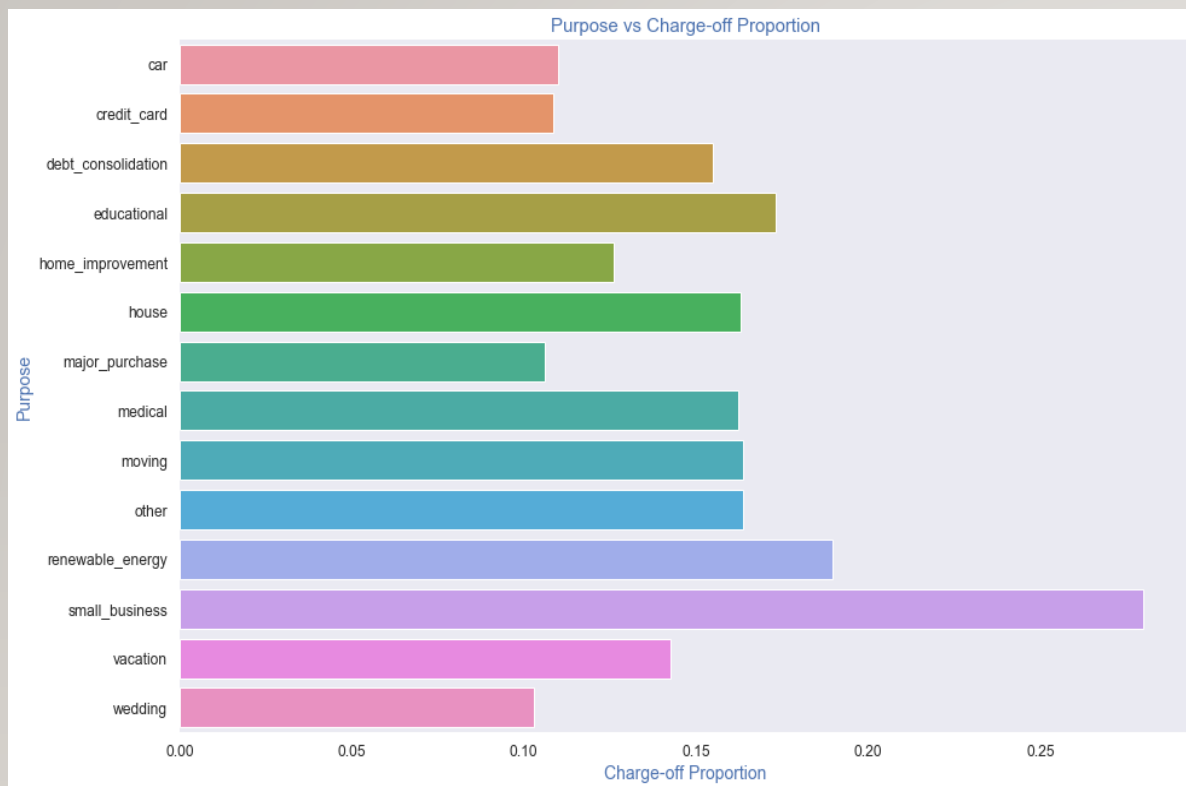
- The whole story is revolving around to analyze those factors which are potentially involve in loan defaulter
- The most essential part is the data cleaning part so that we can analyze on clean data other Garbage In = Garbage Out
- By creating Univariate and Bivariate analyses, we can figure out some strong factors which can identify potential variables which leads to loan default or “Charge Off”





## OBSERVATION:

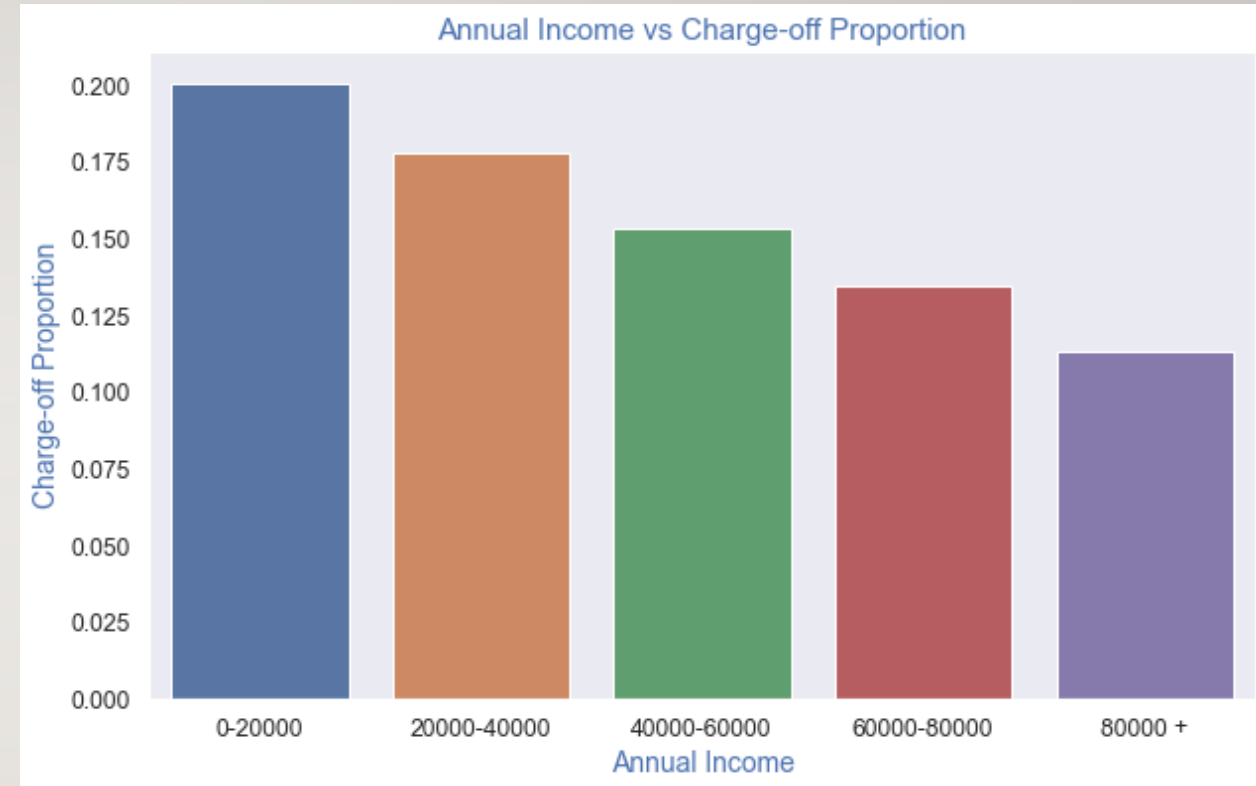
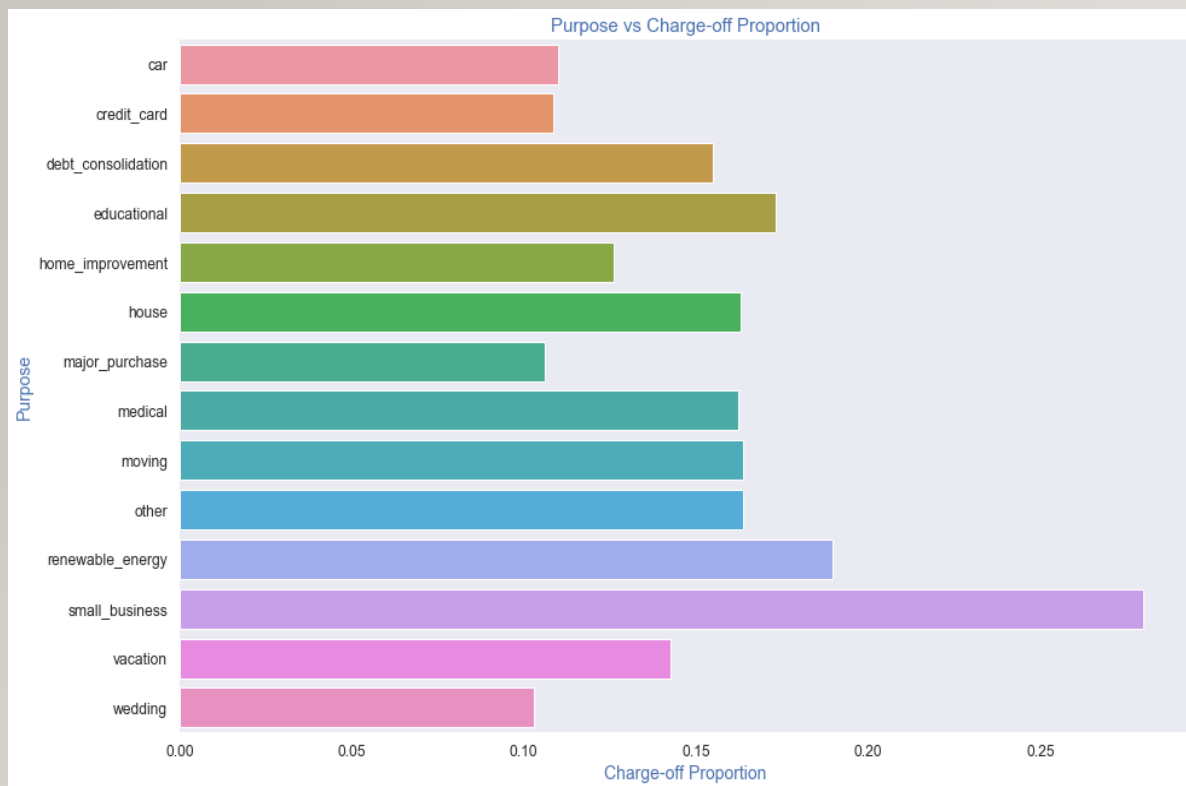
- People with rent have high risk of Charge off
- People with Rent and Mortgage have chance of Charge Off



## OBSERVATION:

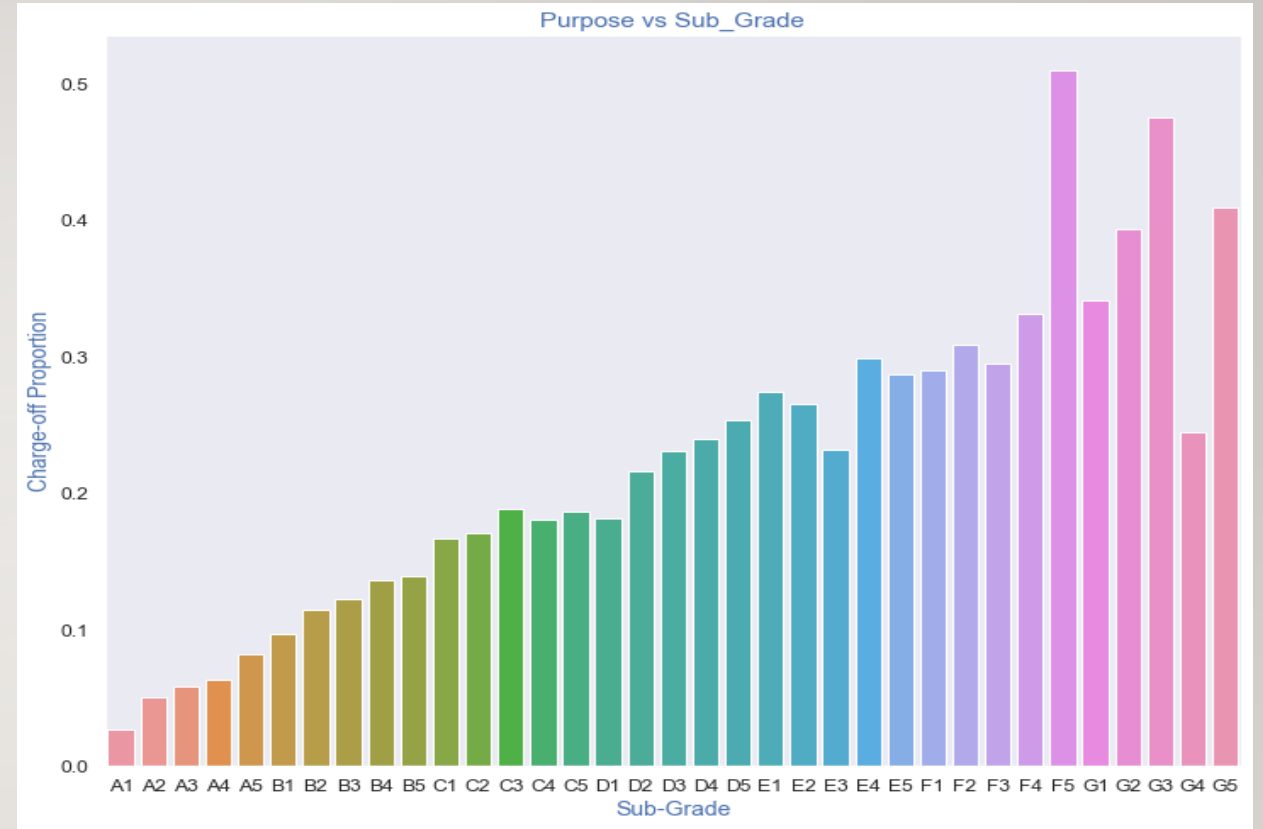
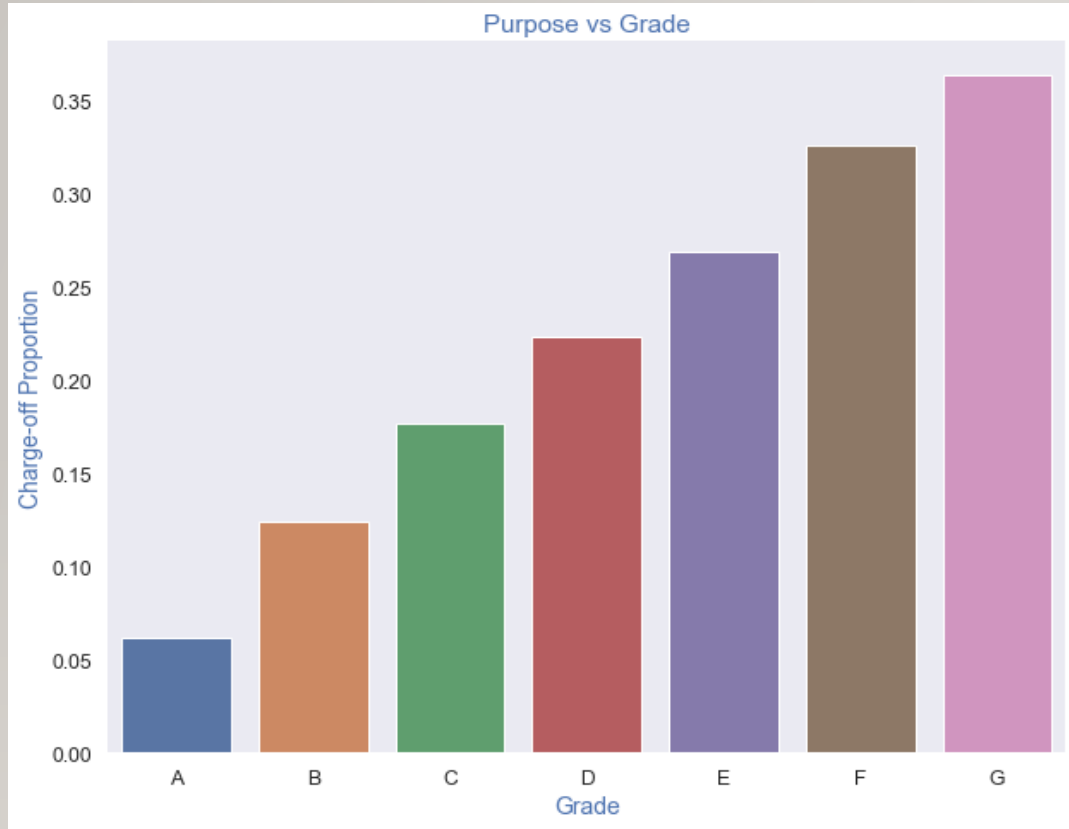
- People with purpose of small business have high proportion of Charge off
- People with high Annual Income have less chance for loan Defaulter





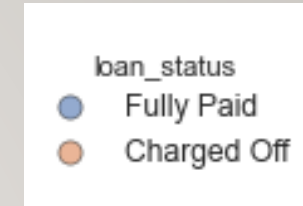
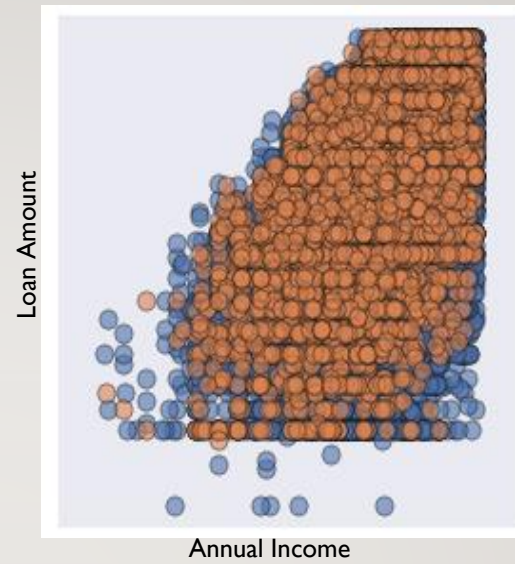
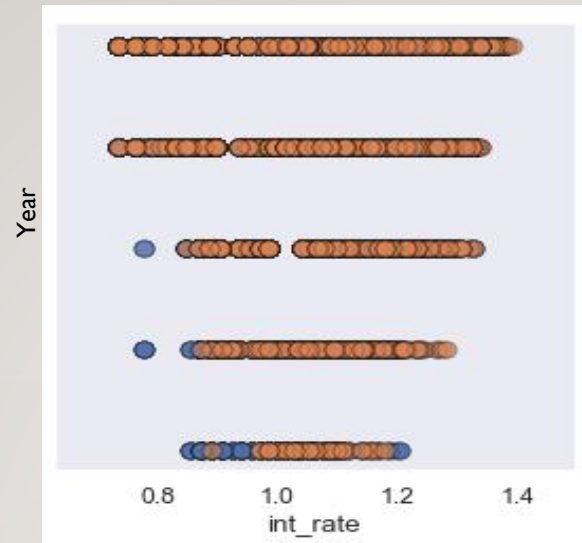
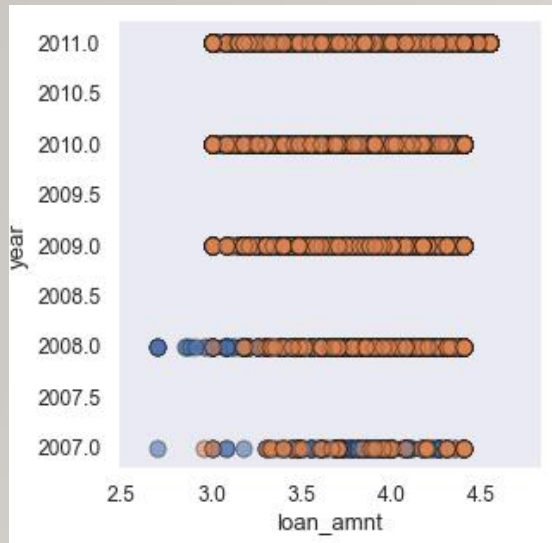
## OBSERVATION:

- People with purpose of small business have high proportion of Charge off
- People with high Annual Income have less chance for loan Defaulter



## OBSERVATION:

- People with Higher Grade and Subgrade have lesser tendency for Charge off



## OBSERVATION:

- As the number of years increases loan amount increases and charged off increases
- Fully paid increases when interest rate is low
- Interest Rate increases as the year increases
- Interest Rate Increases Charge off ratio increases

# RECOMMENDATIONS:

We need to investigate from the following people as they are very high risk of Defaulter

- People with small business
- People with lower annual income
- People with Lower grades and Sub grades
- People with Renting homes
- People in CA state

