

Lending Club Case Study

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Abstract

- 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.
- The objective of this analysis is to identify the driving factors behind loan defaults.

Methodology

Data Cleaning

- Understanding & removing Null valued columns, unnecessary variables and removing the irrelevant data.

Data Understanding

- Going through the data, understanding various columns & their domain specific uses.

Univariate Analysis

- Analyzing each column and plotting the distributions.

Segmented Univariate Analysis

- Analyzing the continuous data with respect to the segments.

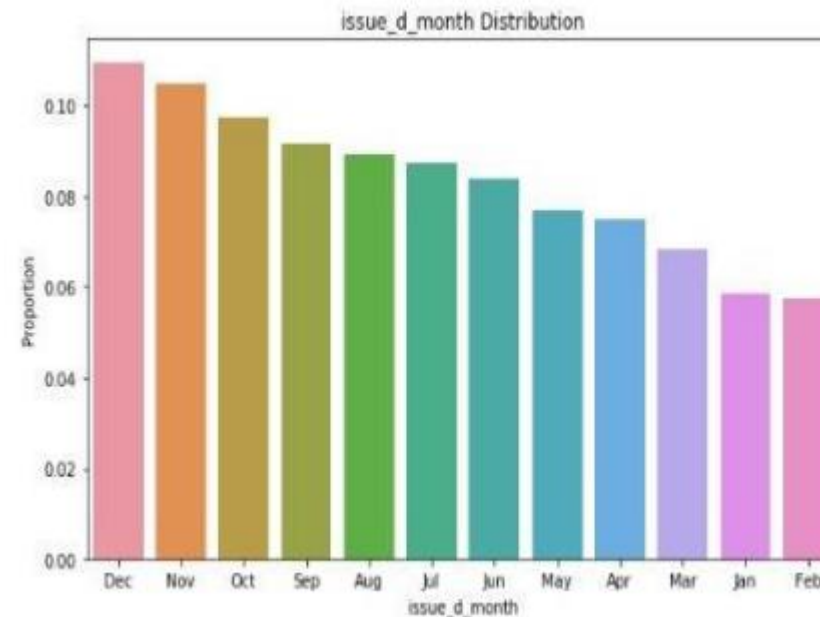
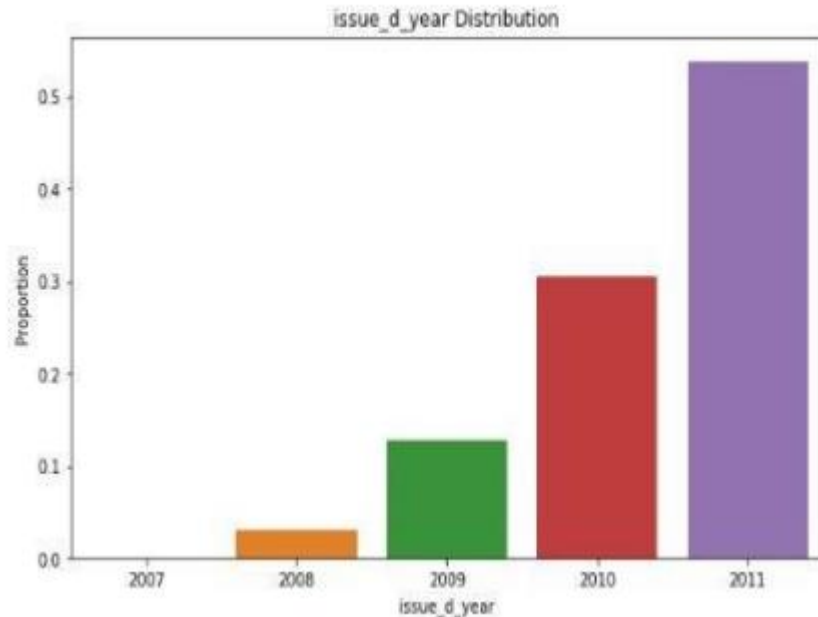
Bivariate Analysis

- Analyzing two variables behavior like term and loan status with respect to loan amount.

Recommendations

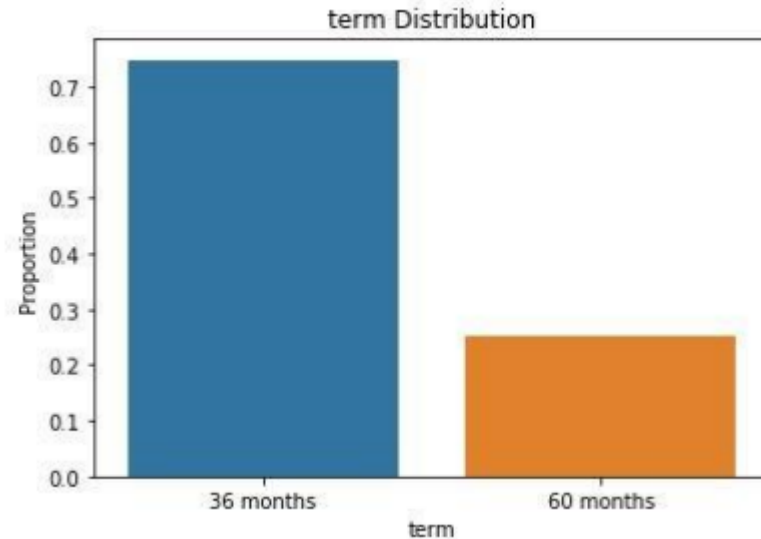
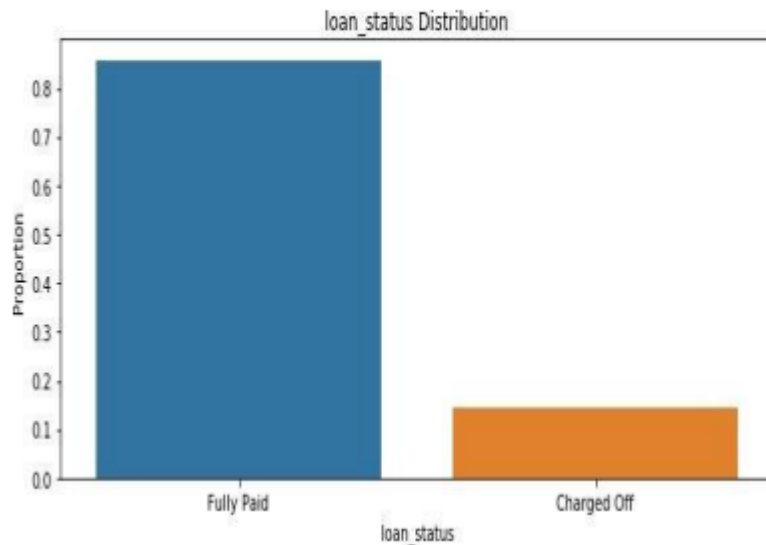
- Analyzing the plots and recommendations for reducing the loss of business by detecting variables which contributes the most to loan defaulters.

Analysis



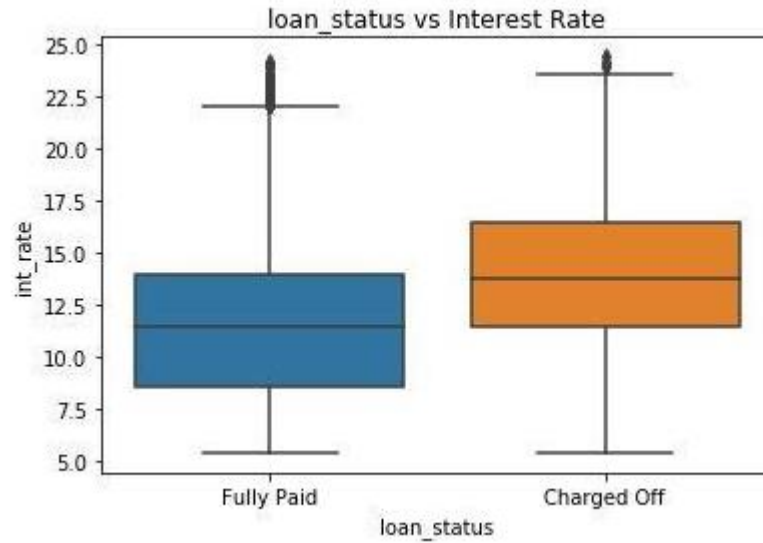
- We could infer that the lending club has grown year by year, the number of loans issued are doubled every year.
- The issued month of loans is also increasing from January to December. In the final quarter of year there are more loans issued this could be because of vacation.

Analysis



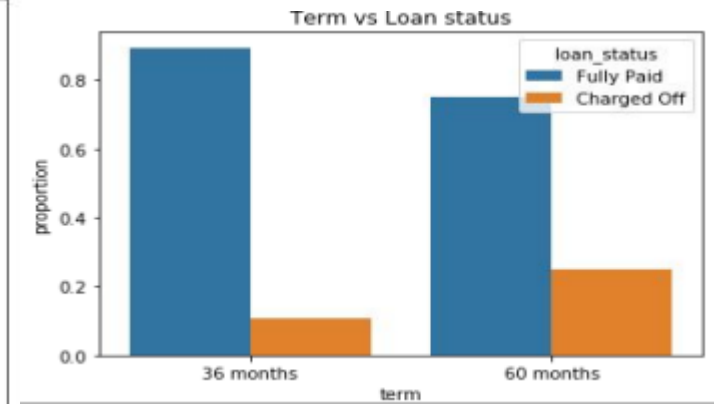
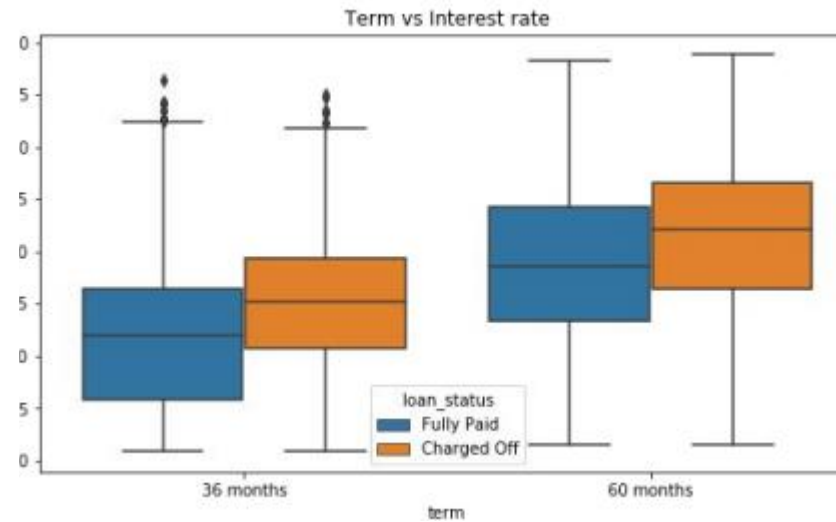
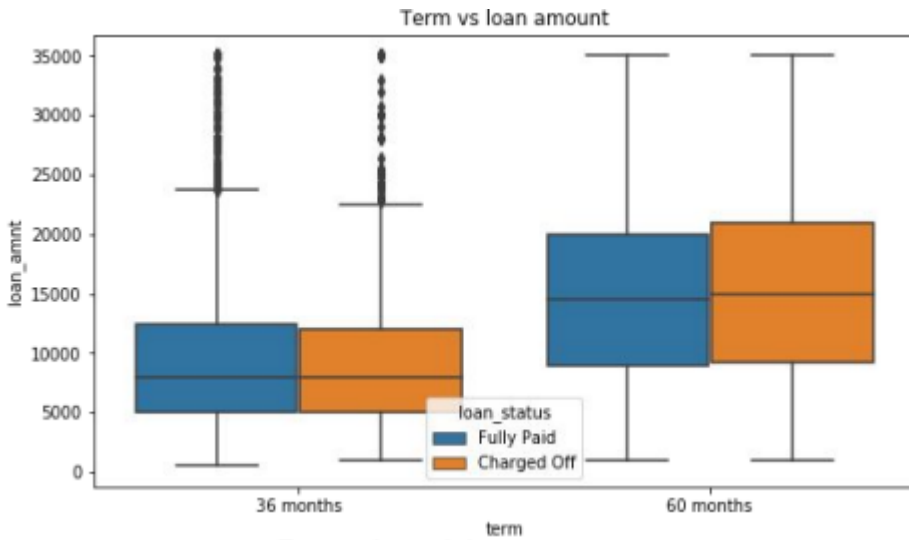
- We could see that there are two loan terms i.e., 36 & 60 months. Most of the borrowers have taken 36 months loan term.
- The charged off borrowers are around 15% & fully paid is around 85% in the given data set.

Analysis



- When the loan interest rate is high then there are high chances of loan getting defaulted.

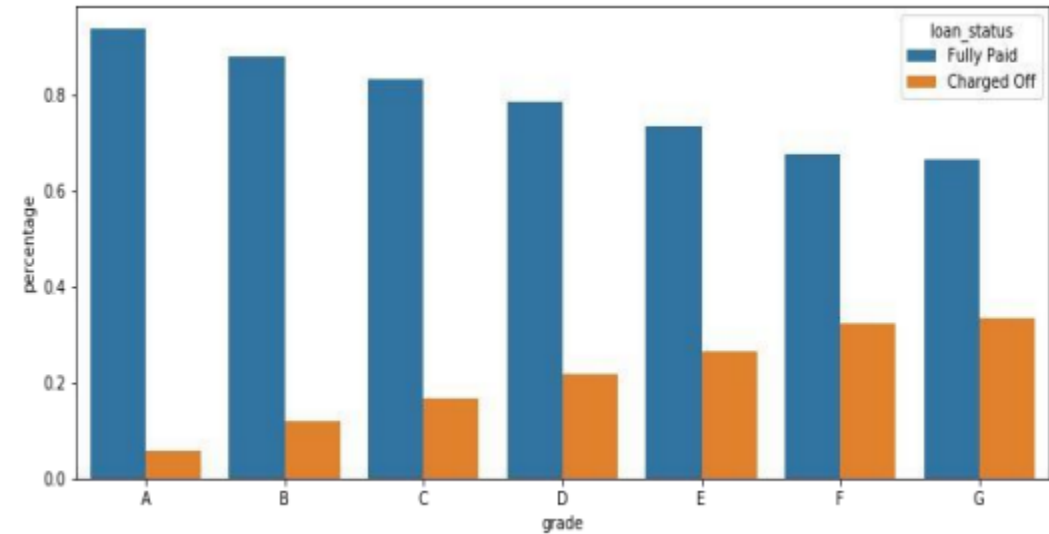
Analysis



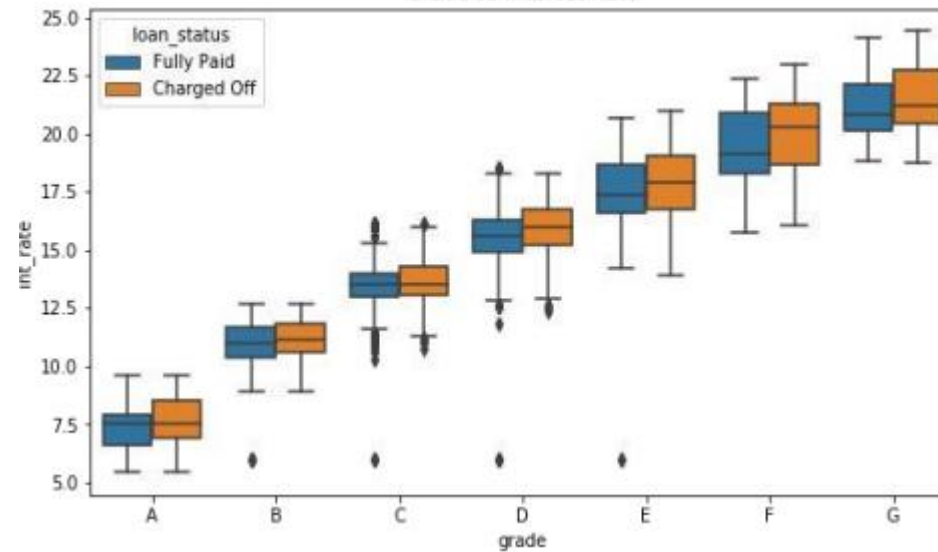
- The default rate is high in 60 months tenure because most of the people have taken high amount of loan at higher rate of interest.

Analysis

Grade vs Loan status

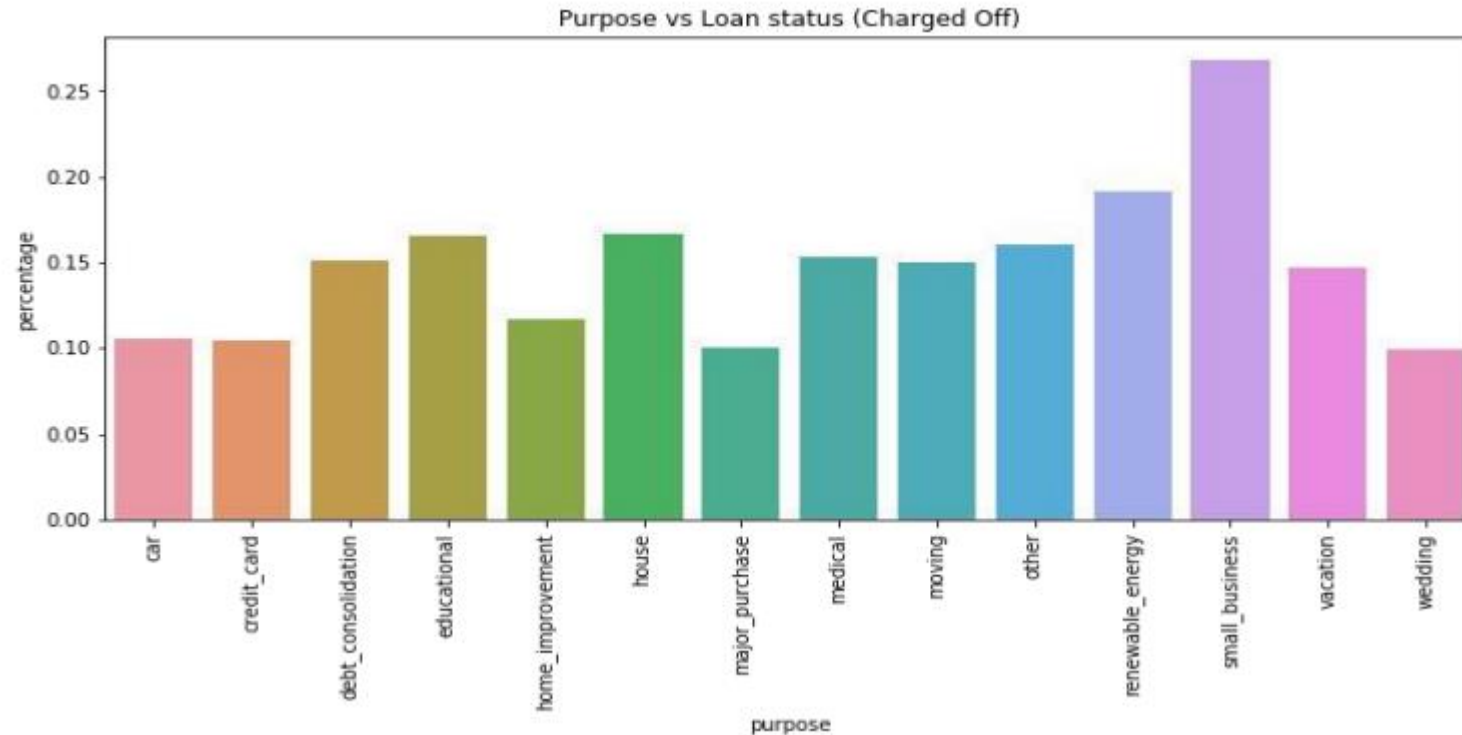


Grade vs Interest Rate



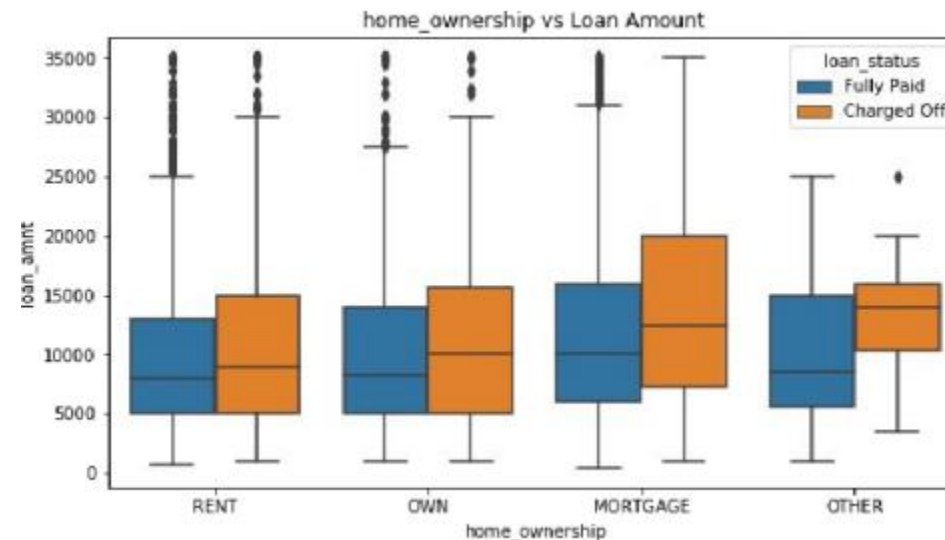
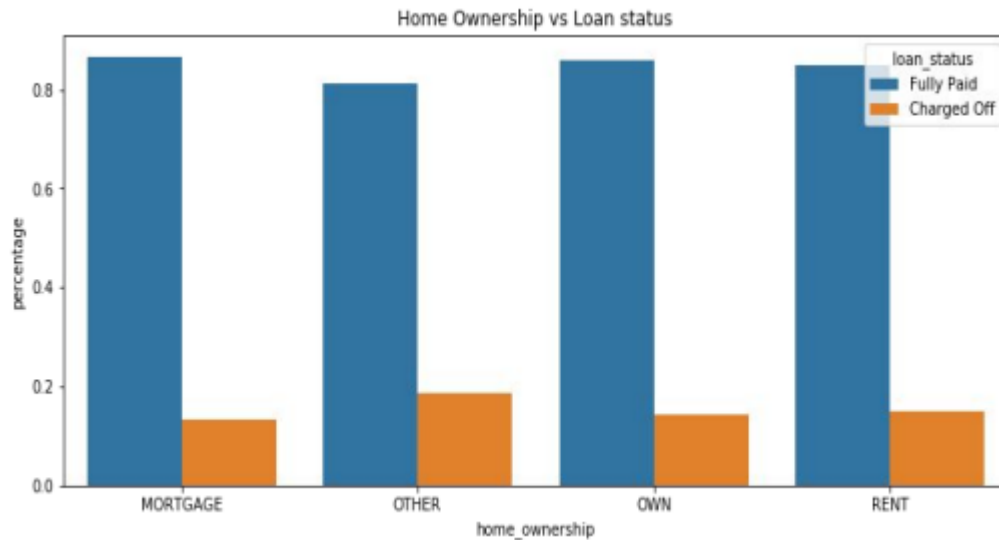
- Grades are good category to tell the borrower's probability of defaulting the loan.
- The Lower grades i.e., E,F,G have higher chances of defaulting the loan than Higher ones i.e., A,B .
- The Lower grades are getting loans for higher interest rates which might be the cause for loan default.

Analysis



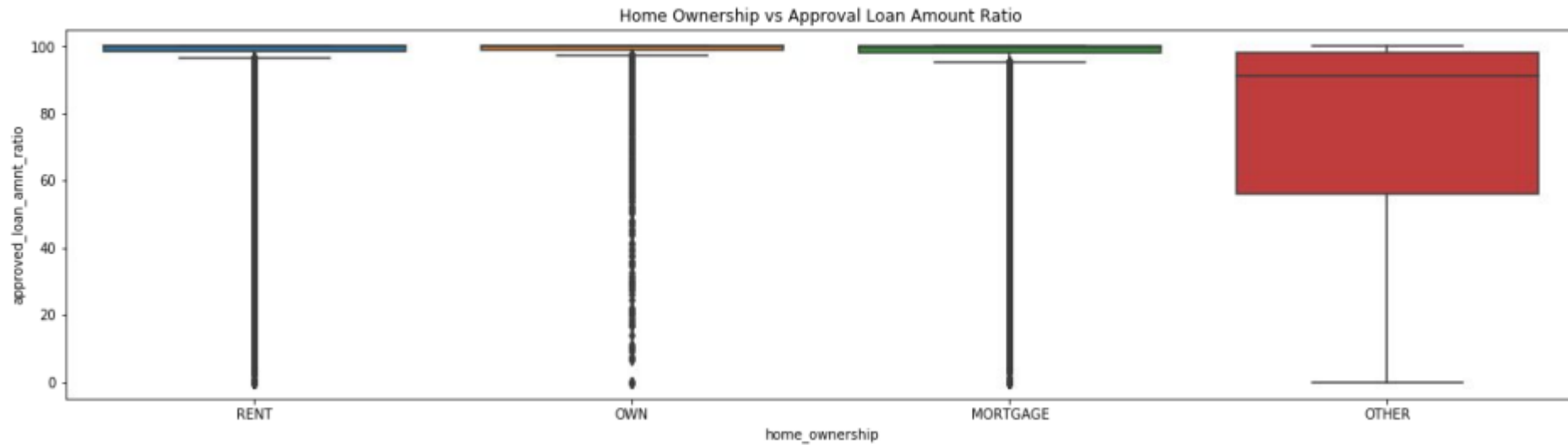
- Loans taken for small business have defaulted more.

Analysis



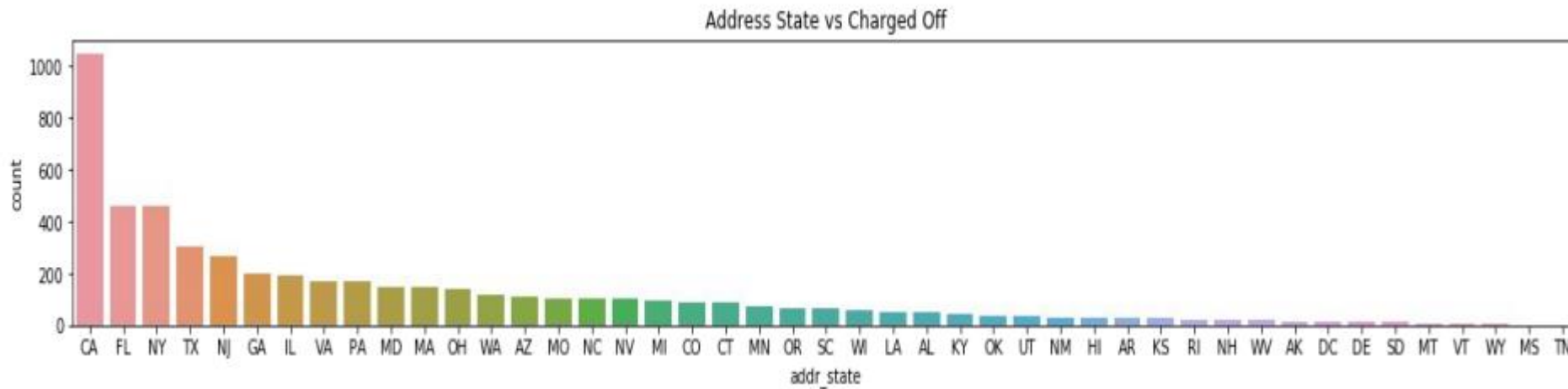
- There are around 20% chances of loan default in each home ownership category.
- People with higher loan amount in Mortgage home ownership has high default rate than others.

Analysis



- Loan requested by borrowers of Other home ownership category has less value of approved loan.

Analysis



- The loan given to borrowers of state CA, FL, NY & TX are defaulted more than other states.

Conclusion

- The company should examine more information from borrowers before issuing loans to Low Grade.
- The company should control the number of loans issued for borrowers who are from CA , FL , NY & TX state.
- The company should be careful while issuing loans to small business as they default more.
- The company should stop giving loans to Borrowers who have Mortgage home ownership & the requested loan amount is more than 12000.
- The company should think about reducing high interest loans for 60 months tenure as they default more.
- The company should make sure there are no public derogatory records for borrower.