LENDING CLUB CASE STUDY

Submitted By:

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Objective

To identify the factors which leads the loans to get defaulted, in order to help the lending company, avoid losses

The case study involves a Lending Club where a user can apply for loans online. The investors check the profile of users and approves the amount

Problem solving methodologies

Data Analysis

Data Cleaning

Univariate Analysis

Segmented Univariate Analysis

Bivariate Analysis

Conclusion

Data Analysis

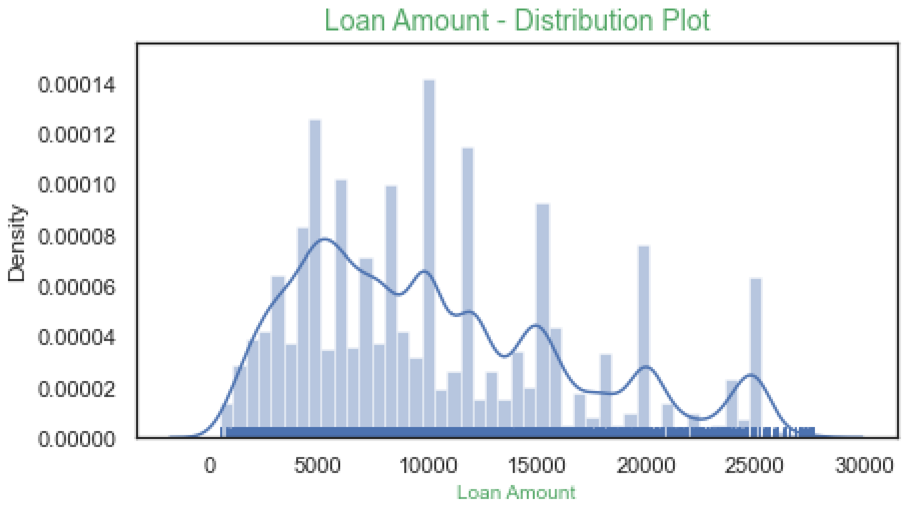
- The data analysis was done by observing each columns and rows thoroughly.
- Data consists of 111 columns and 39717 rows.
- We observed that the loans are divided into various categories (grades).
- The loan term is either 36 months or 60 months.
- Loan status is Fully paid, Charged off and Current
- Loans with Charged Off status are the default or bad loans

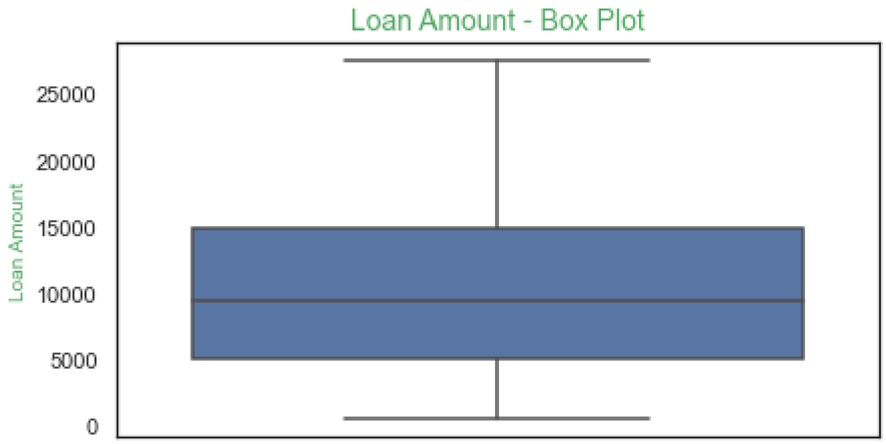
Data Cleaning

- We observed the data thoroughly and treated the data so that it could help us in analysis.

Univariate analysis

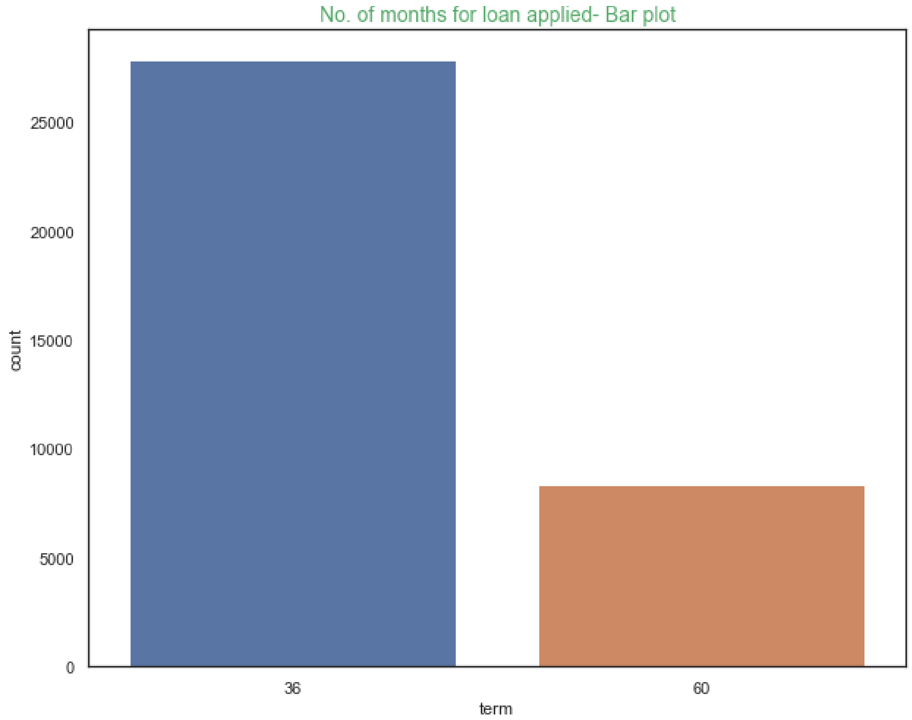
- Most of the loan amount exists between 5000 and 15000.
- Highest number of loans is Rs 5000. The number of loans decrease as amount increases after 5000.

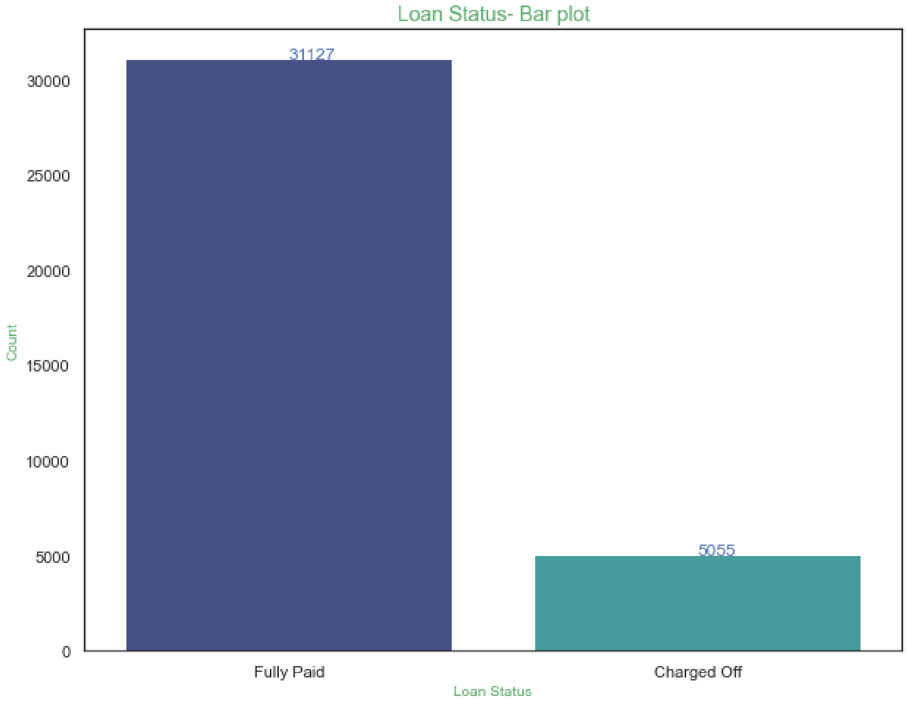




Univariate analysis

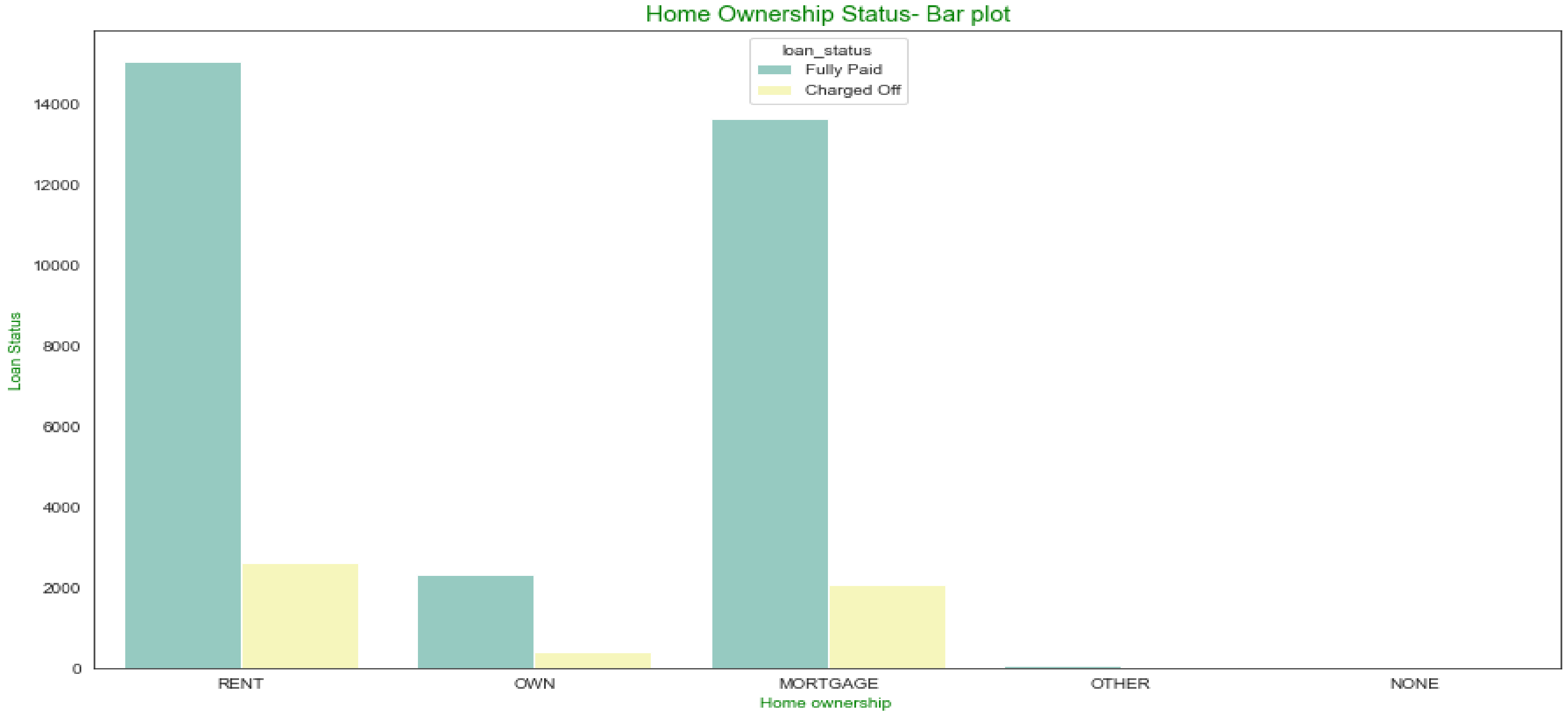
- Most of the loans tenure is 36 months
- Most of the loans are Fully Paid.





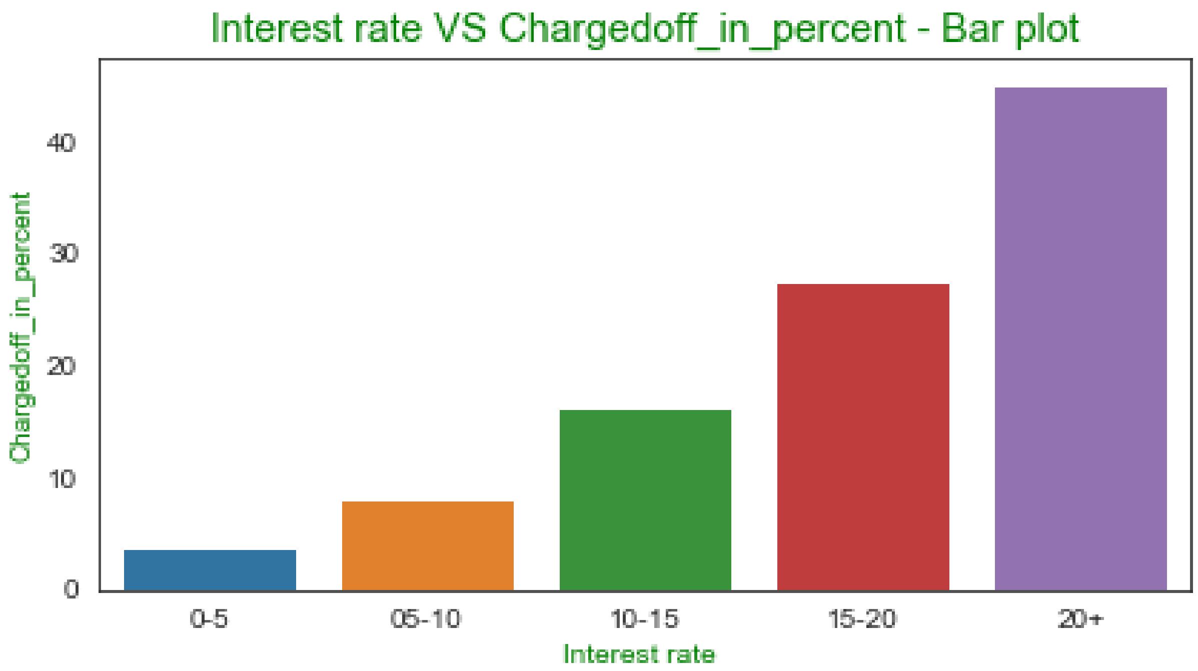
Bivariate analysis

- People staying on rent or mortgage take more loans but the Percentage of Charged Off loans does not show any specific trend.



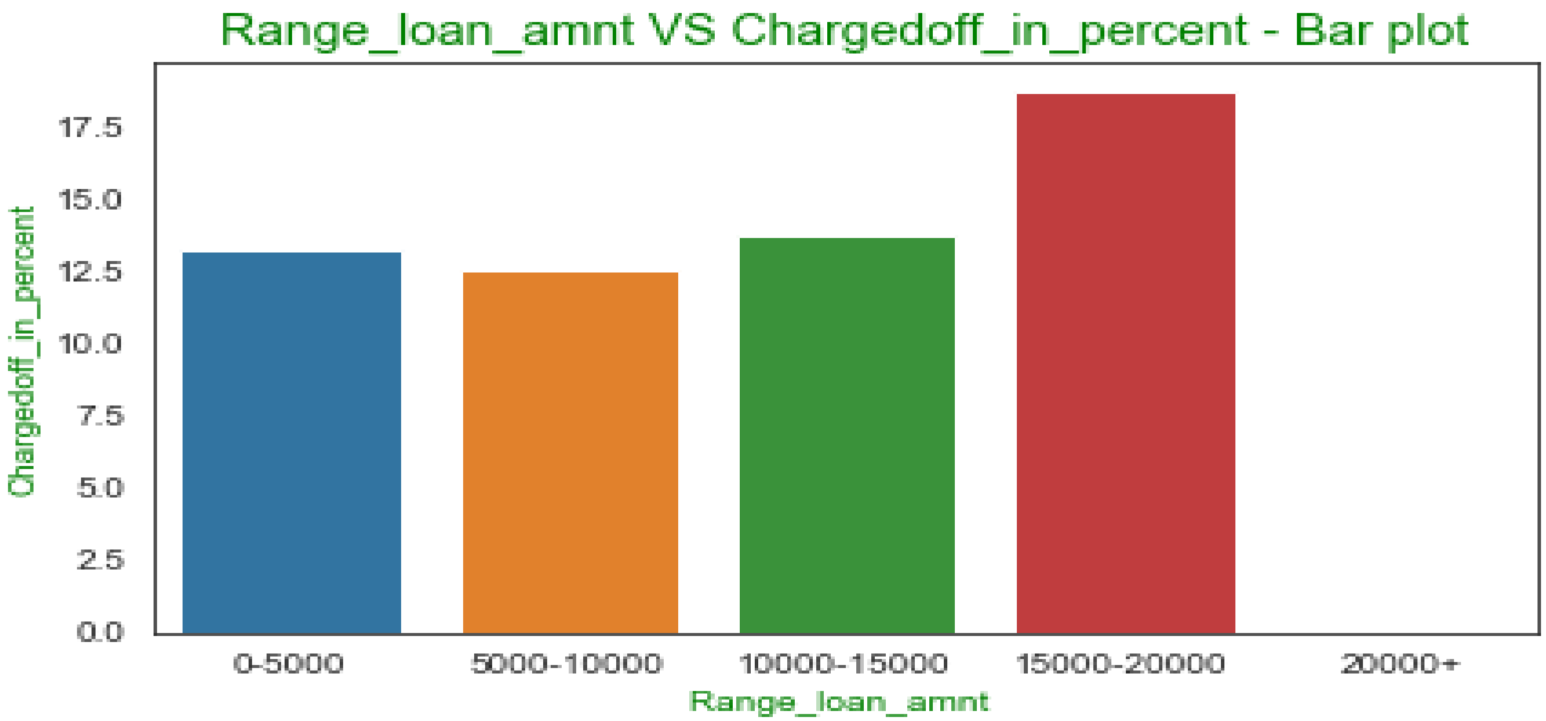
Bivariate analysis

- As expected, higher the interest rate, higher the chances of default
- We created bins of 5 for interest rate
- The percentage of Charged off loans gets higher as interest rate increases



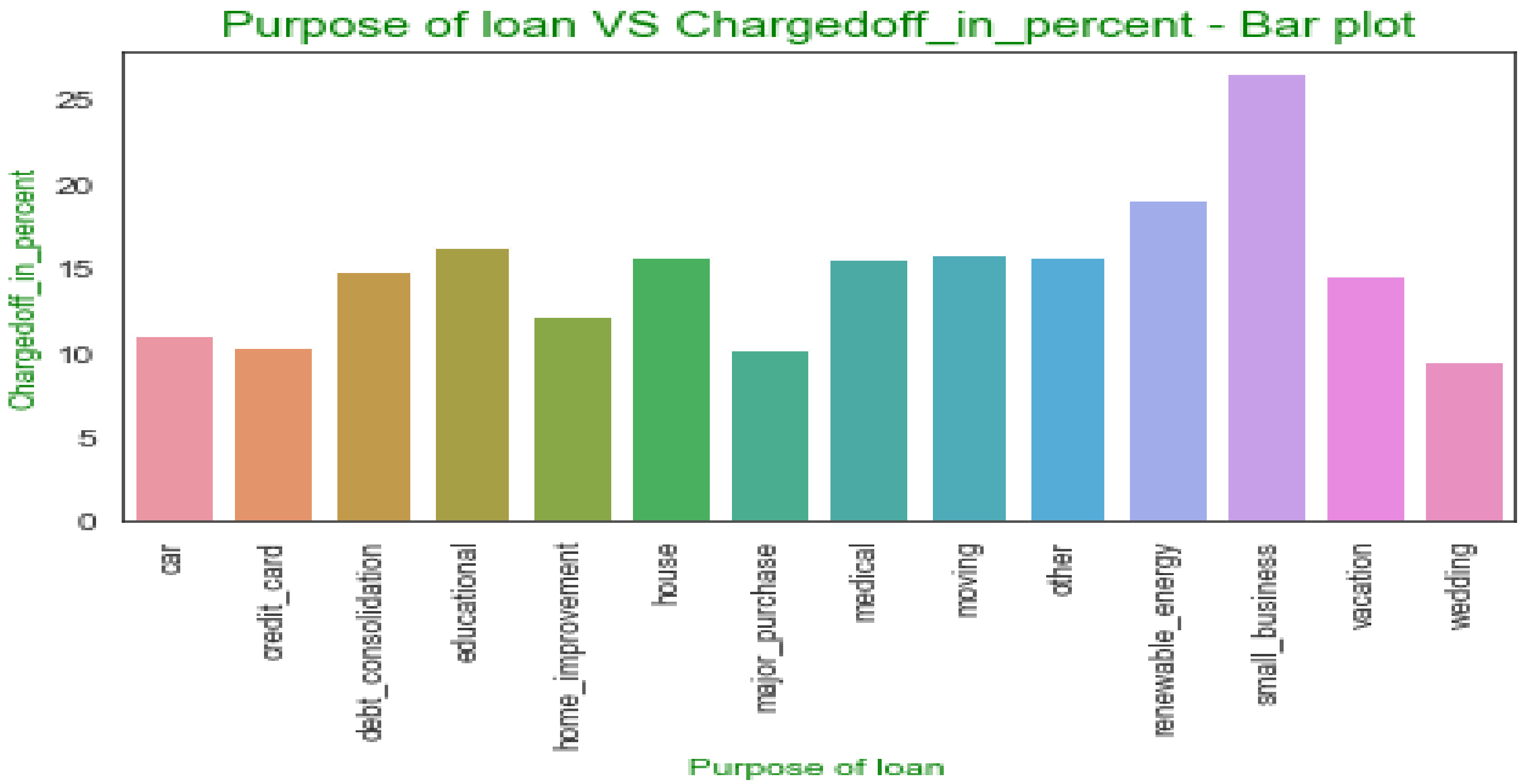
Bivariate analysis

- Percentage of Charged off customer are more for 15000-20000 range loan amount



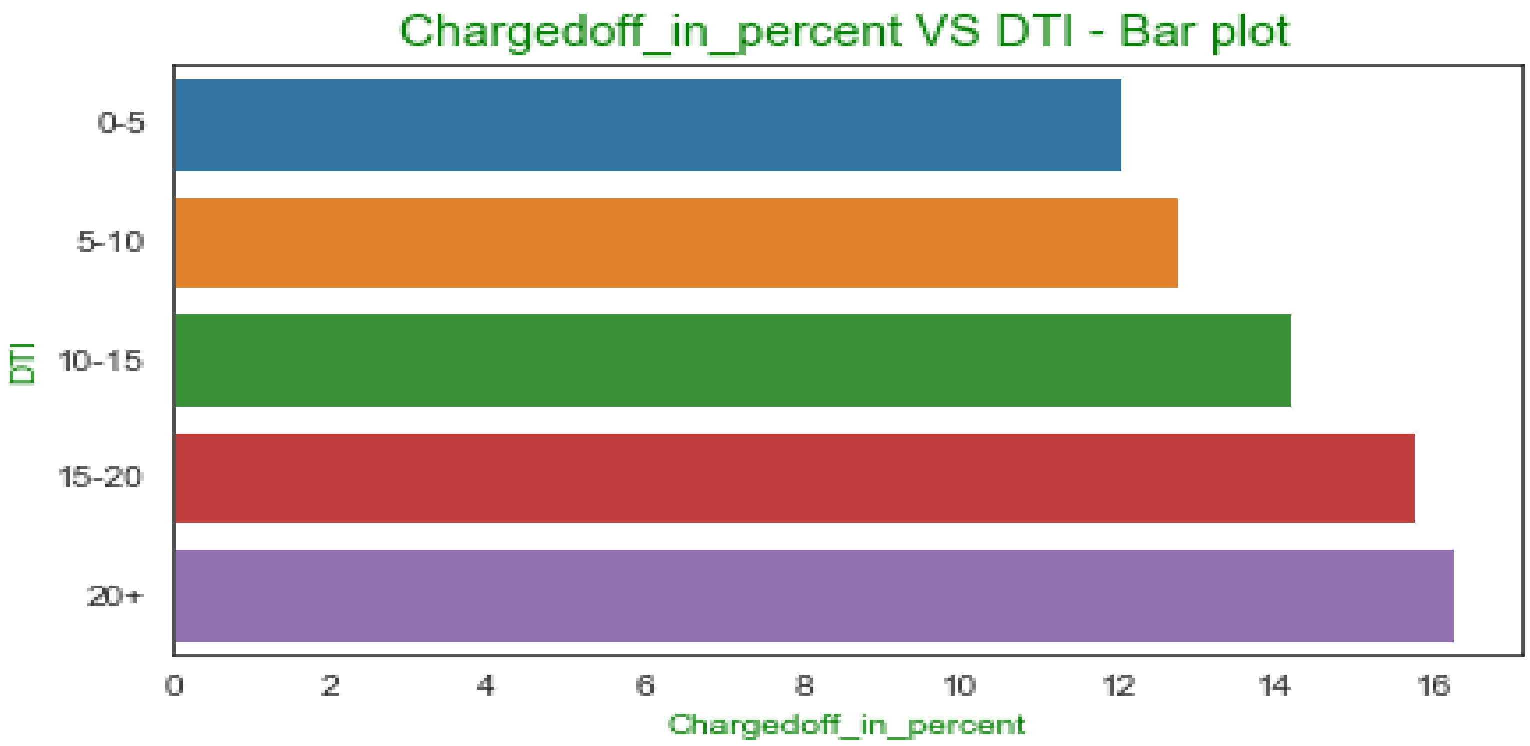
Bivariate analysis

- Most of the Charged off customers are those who have taken loan for small business. A reason behind may be the business failed.



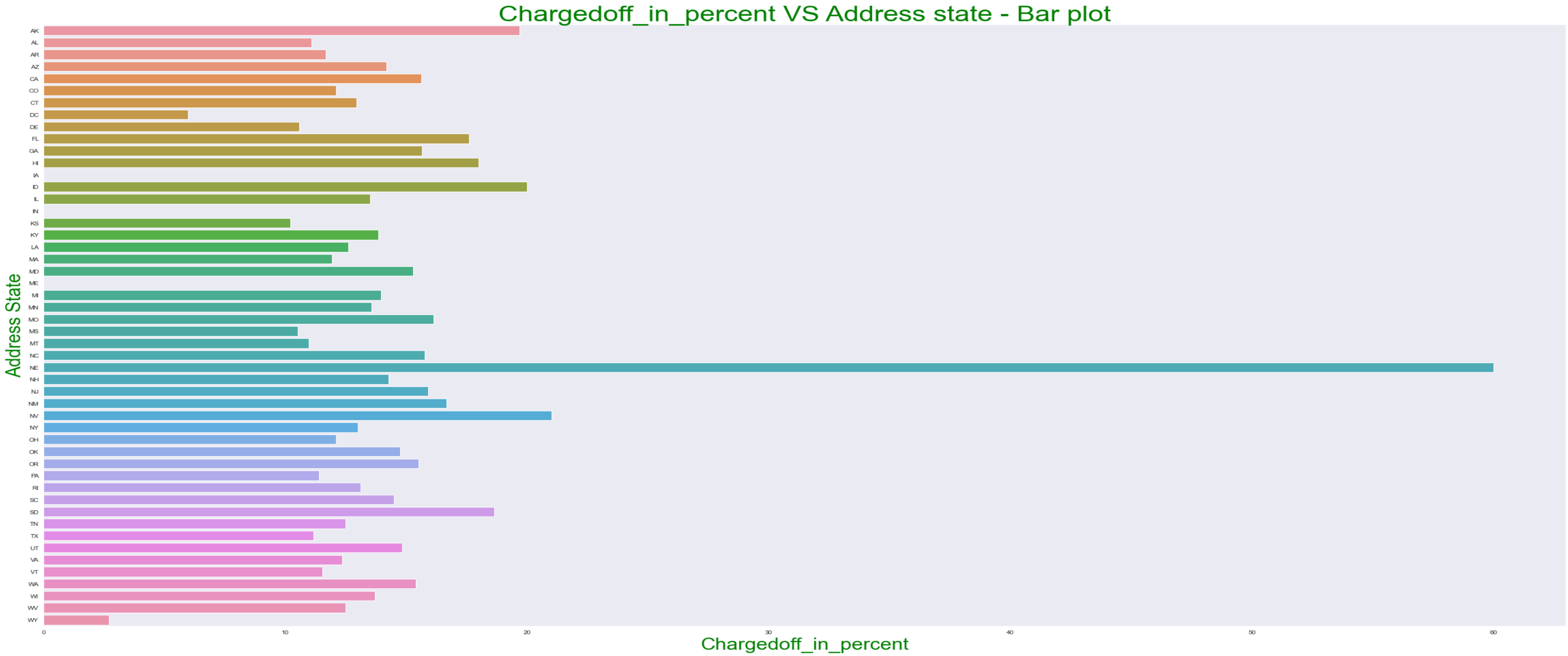
Bivariate analysis

- Customers with more debt to income ratio i.e. DTI are more likely to default.



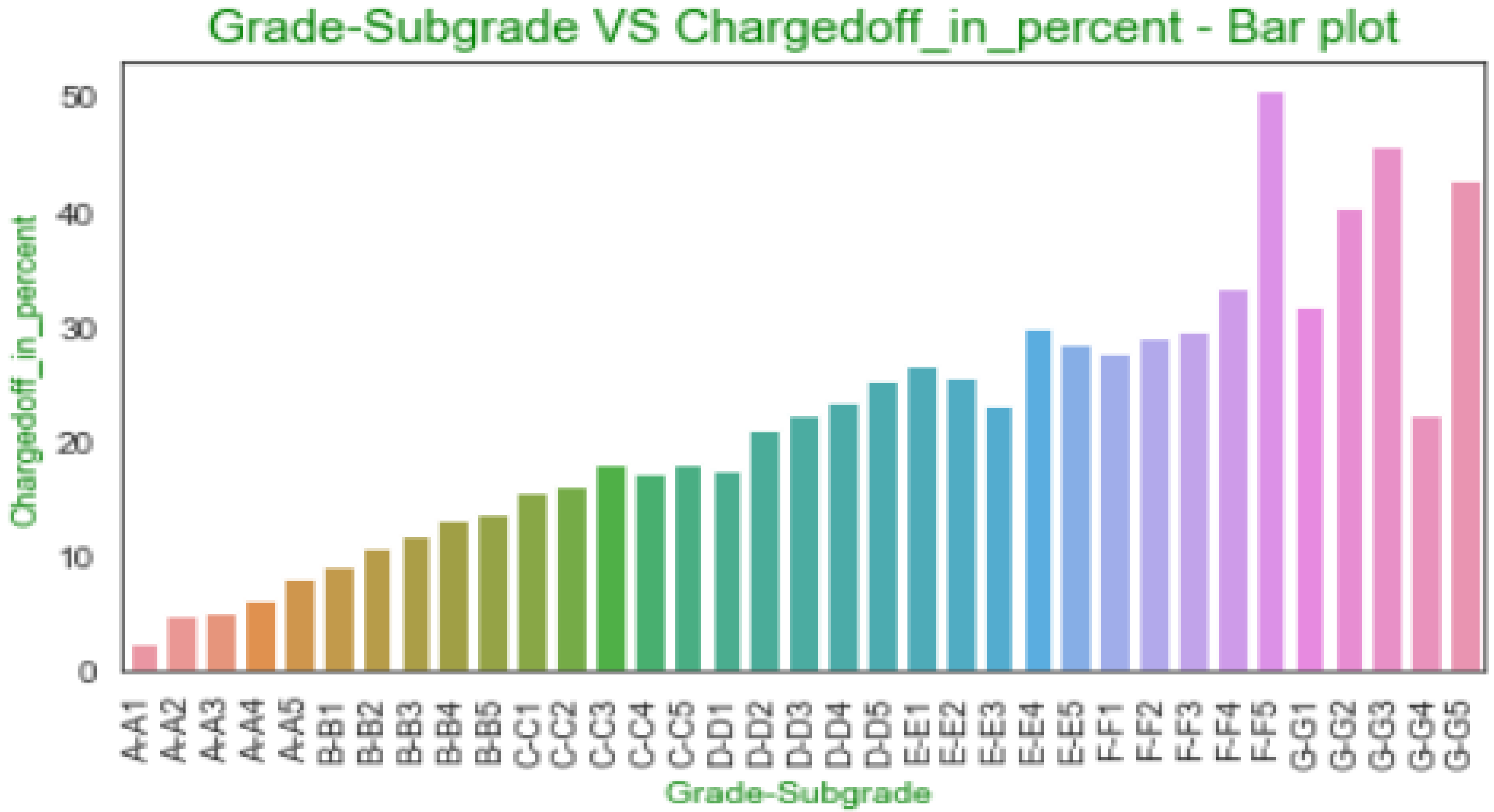
Bivariate analysis

- Customers belonging to a specific state NE are more prone to default the loan.



Bivariate analysis

- There is an increase in charged off percentage from A to G grade observed. As the grades are provided by bank , lower the grade, higher the chances of charged off percentage.



Conclusion

•Customers with more DTI are more likely to default. Ofcourse, more DTI means, more liabilities as per the income. So, less chances of repaying the loan.

•Loans provided to customers belonging to a specific state NE are more likely to Charge Off. So the lenders need to be more cautious while giving loan to this state.

•Higher the interest rate, higher are the chances of loan to get Charged Off.

•Percentage of Charged off customer are more for 15000-20000 range loan amount(Low level).

•Customers taking loan for Small Business are more likely to Charge off as the chances of business failure is high as compared to other reasons.

•An increase is percentage of charged off customer as the grade decreases from A to G.