Lending Club Case Study

Group Members:
Prity Bansod
Syed Mohabu Basha.S

Abstract

- **consumer finance company** which specialises in lending various types of loans to urban customers. When the company receives a loan application, the company has to make a decision for loan approval based on the applicant's profile.

- Objective of the analysis is based on consumer past loan and find whether they eligible for new loan or not.

Data Processing

Consumer Data
- **Data Understanding** (Review the data dictionary and understand the variables details)
- **Data Cleaning** (Remove the null values columns based on percentage of values, remove irrelevant variables)
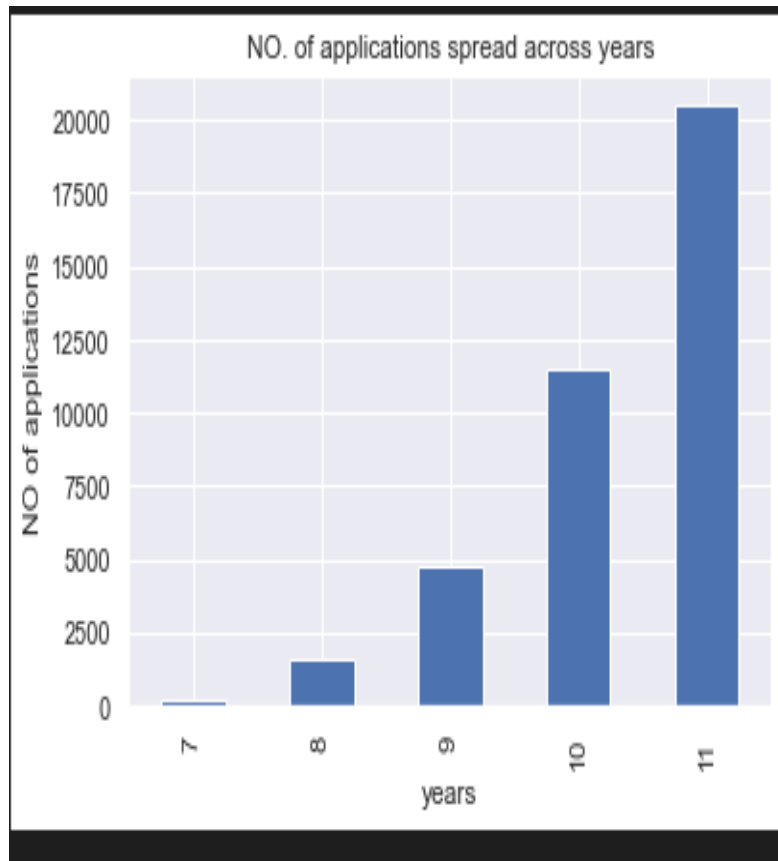
Analysis
- **Univariate** (Analyse the each column of categorical and quantitative variable value and plotting them.)
- **Bivariate** (Analyse the pairs of continuous variable like loan amount vs. distribution)
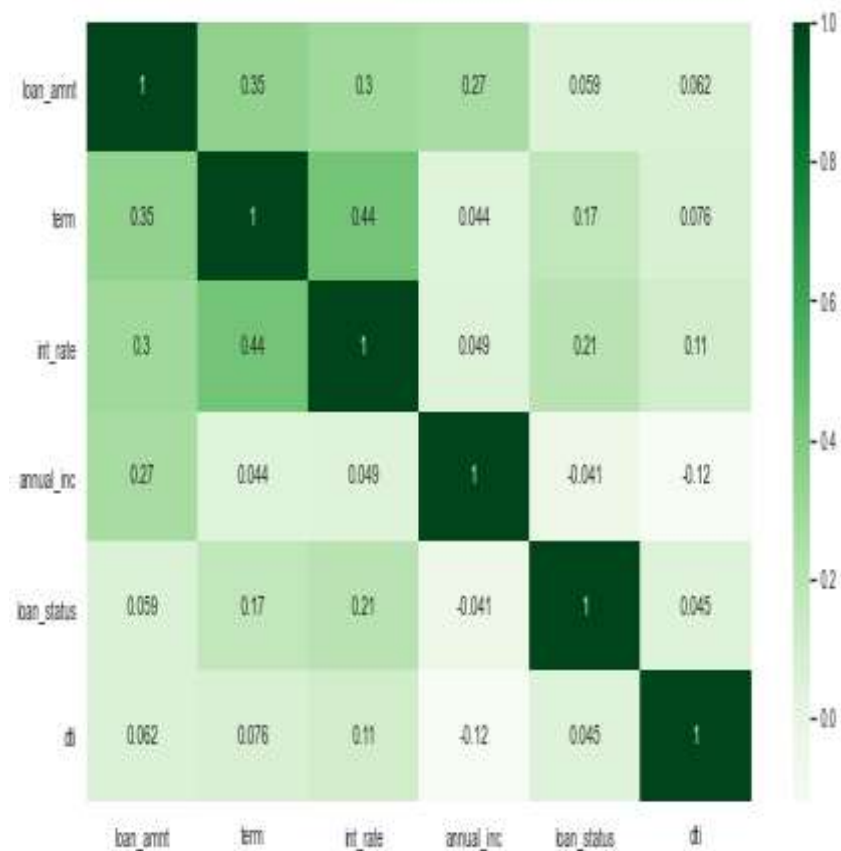
Endorse
- Analyse the all column data, Using recommended variables identify these risky loan applicants ,which are strong indicators of default.
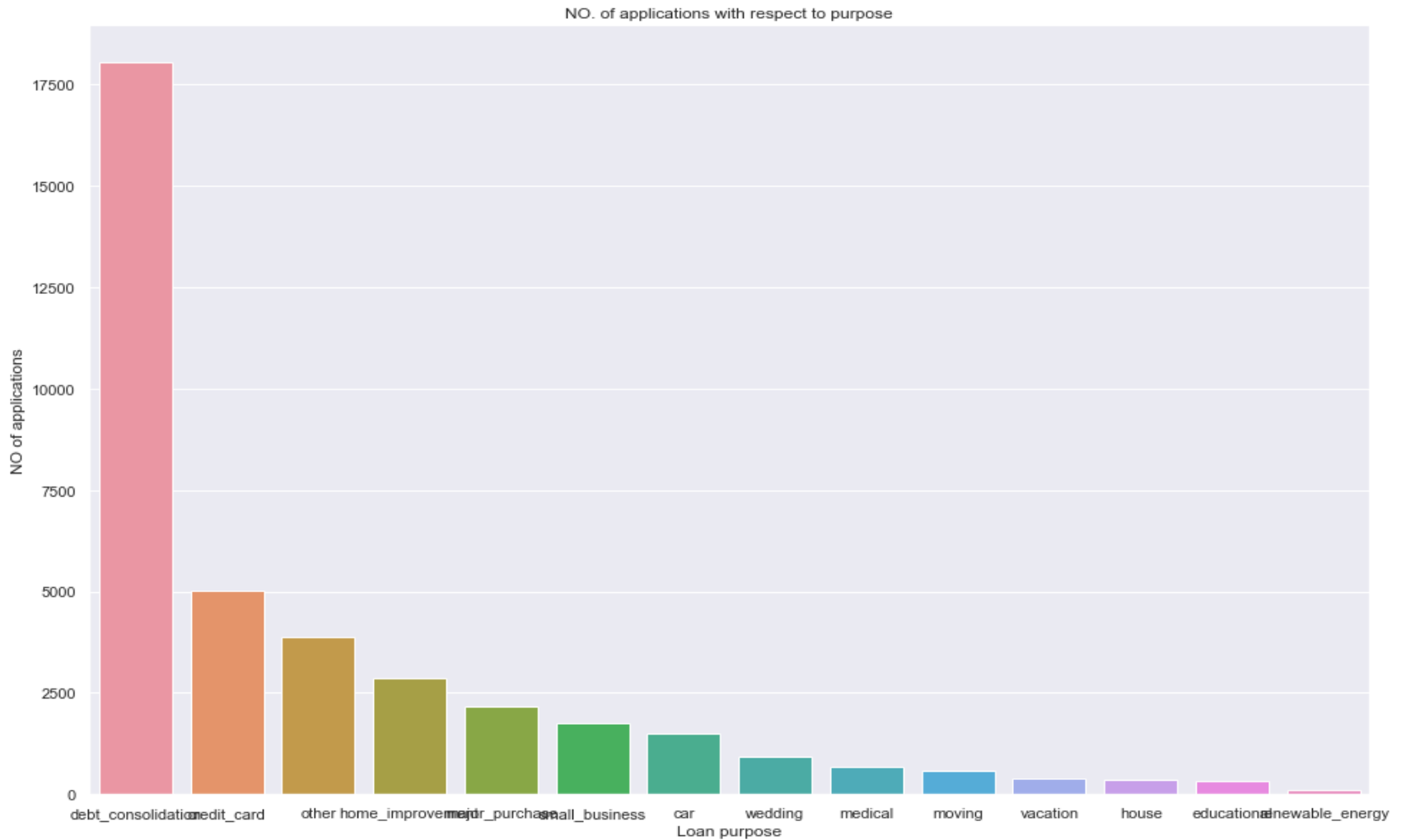
Analysis

Loan Across years

Funded Amount Behaviour

- After cleaning the data we come to know that number of loan application increased with the years and funded amount behaviour
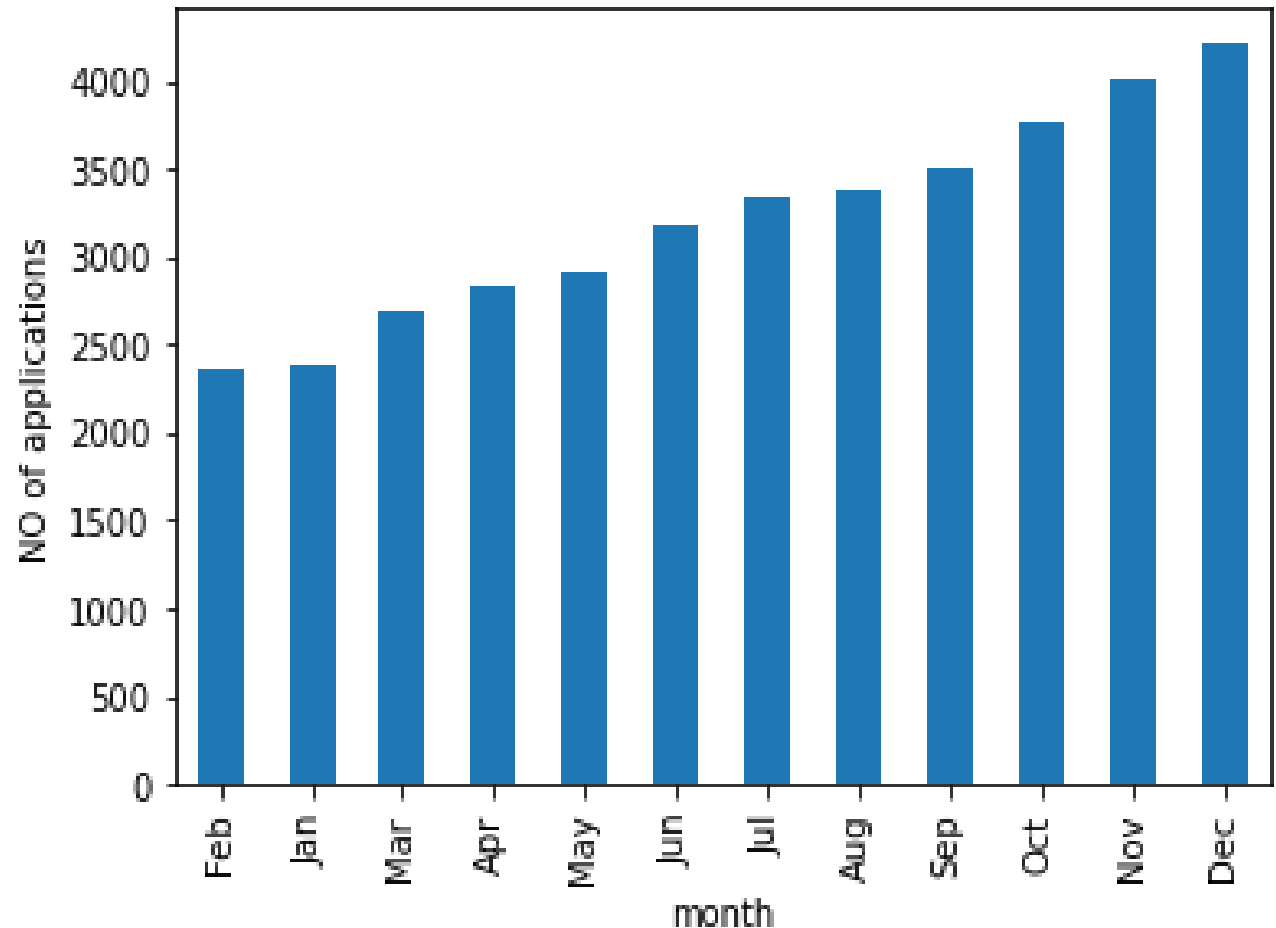
Analysis

NO. of applications with respect to purpose

There are five major purposes of Loan applications are - 'debt_consolidation' , 'credit_card' , 'other' , 'home_improvement' & 'major_purchase'. **'debt_consolidation'** is the highest loan purpose
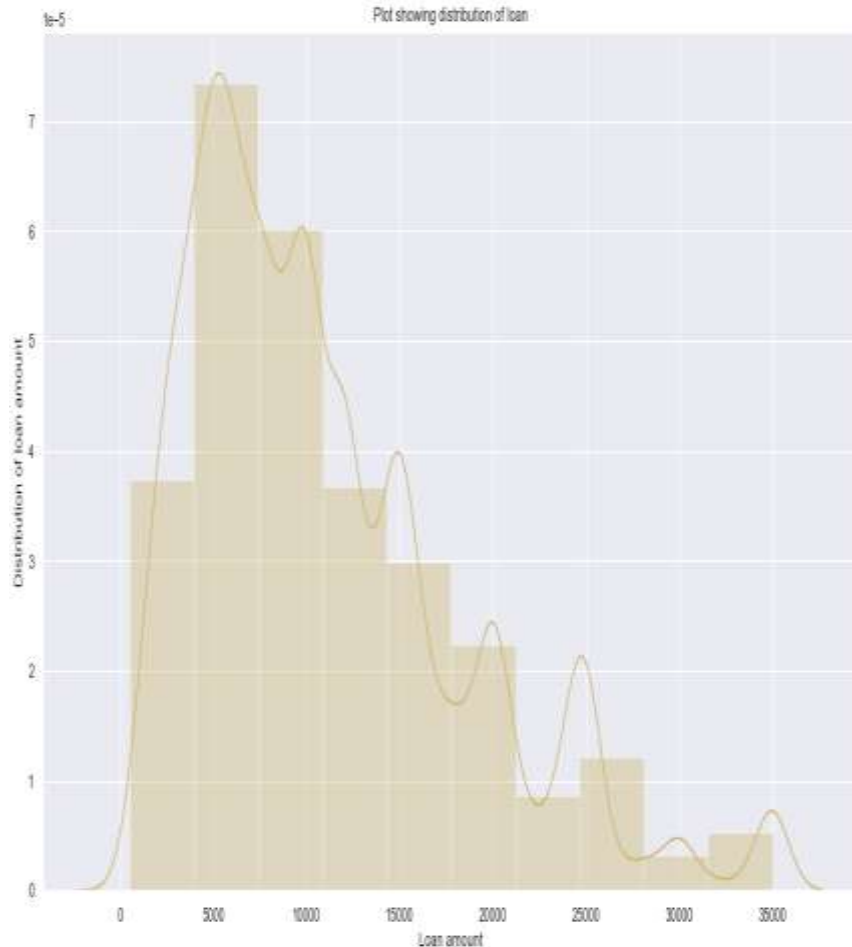
Analysis

Number of application received by month ,In December received more number of applications.
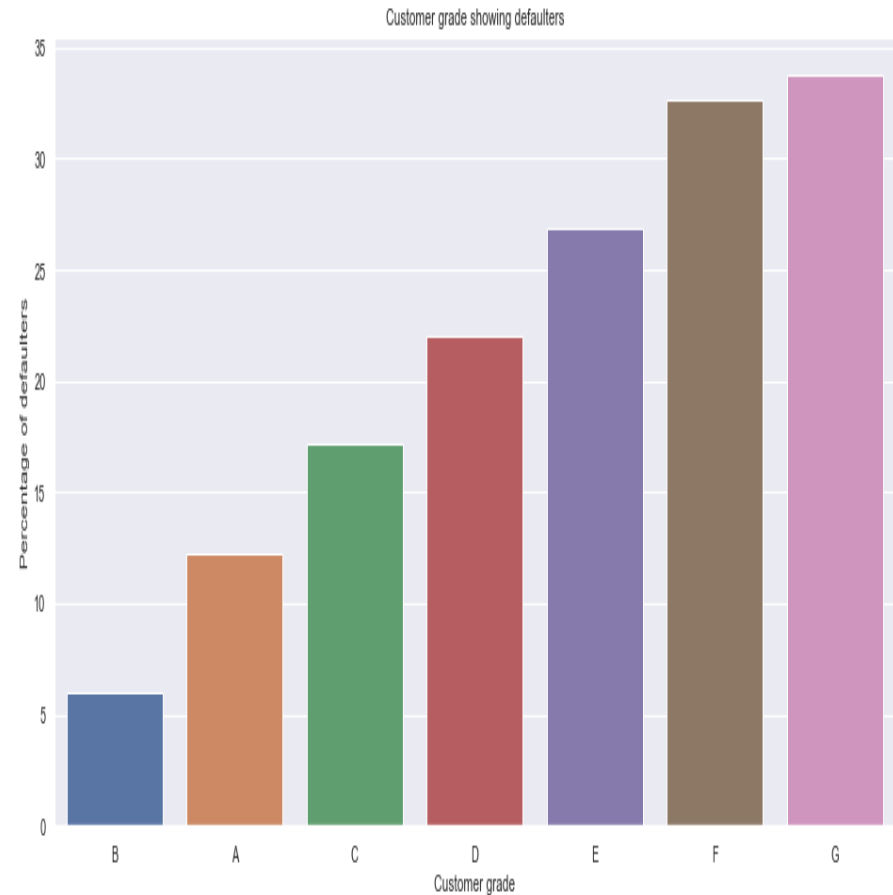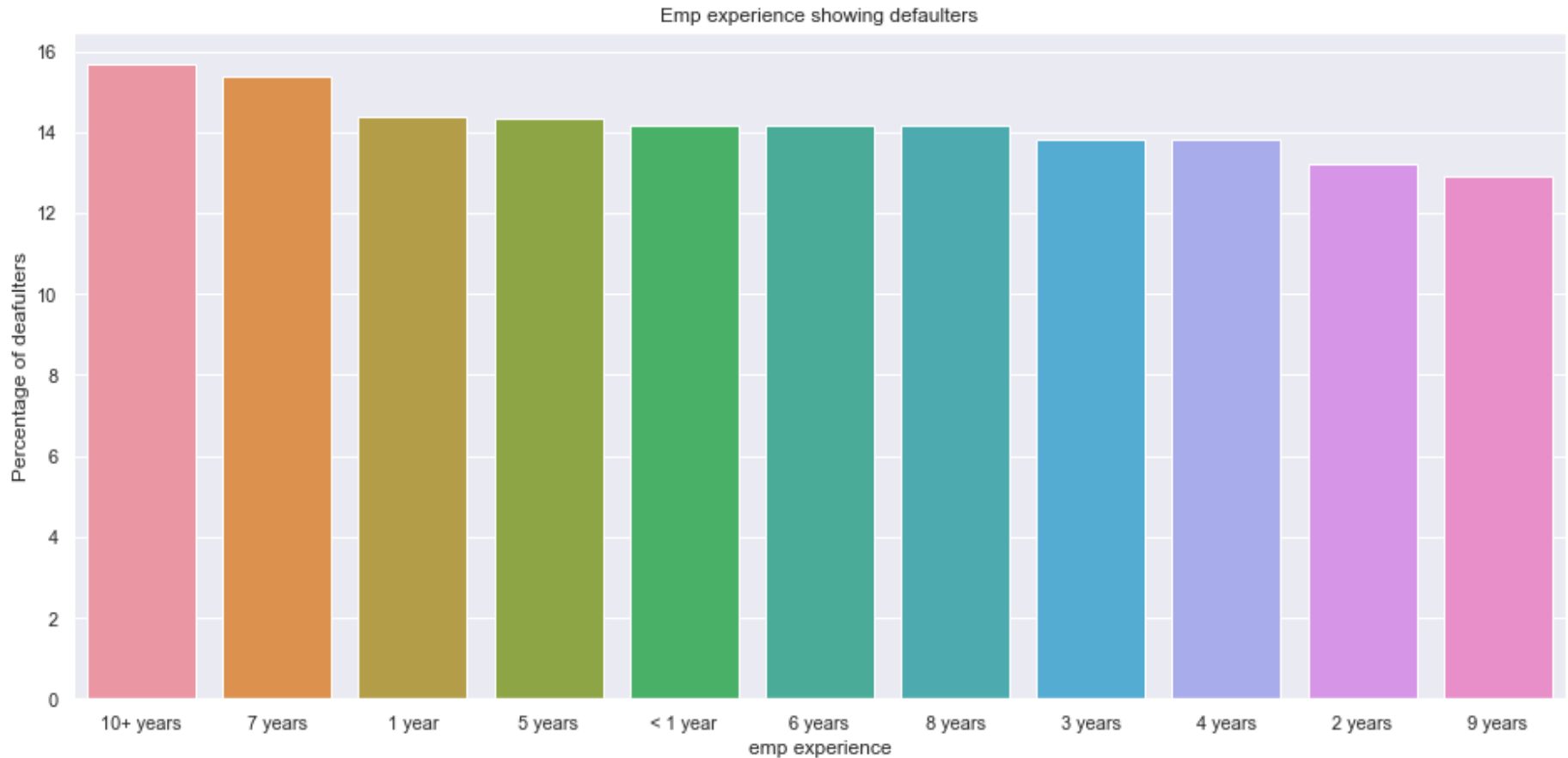
Analysis
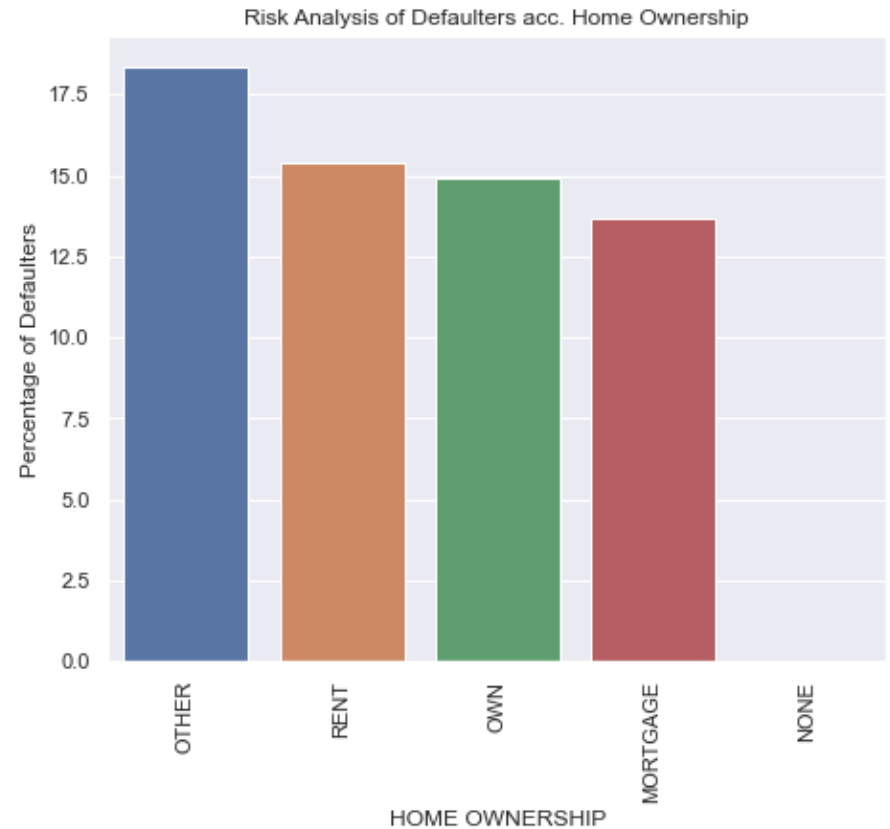
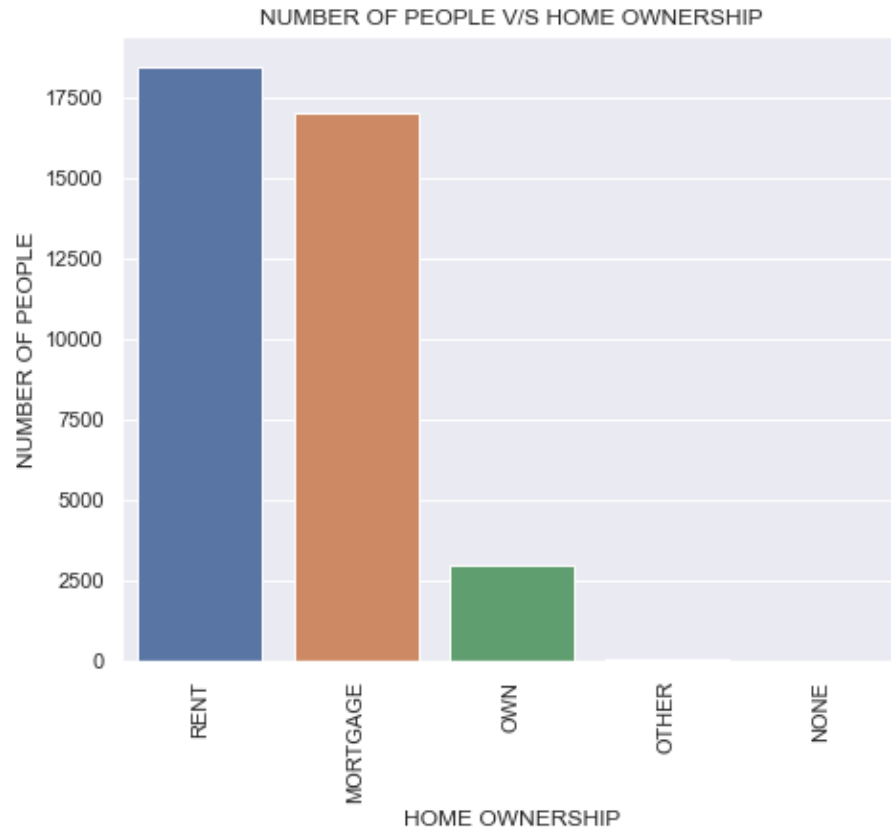## Loan Range Amount

Defaulters

•Observed that the maximum loan range amount is between 5000-10000.
•Grade G group are have high percentage of defaulters.

Analysis

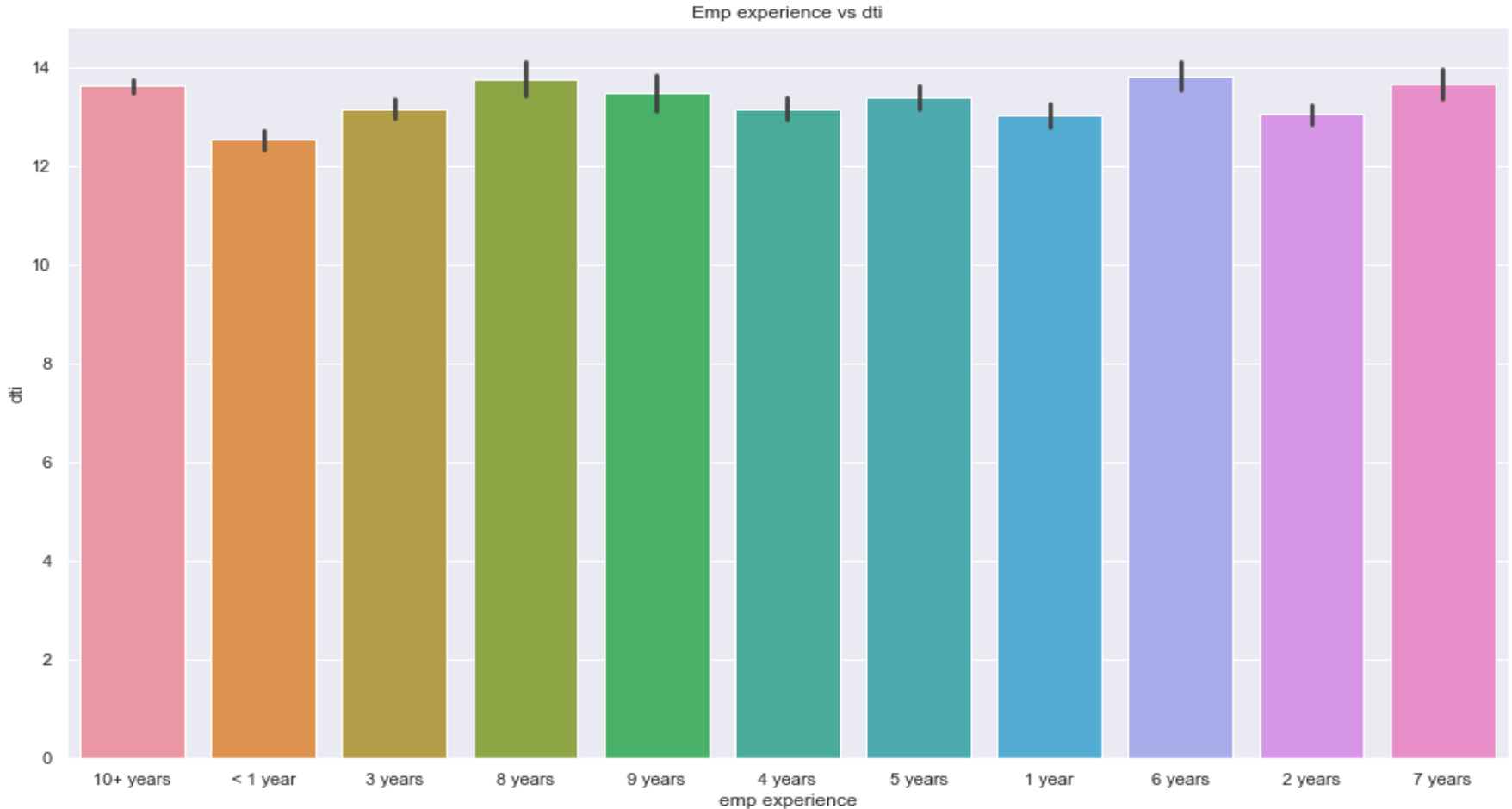Emp experience showing defaulters

The percentage of risk of Defaulters is maximum for customer experience - 10+ years & minimum for 9 year's experience
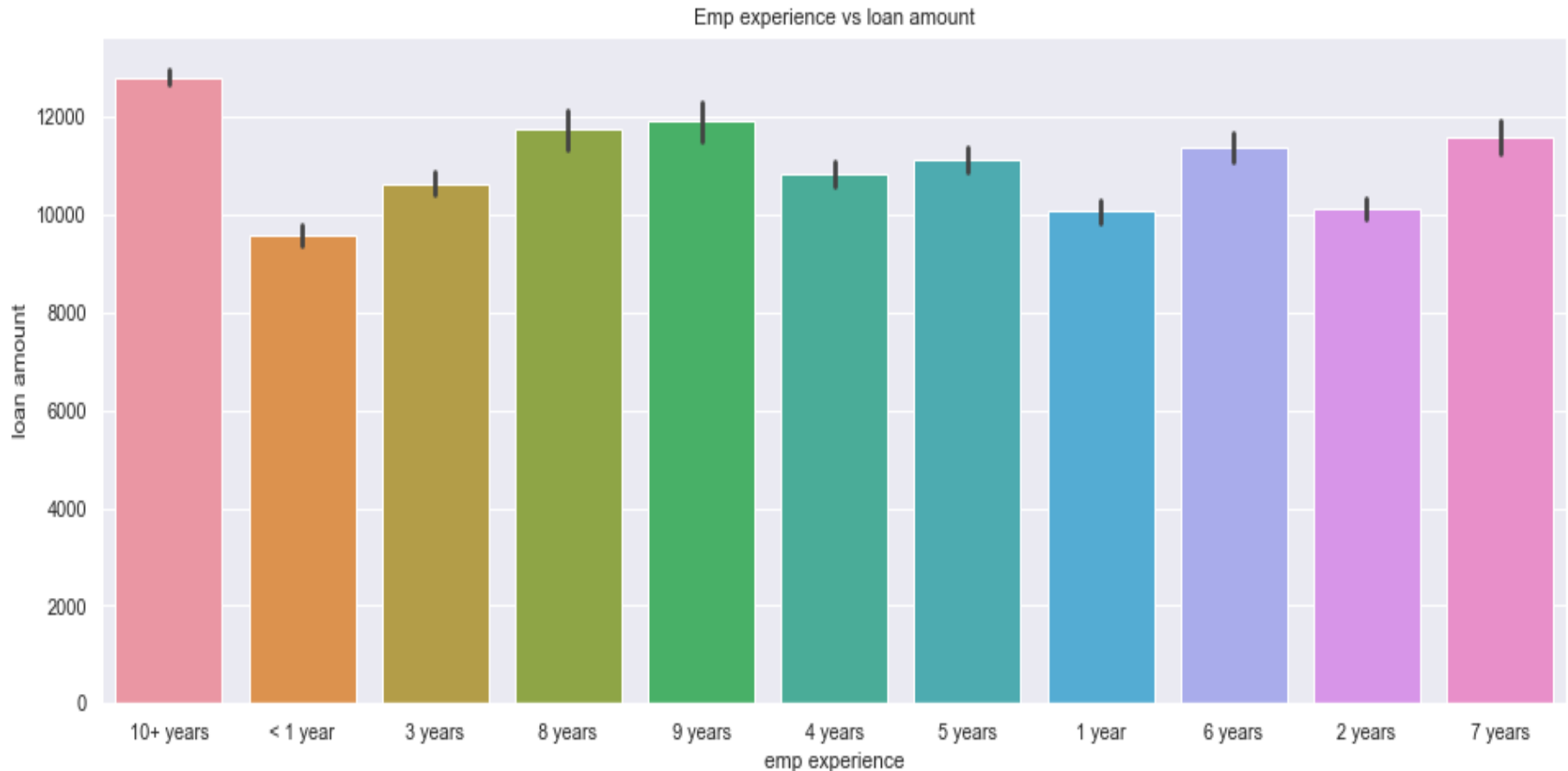
Analysis

The percentage of defaulter under home ownership is "Other" followed by "Rent" and "Own" and "Mortgage"

Analysis-Bivariate

Emp experience vs dti

By doing Bivariate analysis it has been observed that 10+ years of employee exp. Is having debt to income in maximum range apart from that rest year of employee exp. are more or less in same range.

Analysis-Bivariate

Emp experience vs loan amount

By doing Bivariate analysis it has been observed that the employee exp. With 10+ years is taking more amount of loan and those who are less than 1 year is taken less amount of loan.
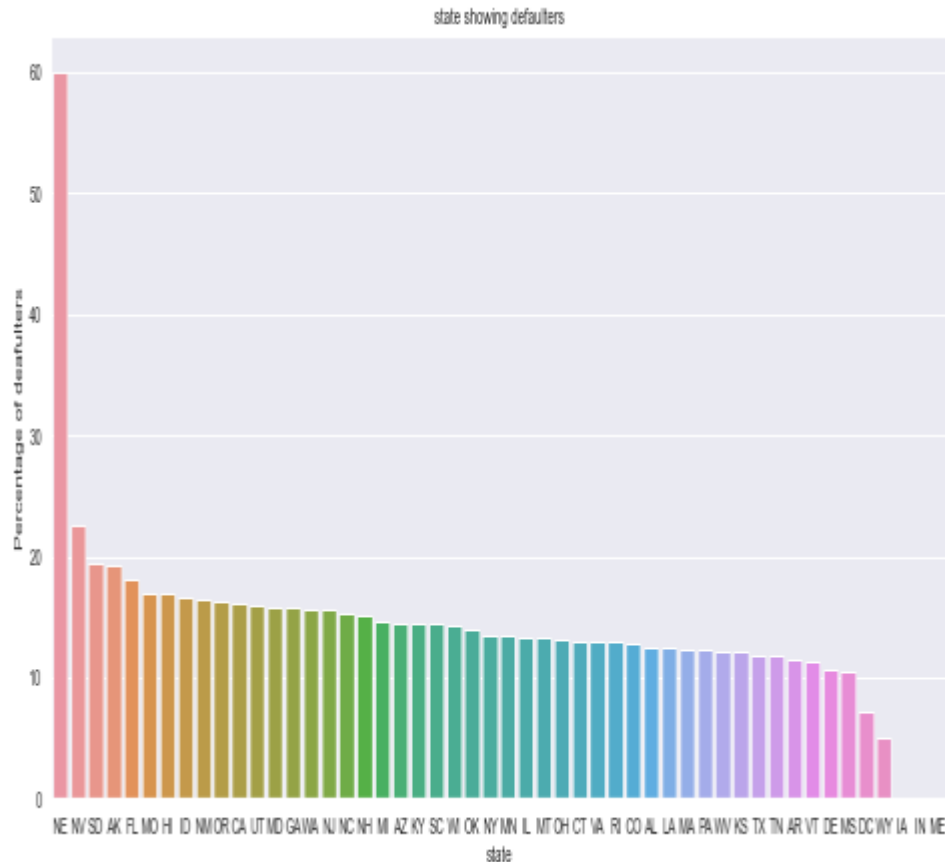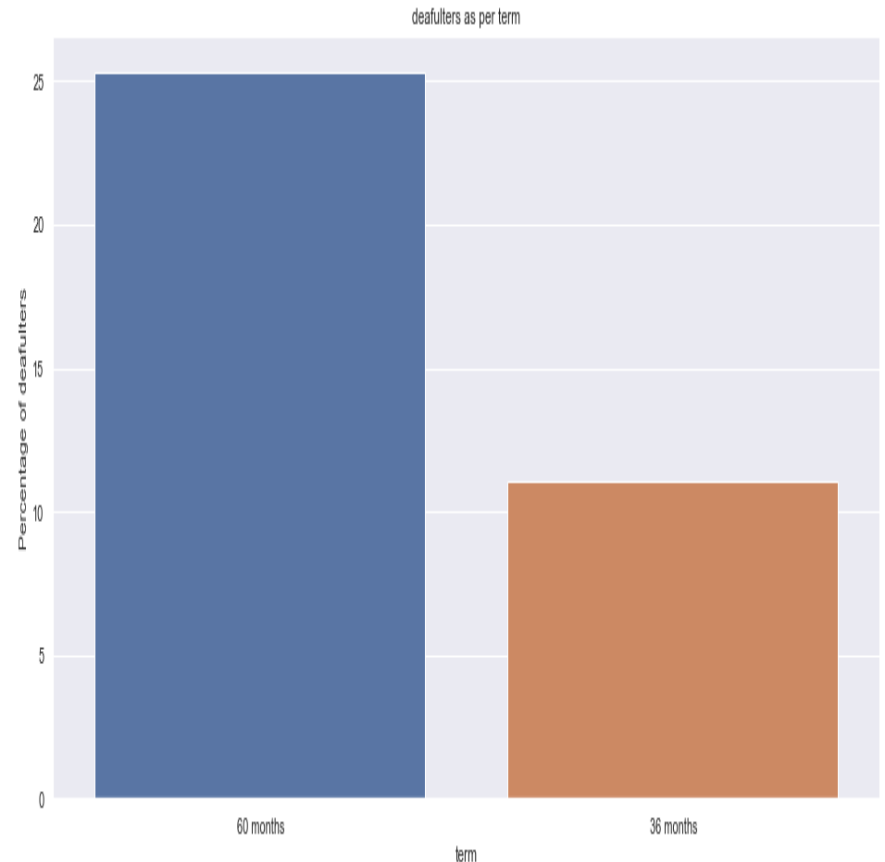
Analysis

Grade vs int rate
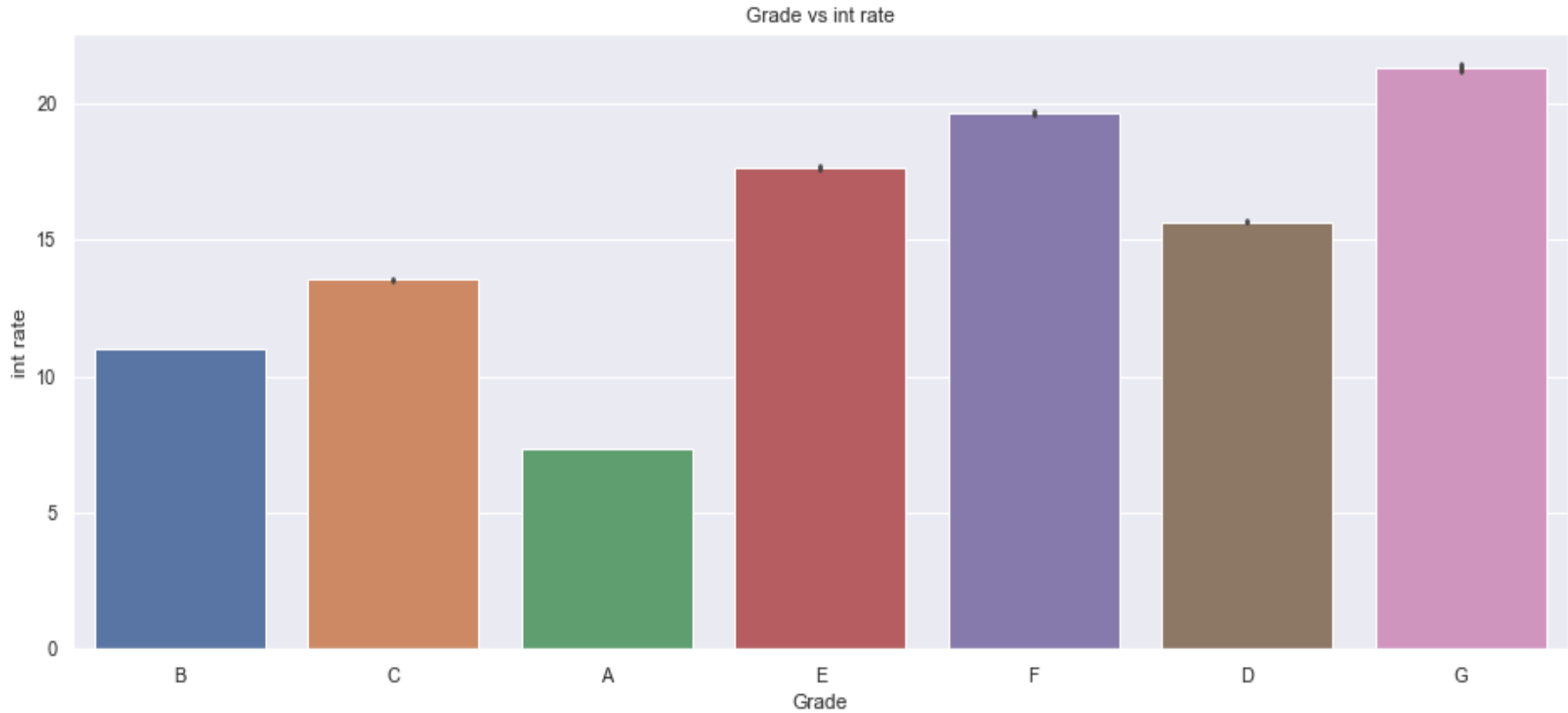
From the above plot it has been visualize that based on grade interest rate is going higher – "A" is having minimum interest rate, whereas "B" is having higher interest rate.
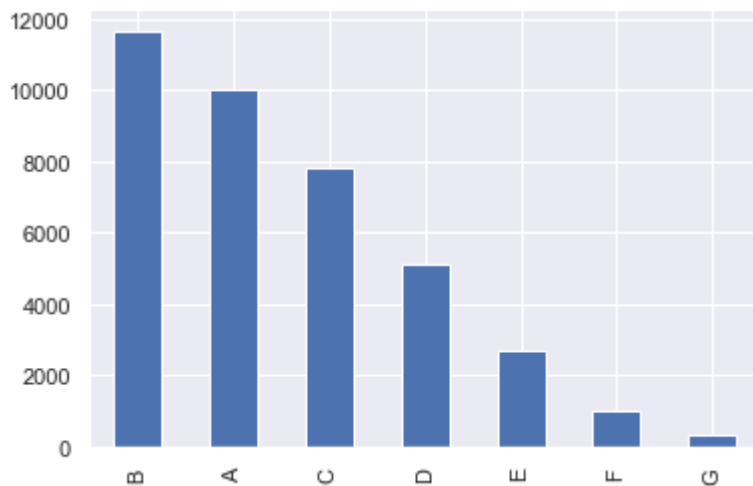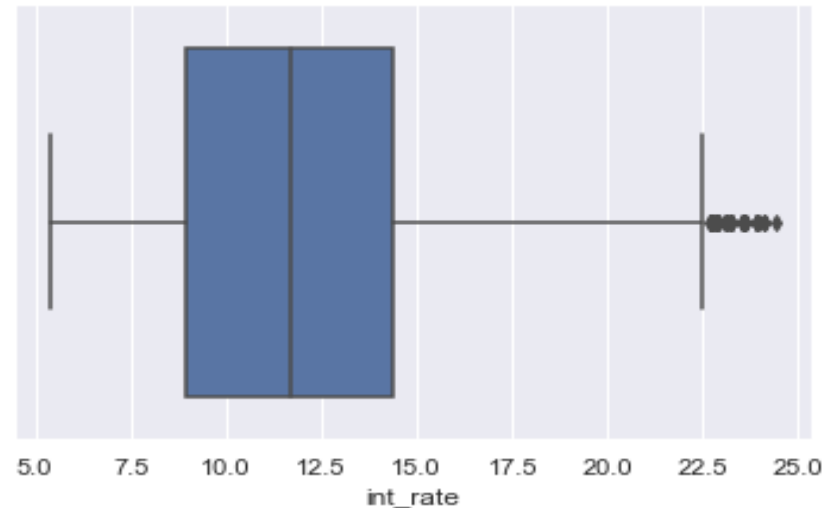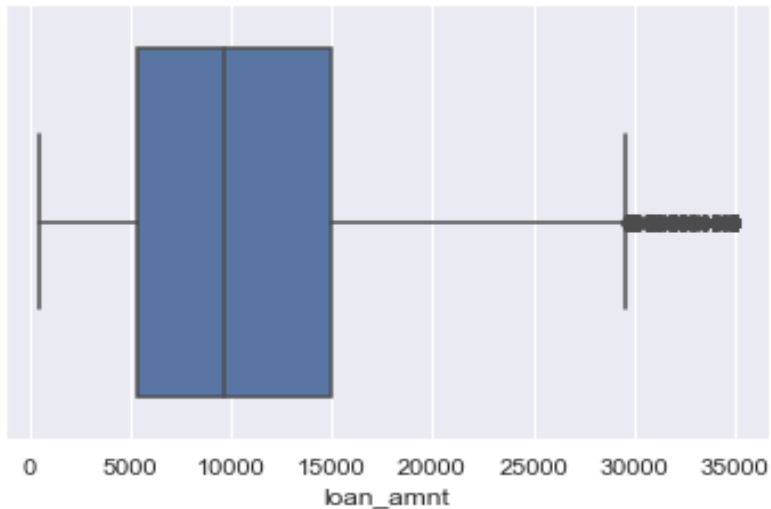
Analysis

Defaulters' in States

state showing defaulters

## Defaulters loan term

deafulters as per term

- The percentage of Defaulters is maximum from NE (address) which is 60%
- The percentage of Defaulters is found in 60 months as compared to 36 months – Loan Term

Analysis-Outlier

- Very few people have taken loan more than 30000
- Very few loan application have interest rate more than 22.5 percent
- There are more number of borrowers having grade B

Analysis-Outlier
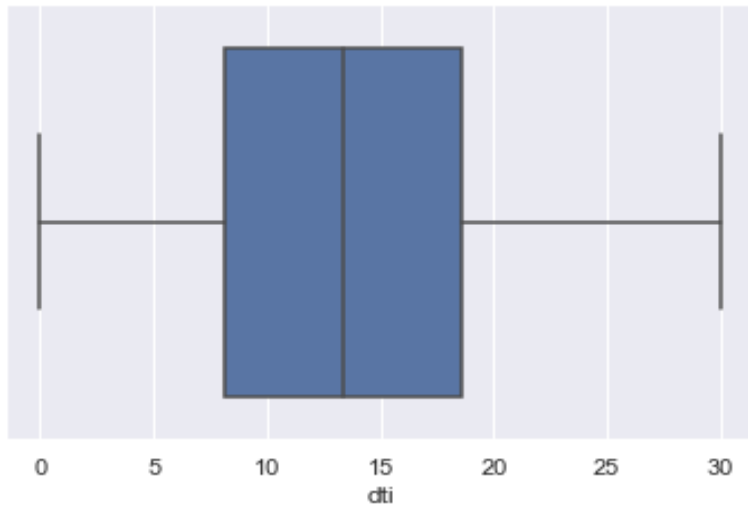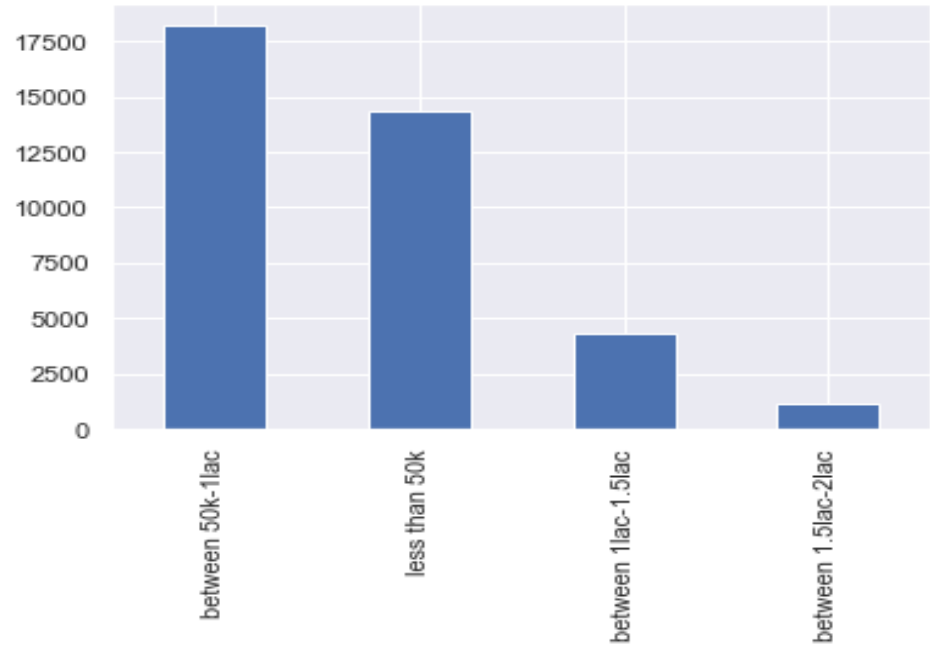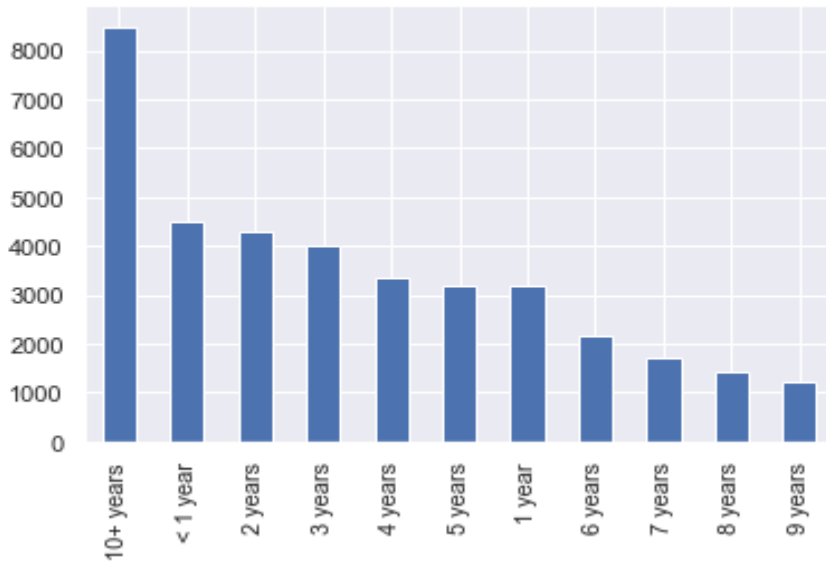
• More number of borrowers are there whose experience is more than 10 years
• There are more number of people whose annual income falls in between 50k and 1 lac

Conclusion

•Upon Analysed the data funded amount inv as they are almost similar in behaviour to loan amount

•Debt consolidation is the highest loan purpose.

•Observed that the maximum loan range amount is between 5000-10000.

•The percentage of risk of Defaulters is maximum for customer with purpose 'small business'.

•The percentage of risk of Defaulters is maximum for customer experience - 10+ years & minimum for 9 year's experience

•The percentage of defaulter under home ownership is "Other" followed by "Rent" and "Own" and "Mortgage"

•Very few loan application have interest rate more than 22.5 percent .

•The percentage of Defaulters is found in 60 months as compared to 36 months – in Loan Term