

# Lending Club Case Study

Group Members:

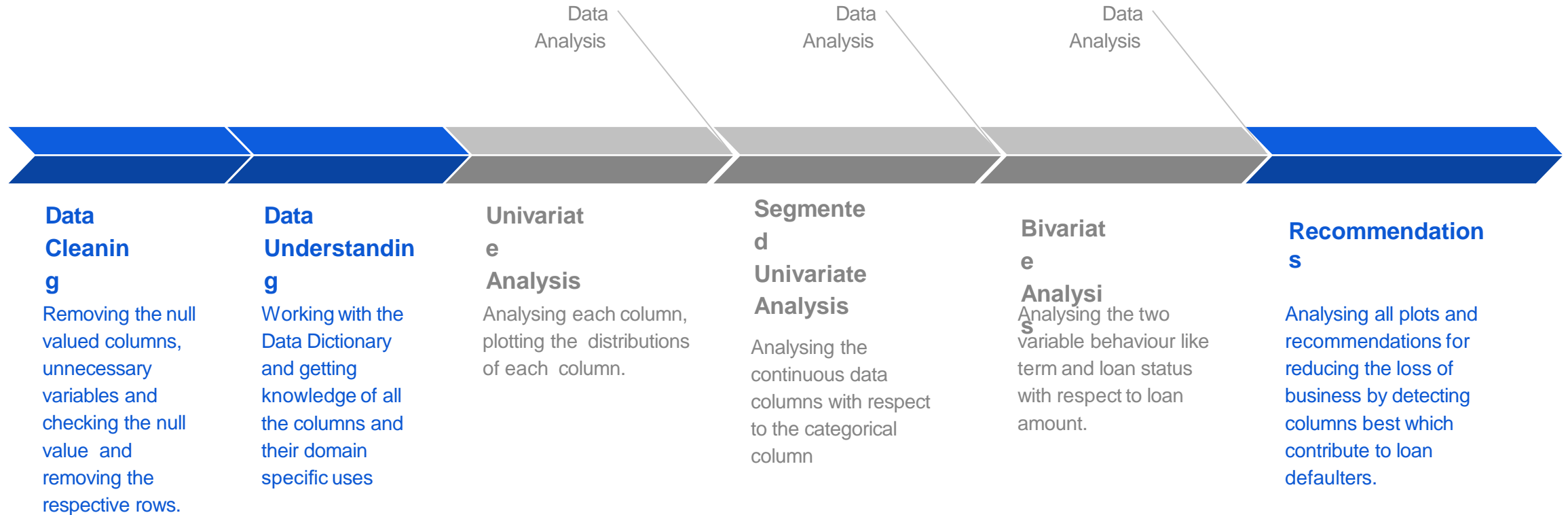
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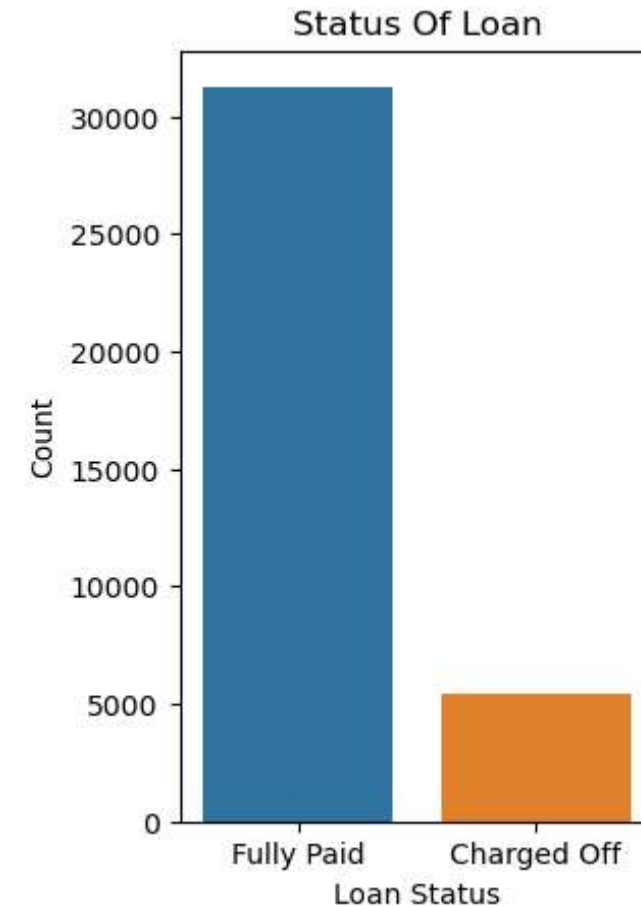
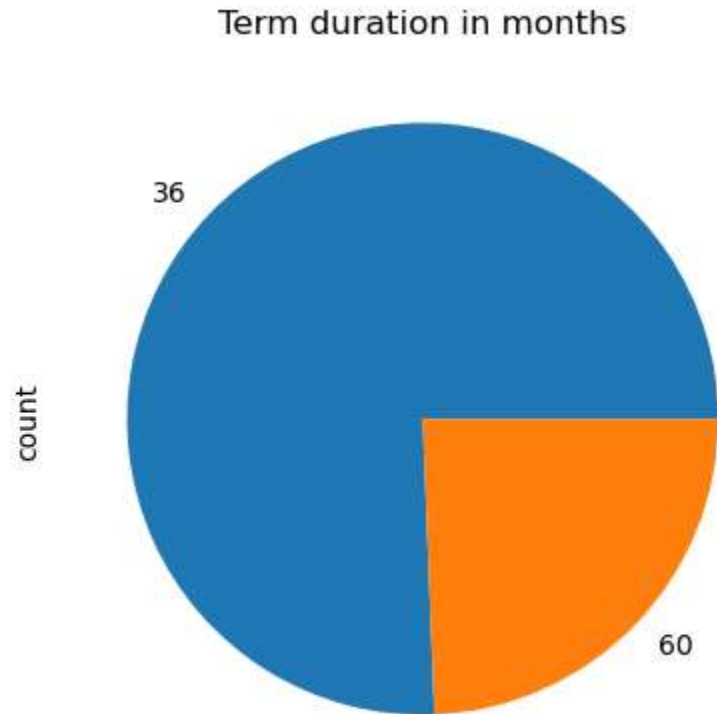
# Abstract

- Lending club 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.
- The objective of analysis is to use the information about past loan applicants and find whether they ‘defaulted’ or not.

# Problem solving methodology

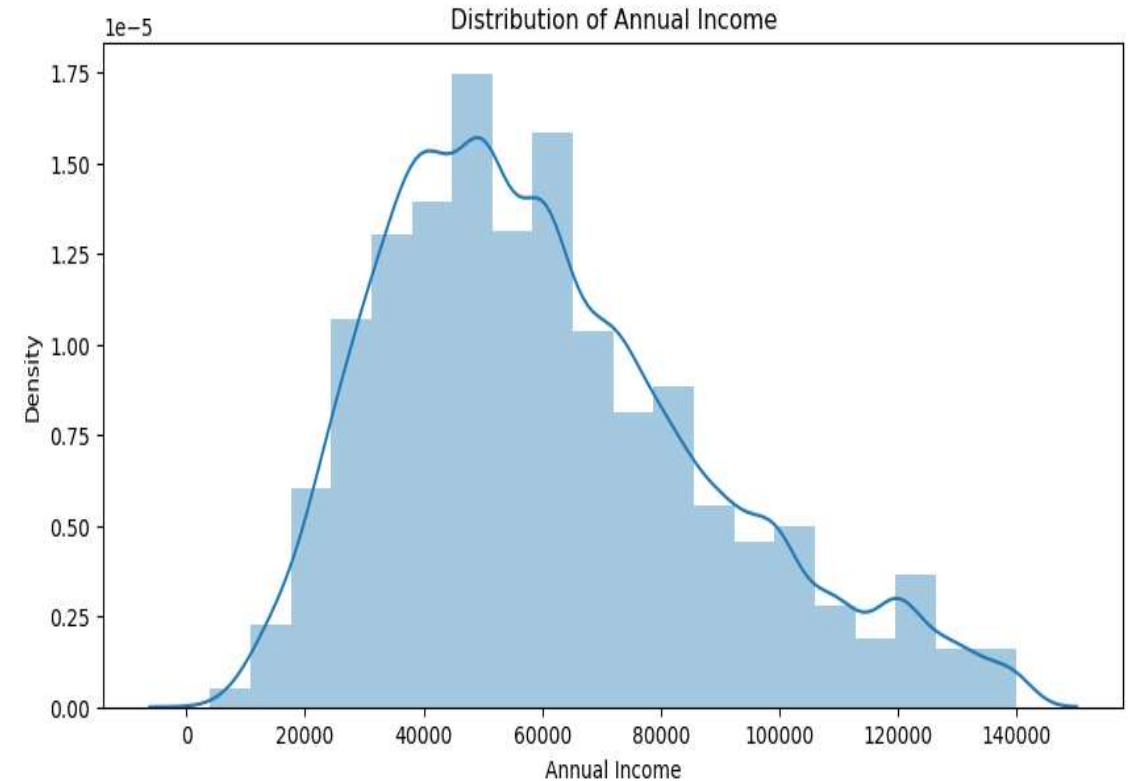
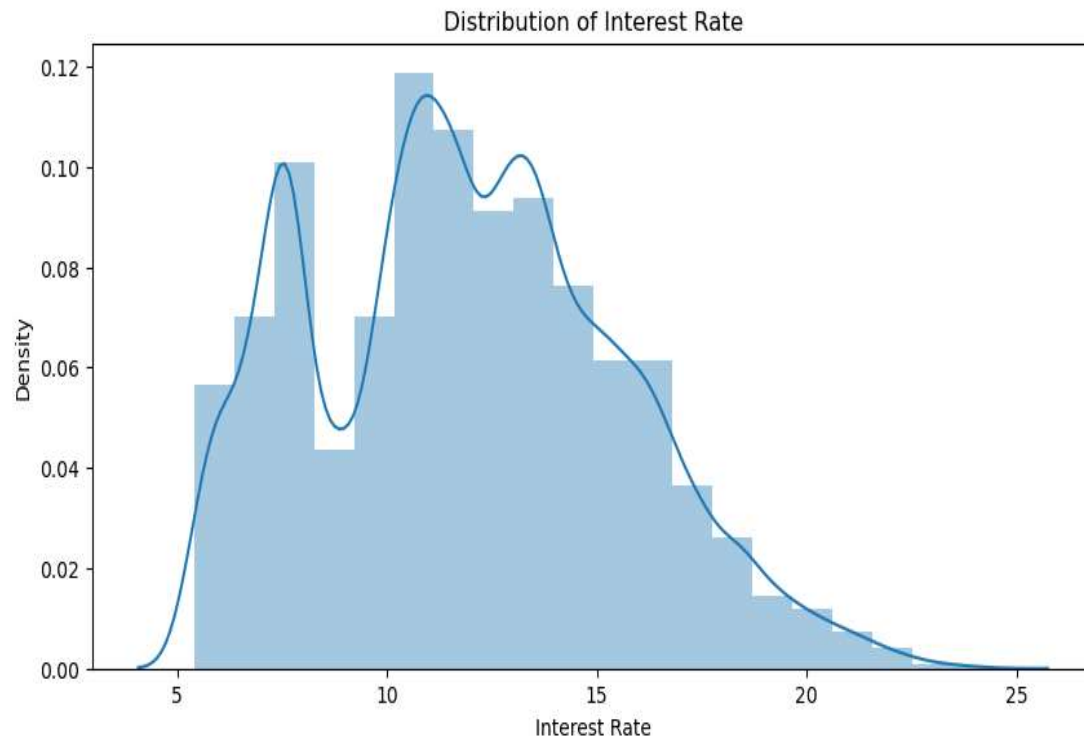


# Analysis



- Loan defaulters are much lower in number, compared to fully paid customers.
- Maximum people have opted for 3years i.e 36months term, compared to 5years i.e 60months tenure.

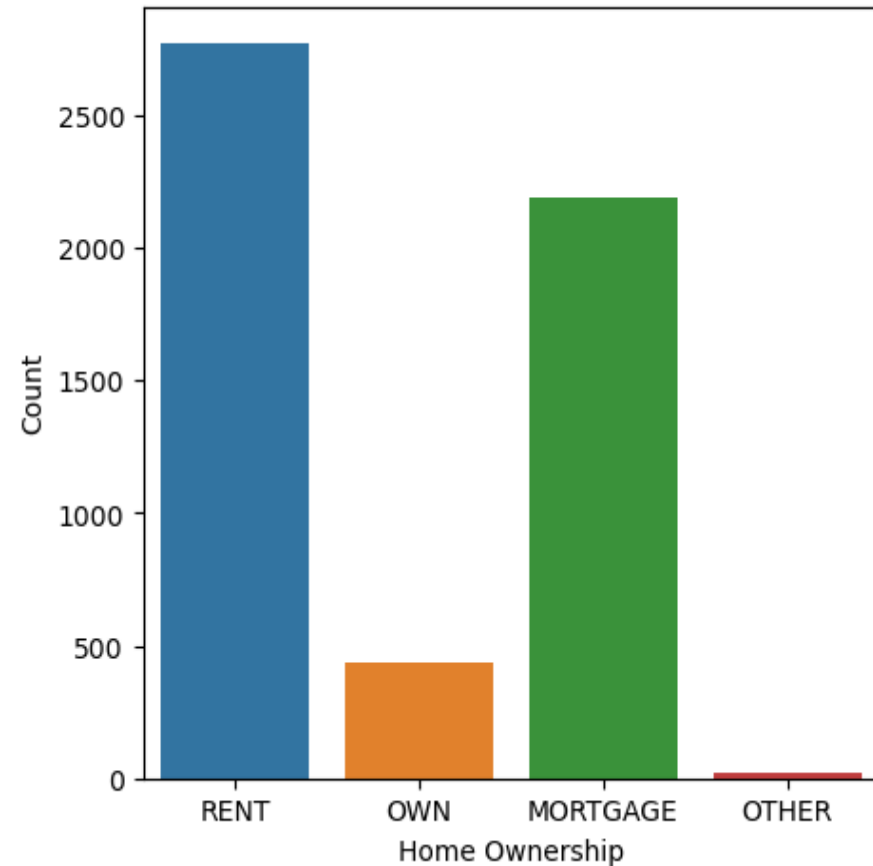
# Analysis



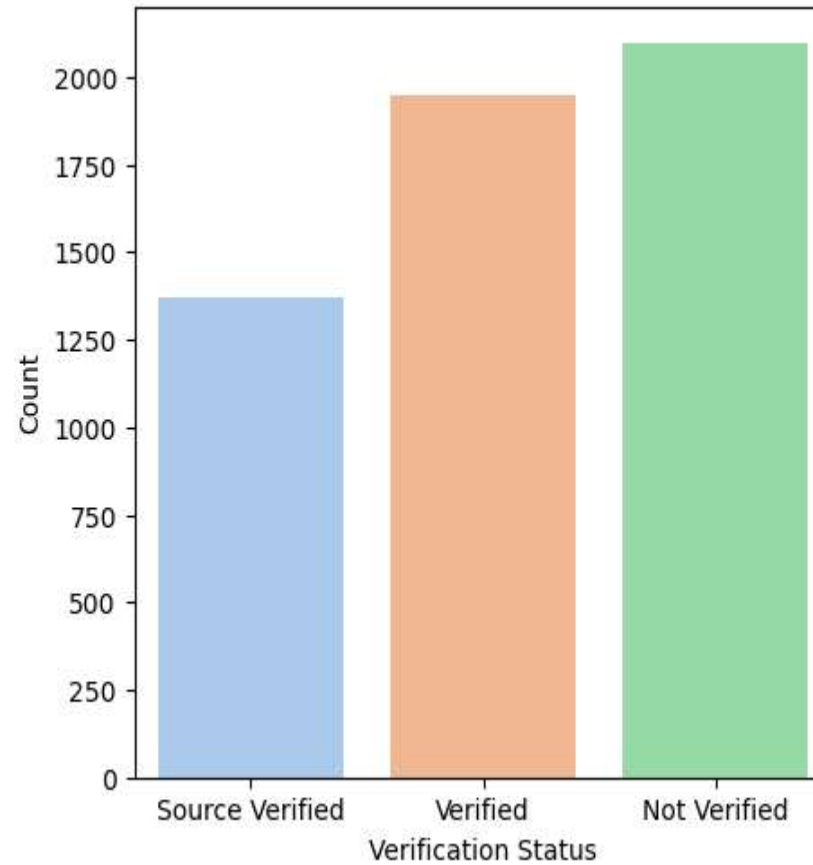
- The distribution of interest rate is more from 5-10 & 10-15, and drops after 15..
- Majority of borrowers have very low income, compared to the rest.

# Analysis

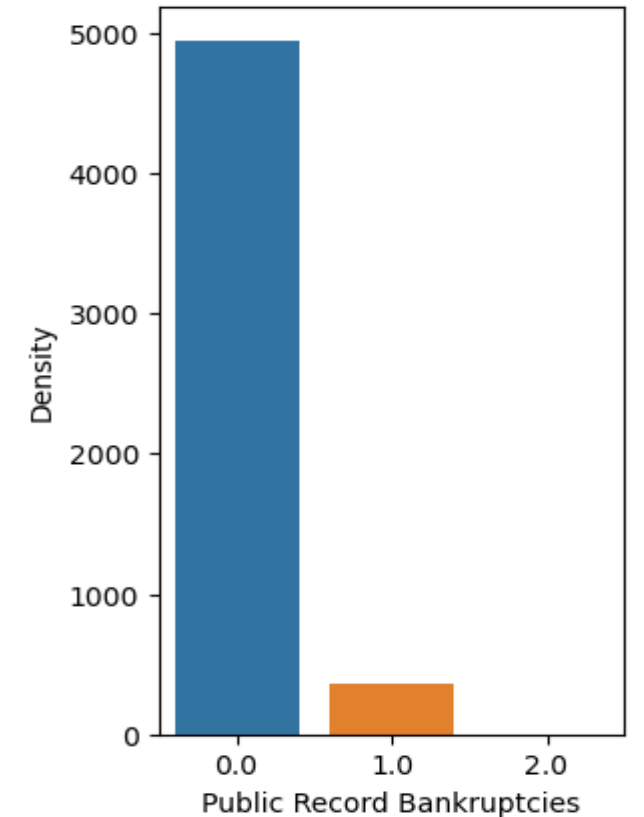
Distribution of Home Ownership



Distribution of Verification Status

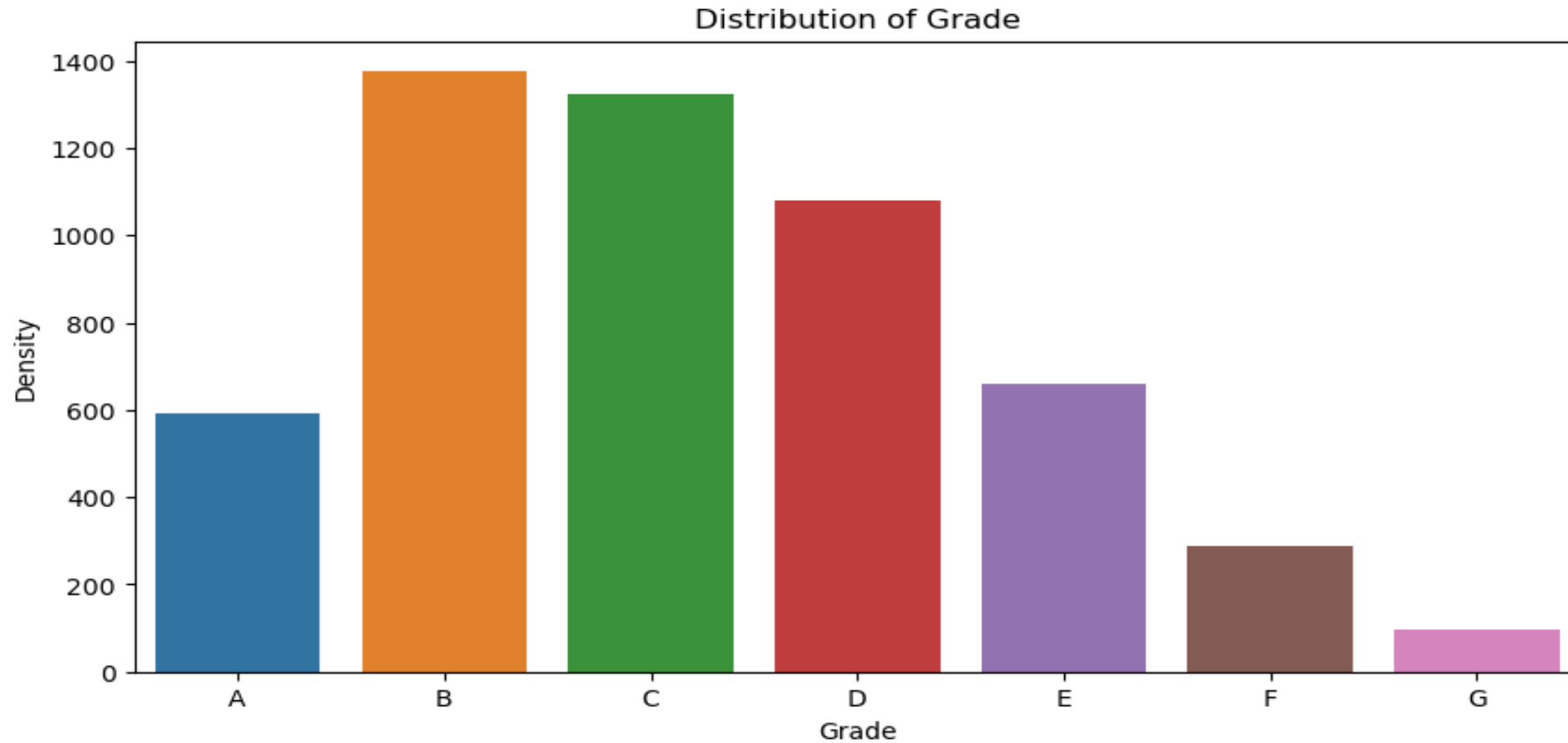


Distribution of Public Record Bankruptcies



- Majority of borrowers were either on mortgaged or rent.
- Many of the borrowers who defaulted the loan were not verified.
- Majority of the borrowers have no record of public record bankruptcies

# Analysis



- Most of the defaulters were either B and C category.

## Analysis

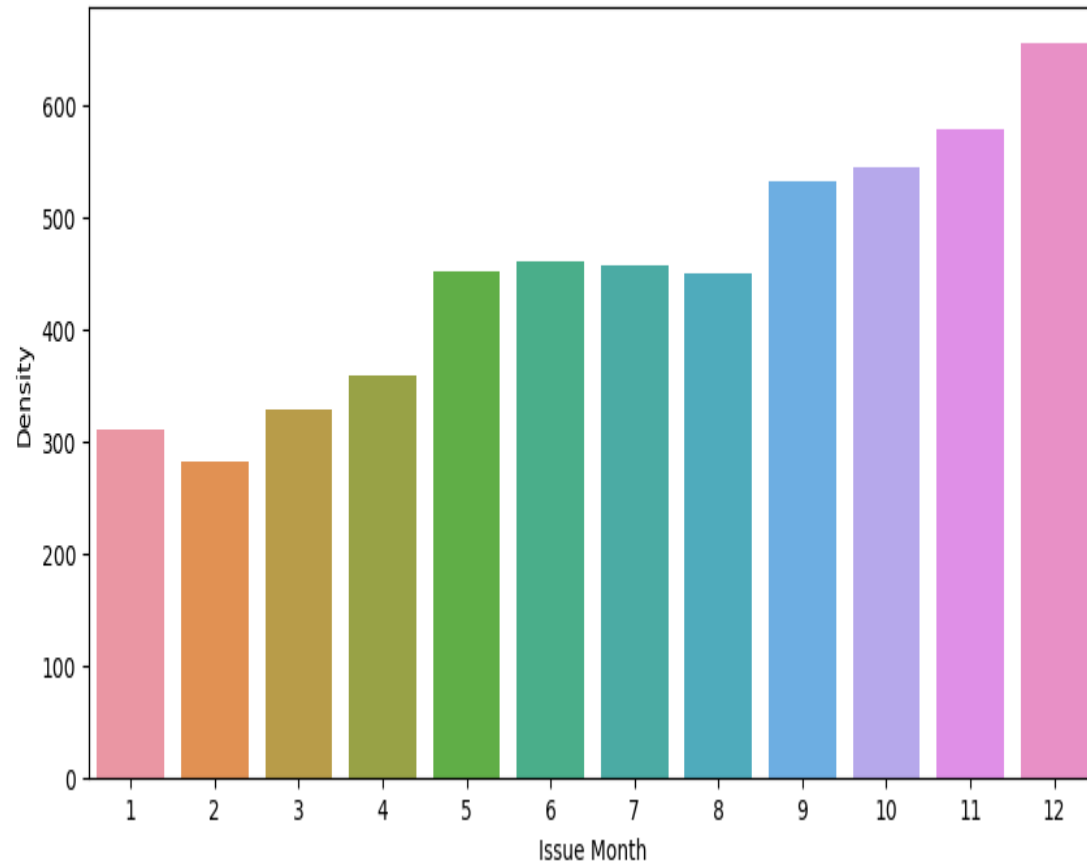


- Majority of the borrowers has working experience of more than 10 years.

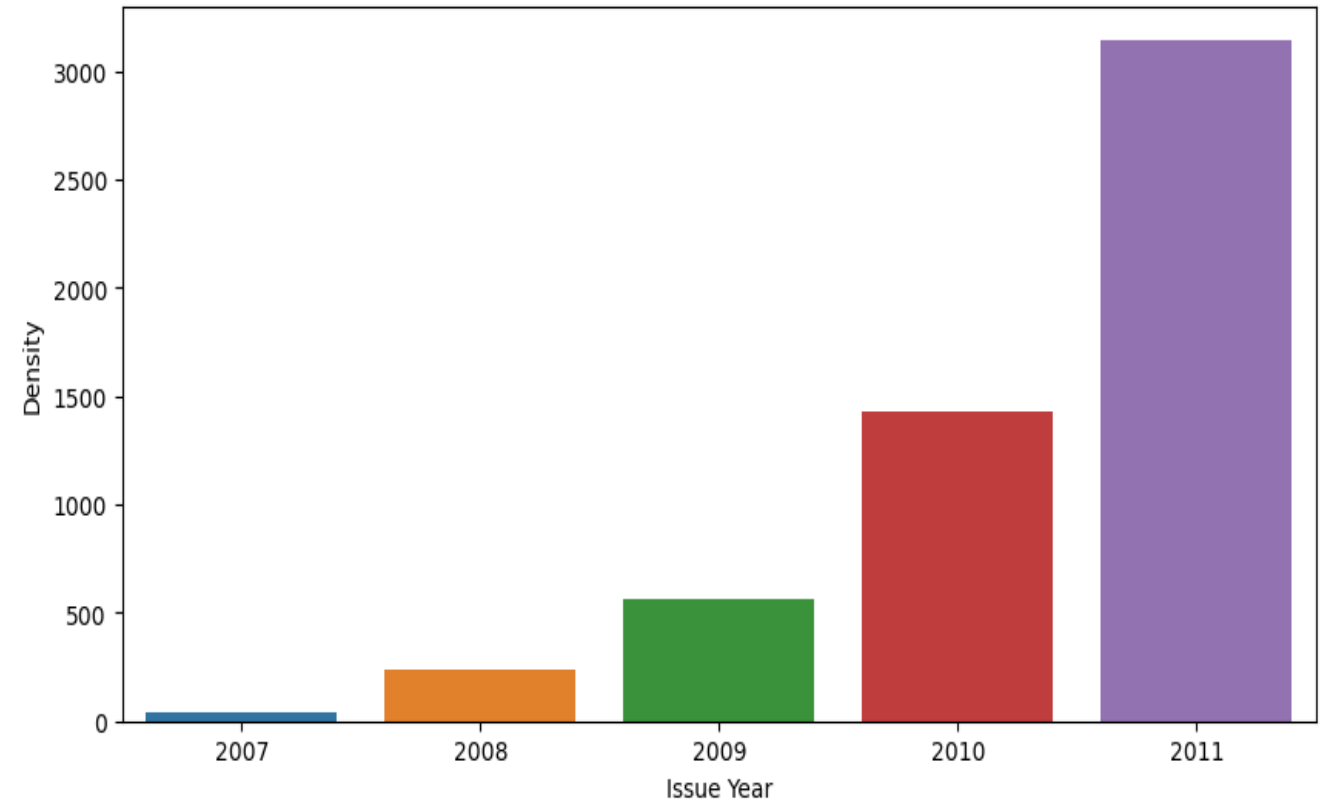


# Analysis

Distribution of Loan Issue Month

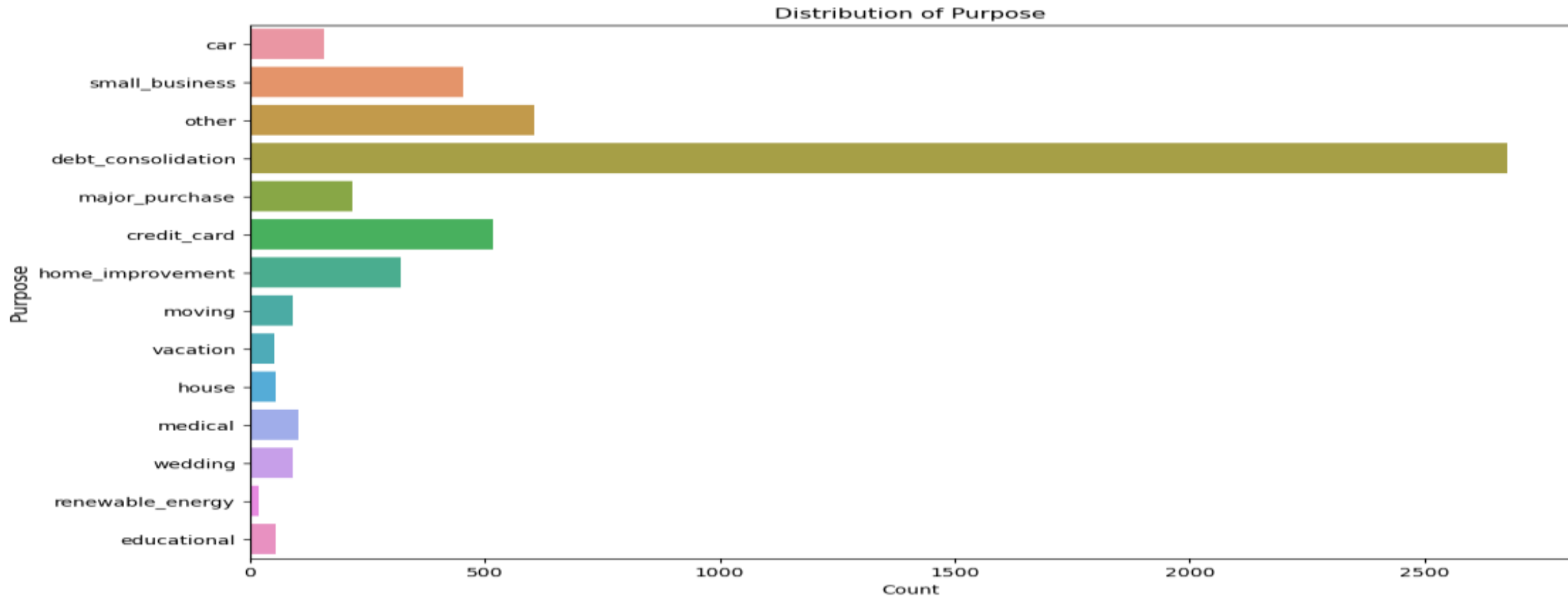


Distribution of Loan Issue Year

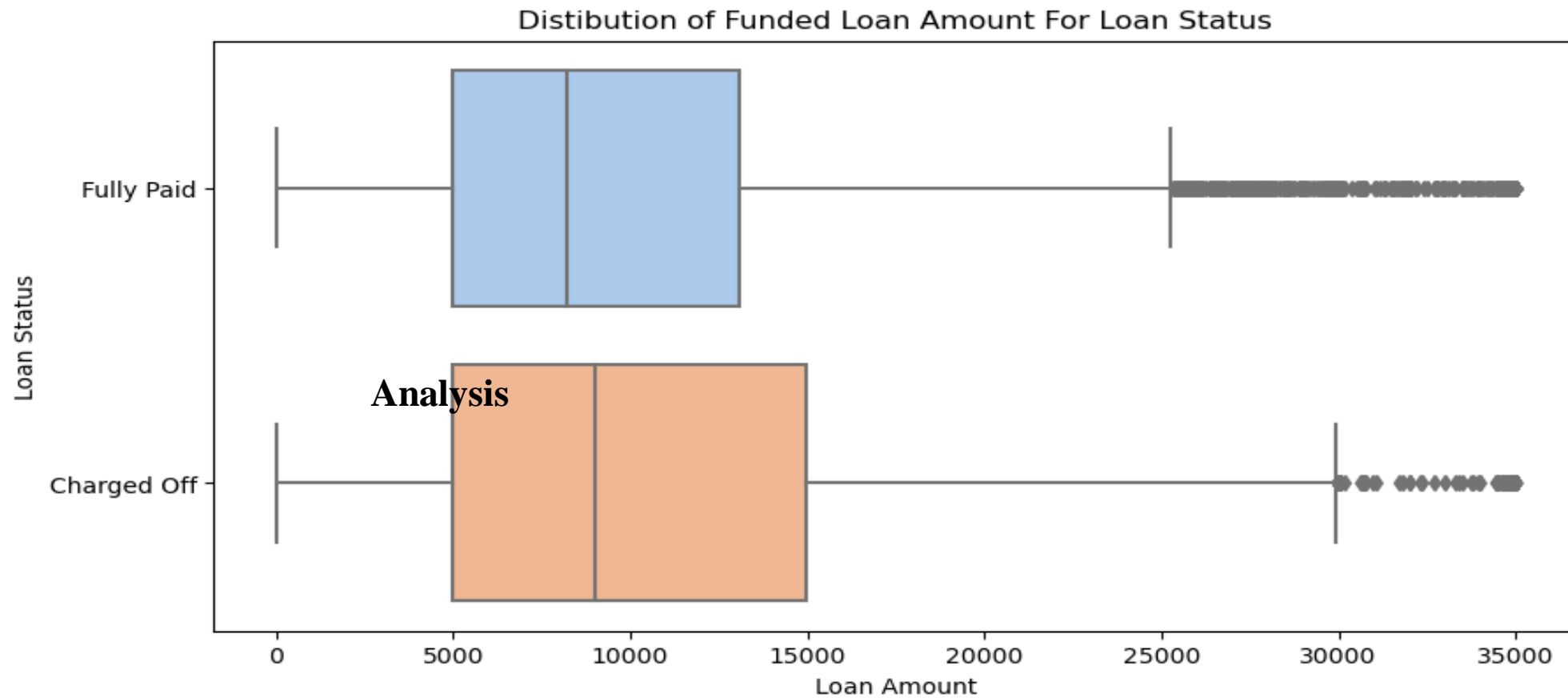


- The number of loans approved have increased over the years and from the graph, we understand that most of the loans were taken in the last quarter.

# Analysis

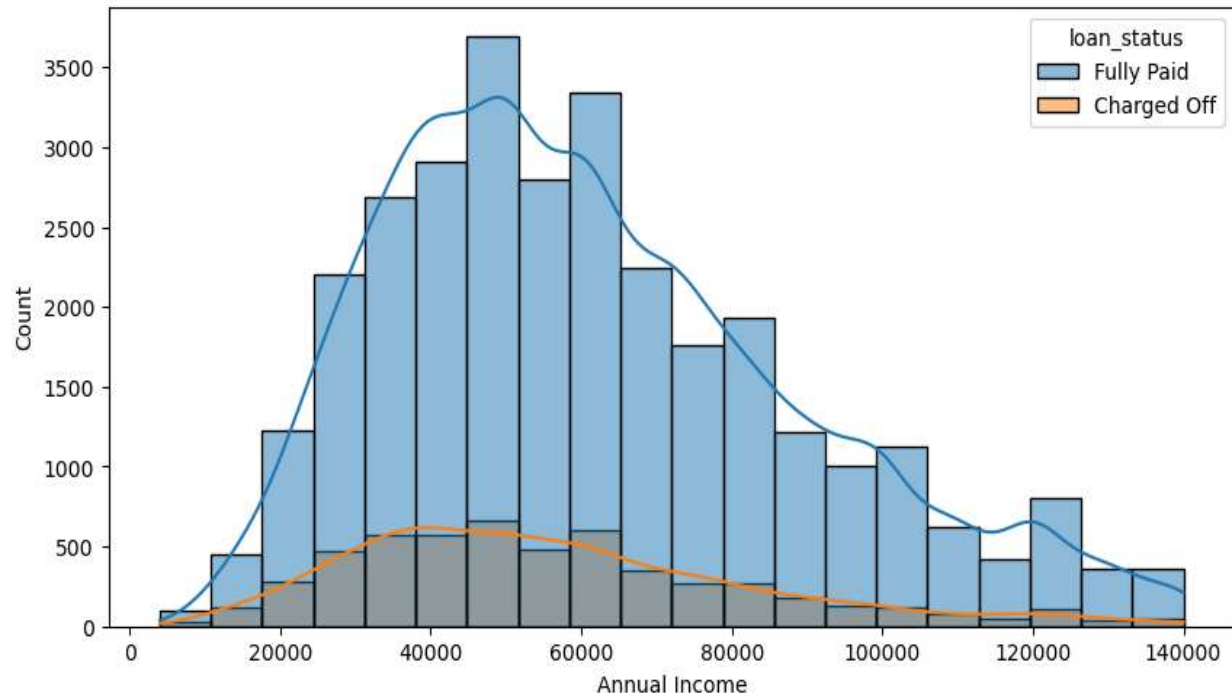


- Last percentage of loans were taken for debt consolidations followed by credit cards.

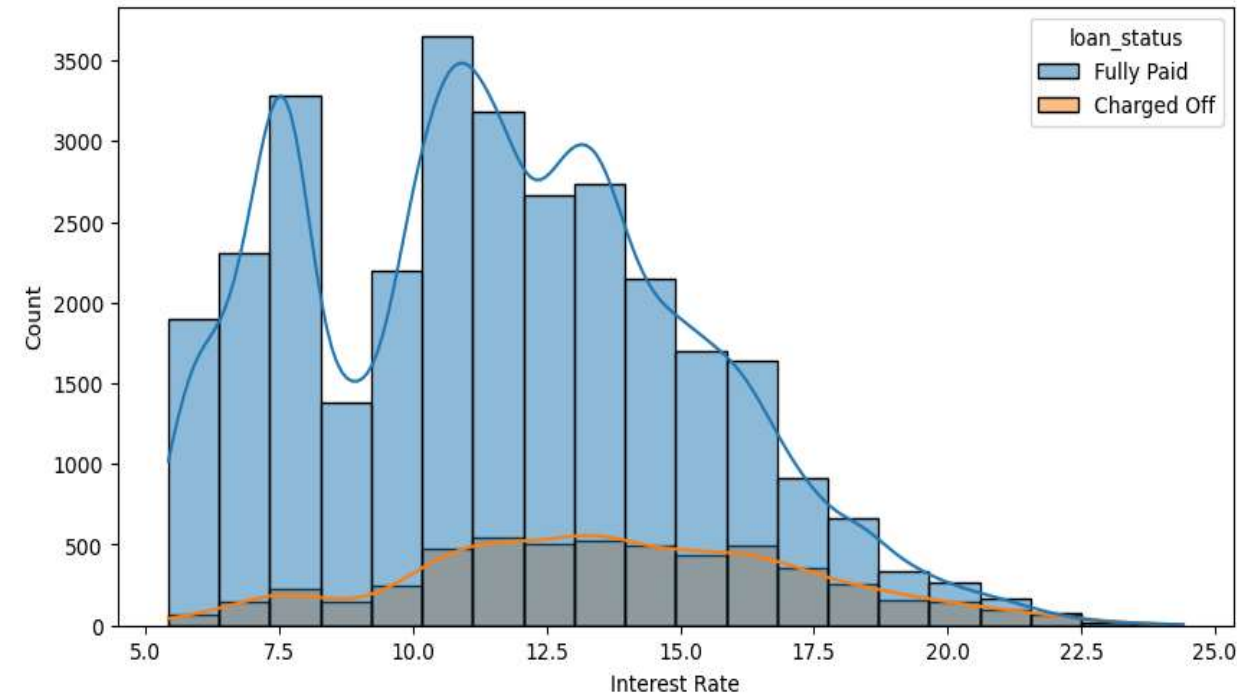


- The graph indicates that people with large amount of loans have higher chance of defaulting.

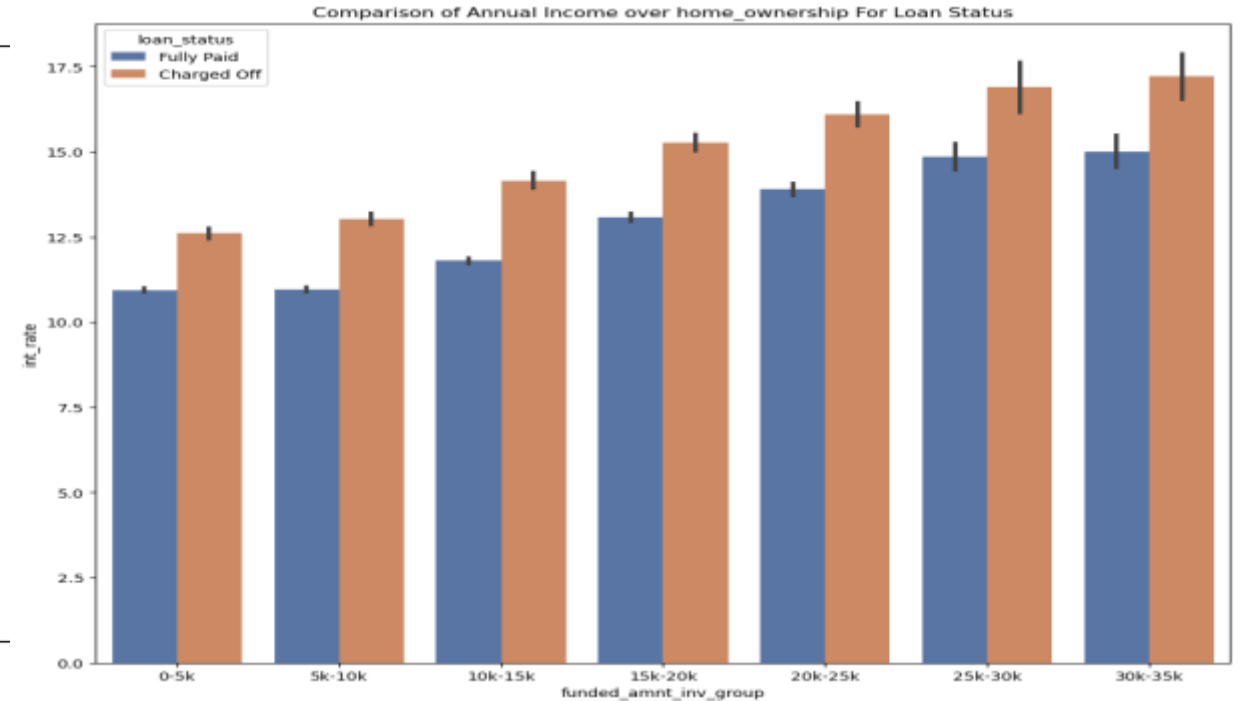
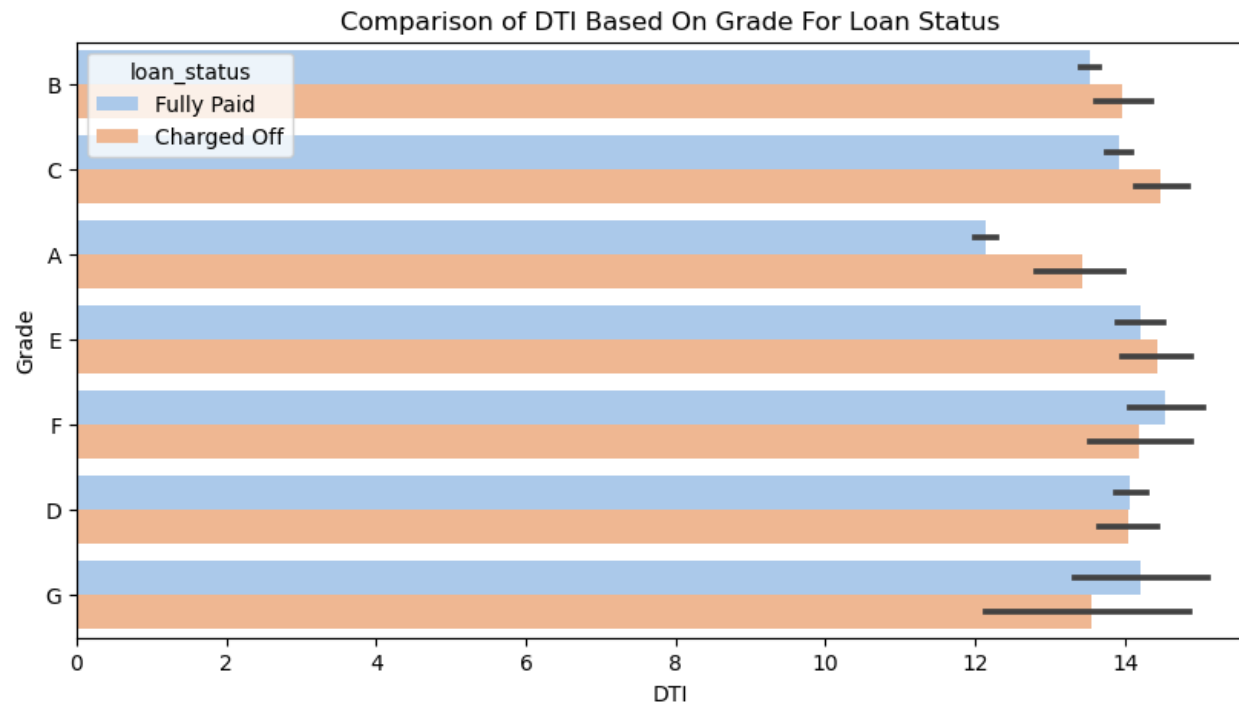
Distribution of Annual Income For Loan Status



Distribution of Interest Rate For Loan Status



- The defaulted loan amount increases with interest rate but shows a decline after 15%. Borrowers with less than 50K annual income are more likely to default.



- The grade A has lowest DTI ratio, hence higher rate has lowest rate of default  
Overall interest rate for charged off loans is higher than fully paid loans.

## Recommendations

- Major Driving factor which can be used to predict the chance of defaulting and avoiding Credit Loss:
  - Interest rate
  - DTI
  - Grades
  - Verification Status
  - Annual income
  - Home ownership
- Other considerations for 'defaults' :
  - . -Borrowers having annual income in the range 31000-85000.
  - Borrowers having Public Recorded Bankruptcy.
  - Borrowers with least grades like B and C which indicates high risk.