Lending Club Case Study

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Introduction

- 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.

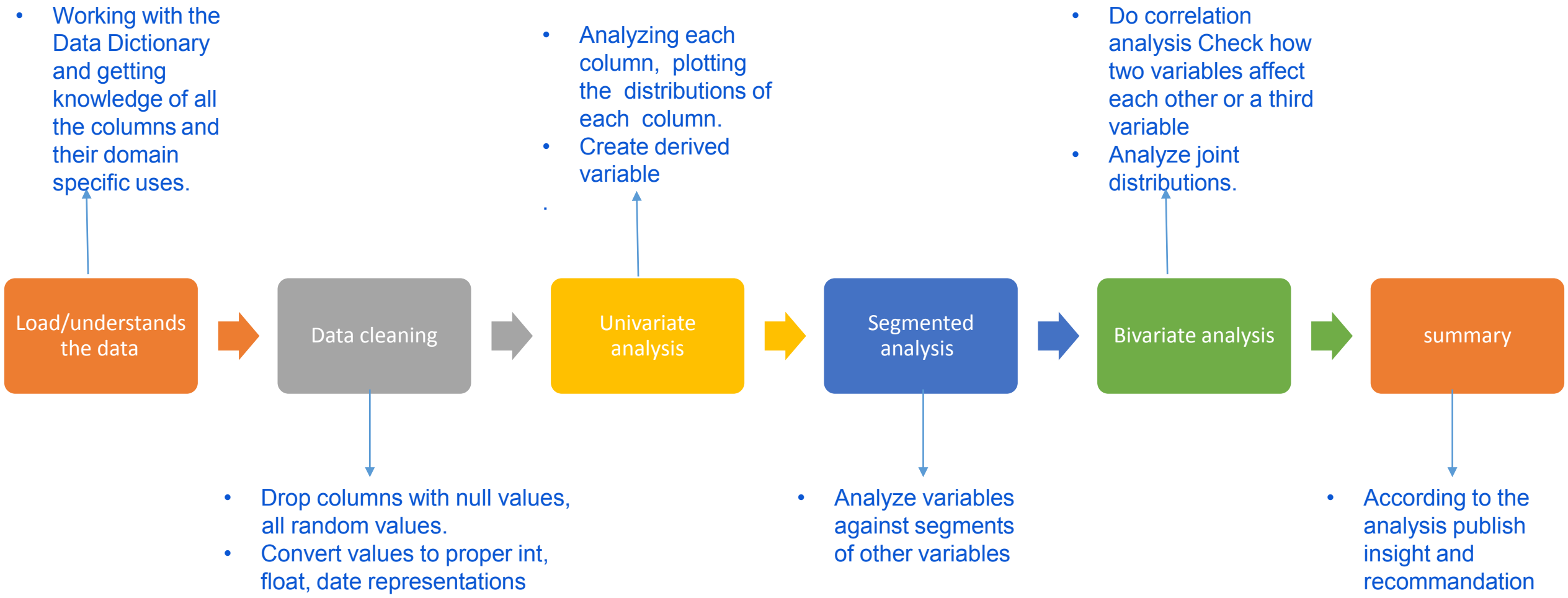
Problem statement

Lending Club case study is to analyze the dataset containing information about past loan applicants using EDA.

Objectives

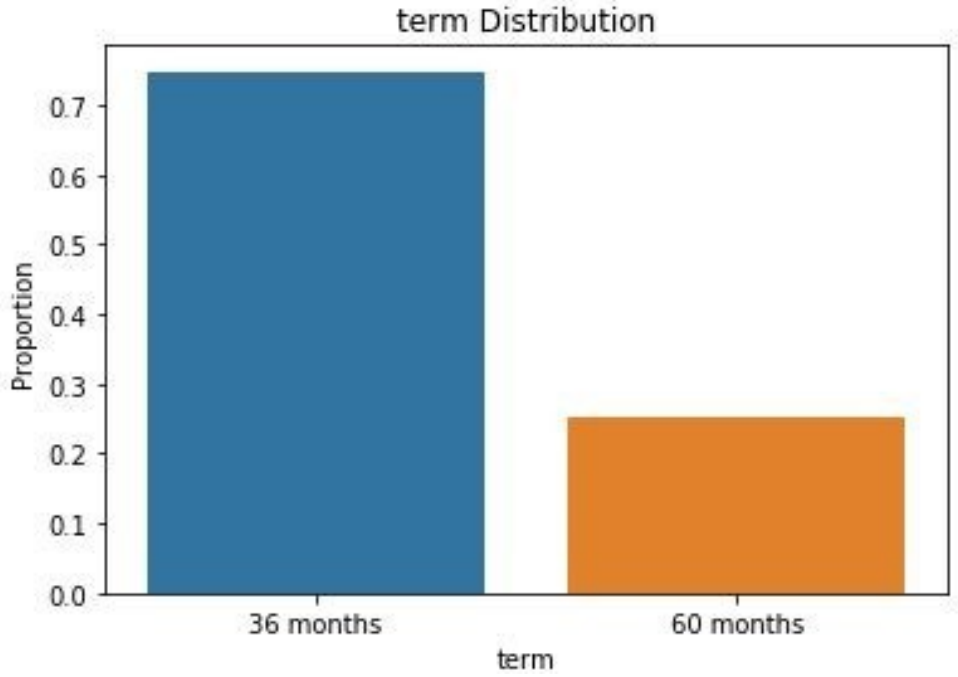
The objective of analysis is to use the information about past loan applicants and find whether they ‘defaulted’ or not.

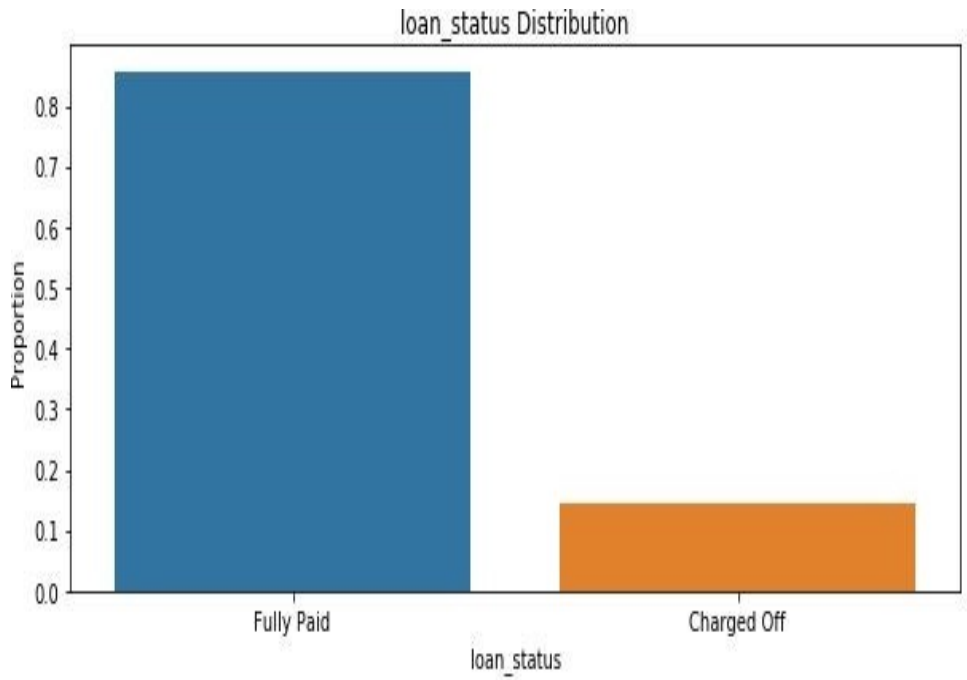
Process followed for EDA



Analysis

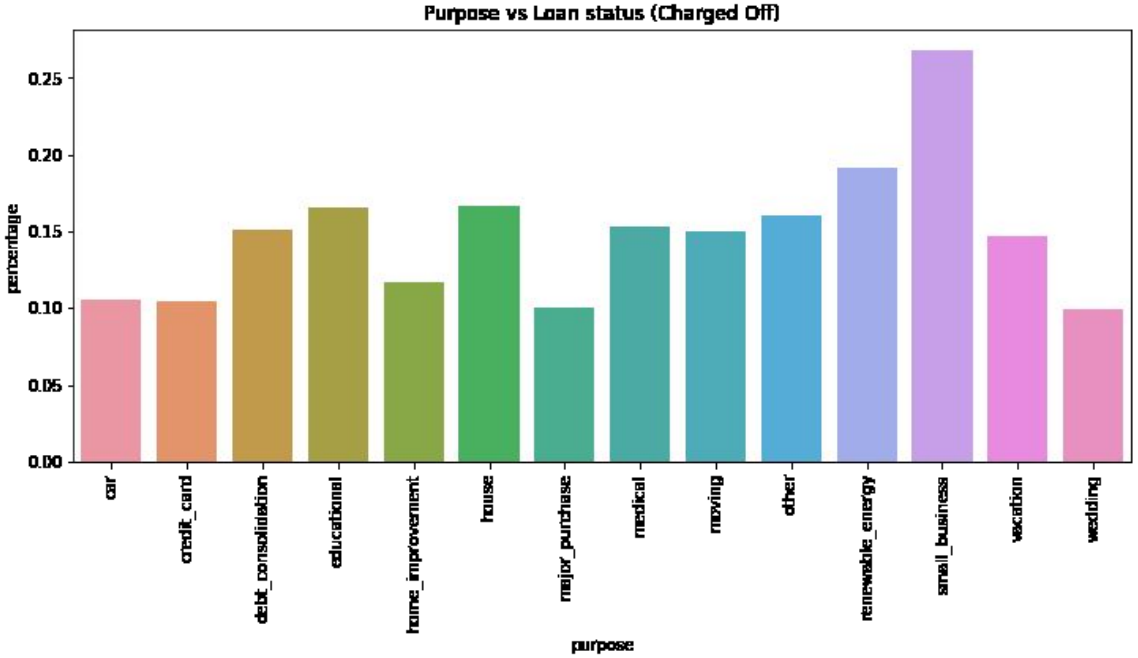
(Loan Distribution and Term Distribution)



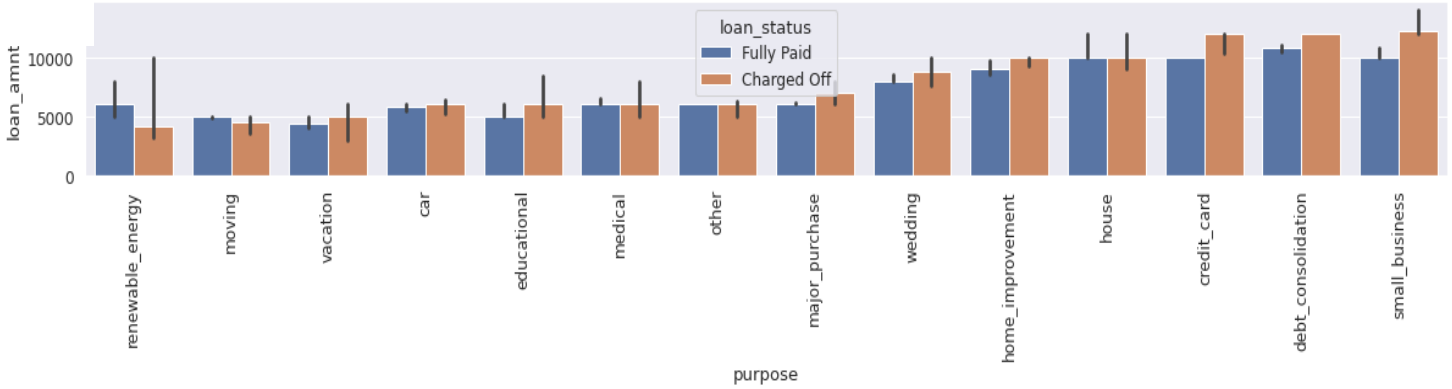


- There are only two loan terms 36 and 60 months. Around 75% borrowers took loans with 36 months term.
- The charged off borrowers are around 15% and fully paid is around 85% in the given data set.

Analysis

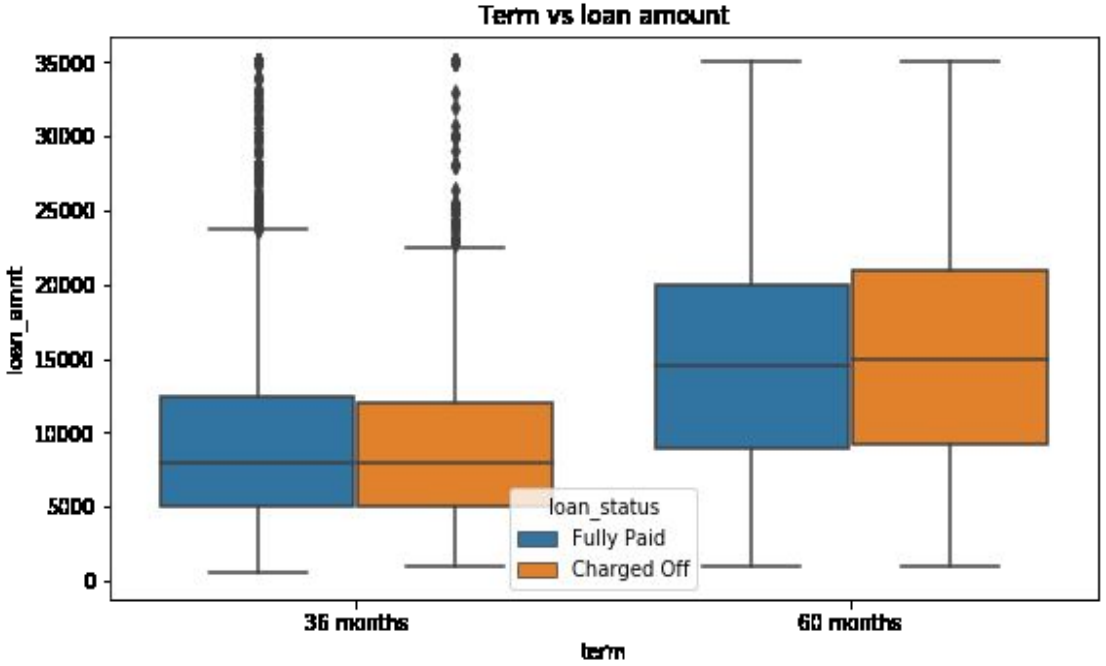


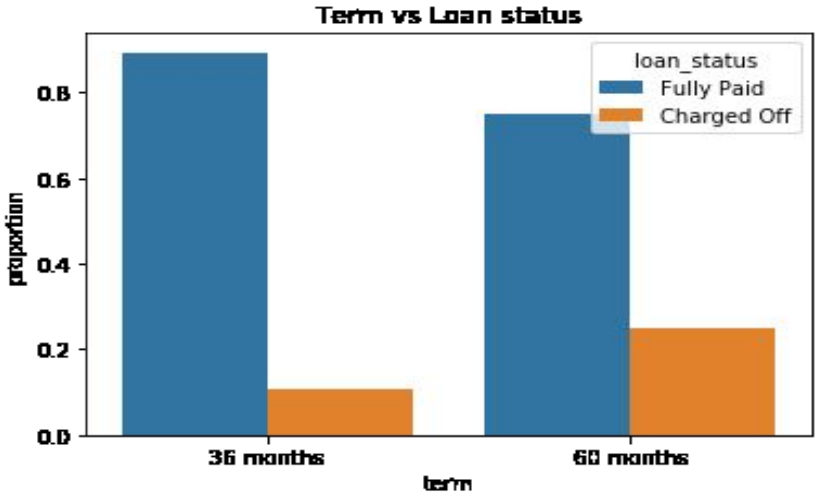
- Charged off is high for the small business then followed by renewable energy.



- Small Business has more defaults when the loan amount is also high.

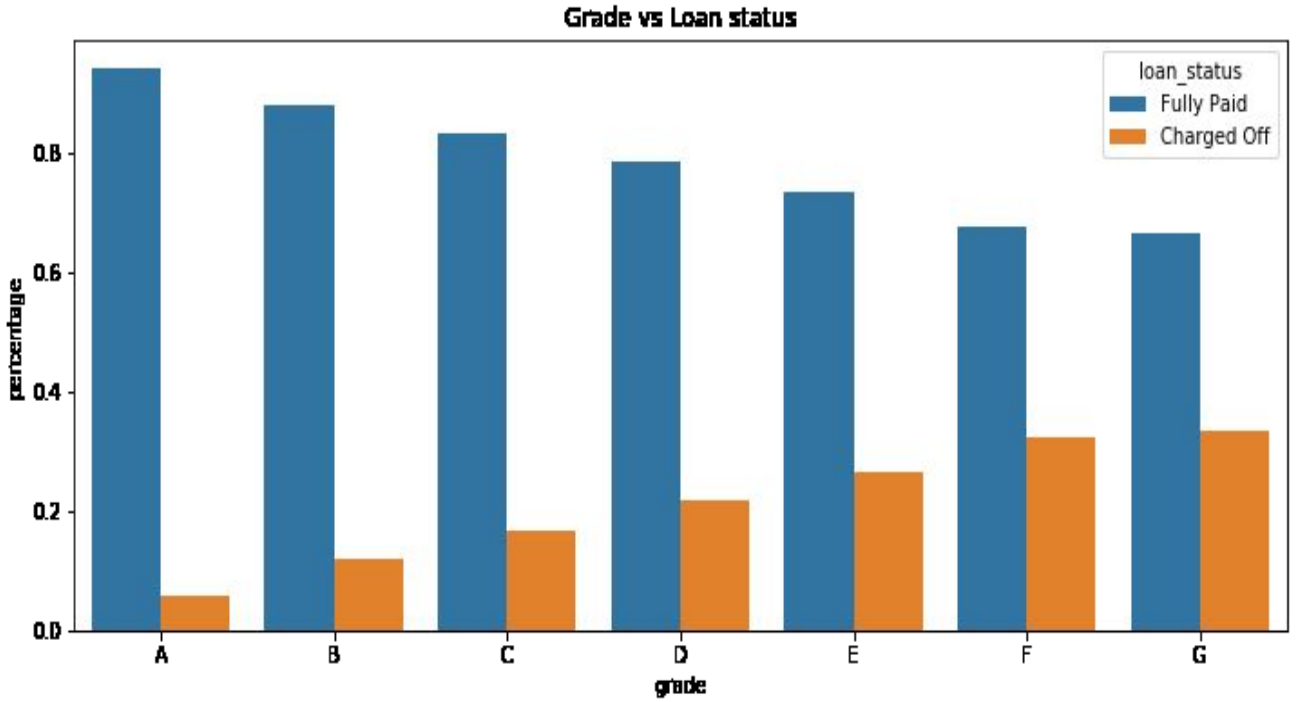
Analysis

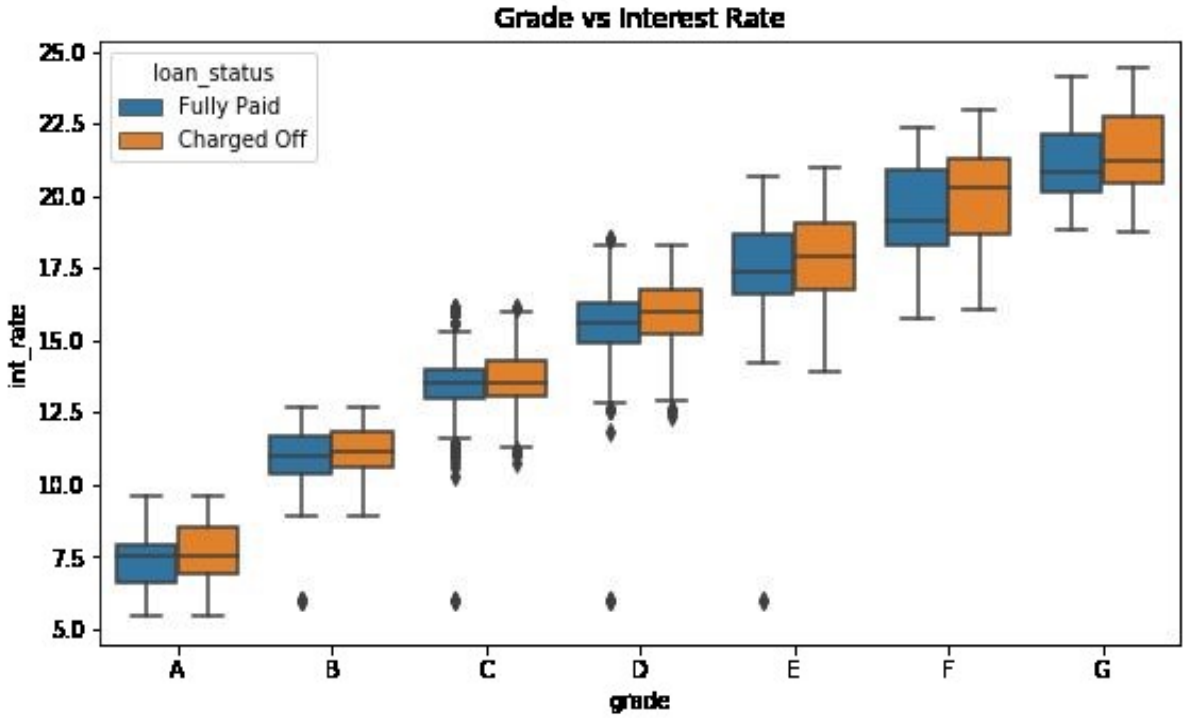




- The default rate is high in 60 months tenure because most people took high loan amount with high interest rate in it and they faced difficulties in returning the sum to bank.

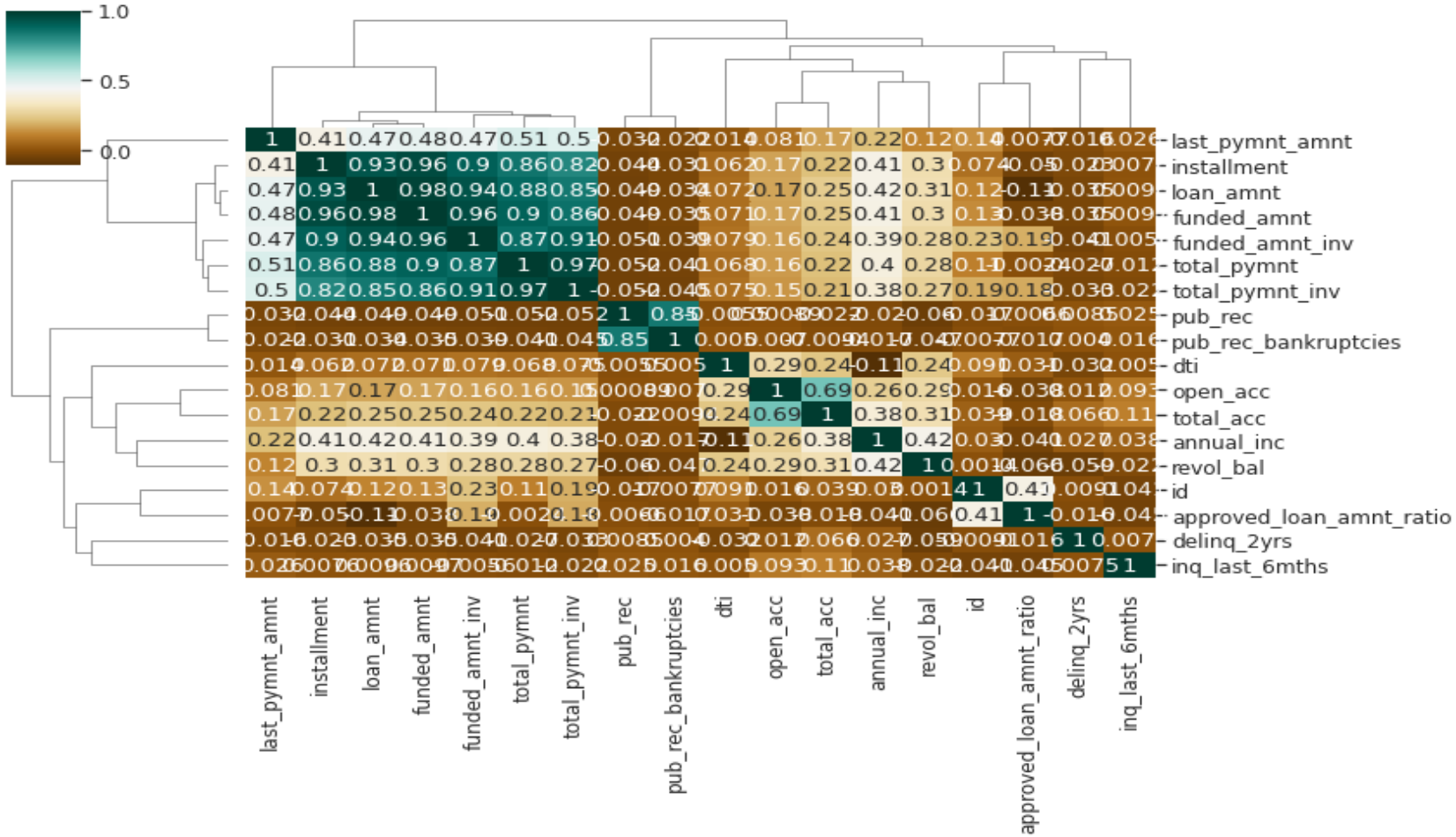
Analysis





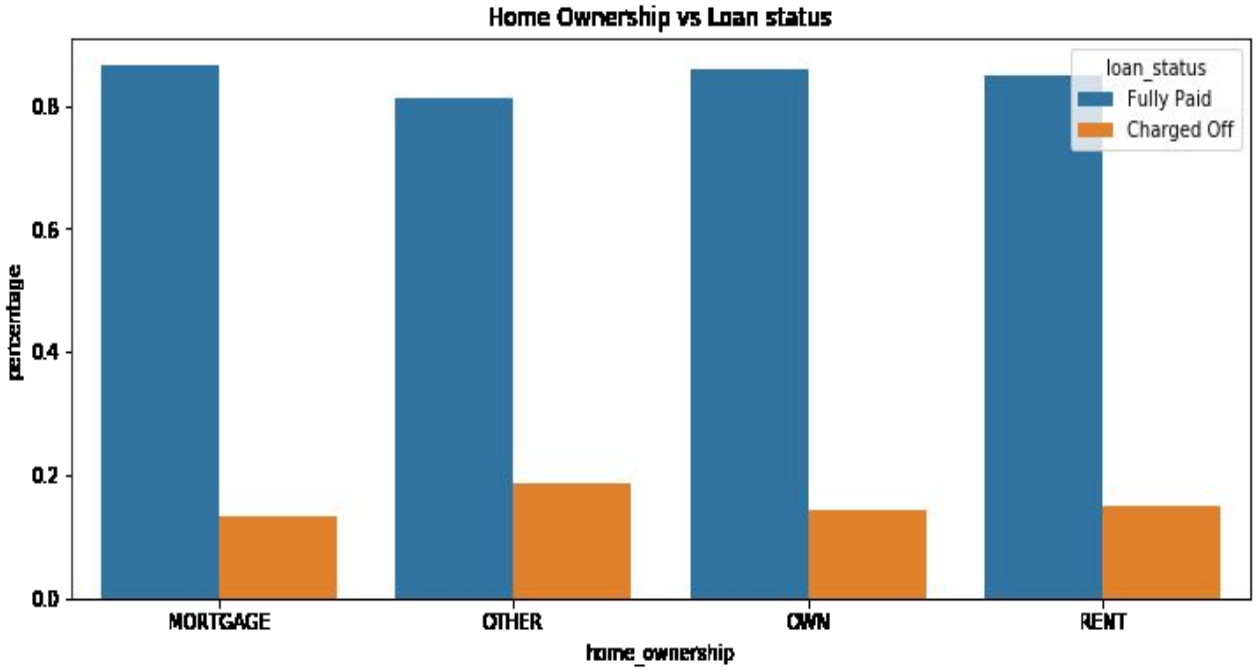
- Grades are very good category to tell the borrower probability of defaulting the loan.
- The Lower grades(E,F,G) have higher chances of defaulting the loan than Higher ones(A,B)
- Also the Lower grades are getting loans for higher interest rates which might be the cause for loan default.

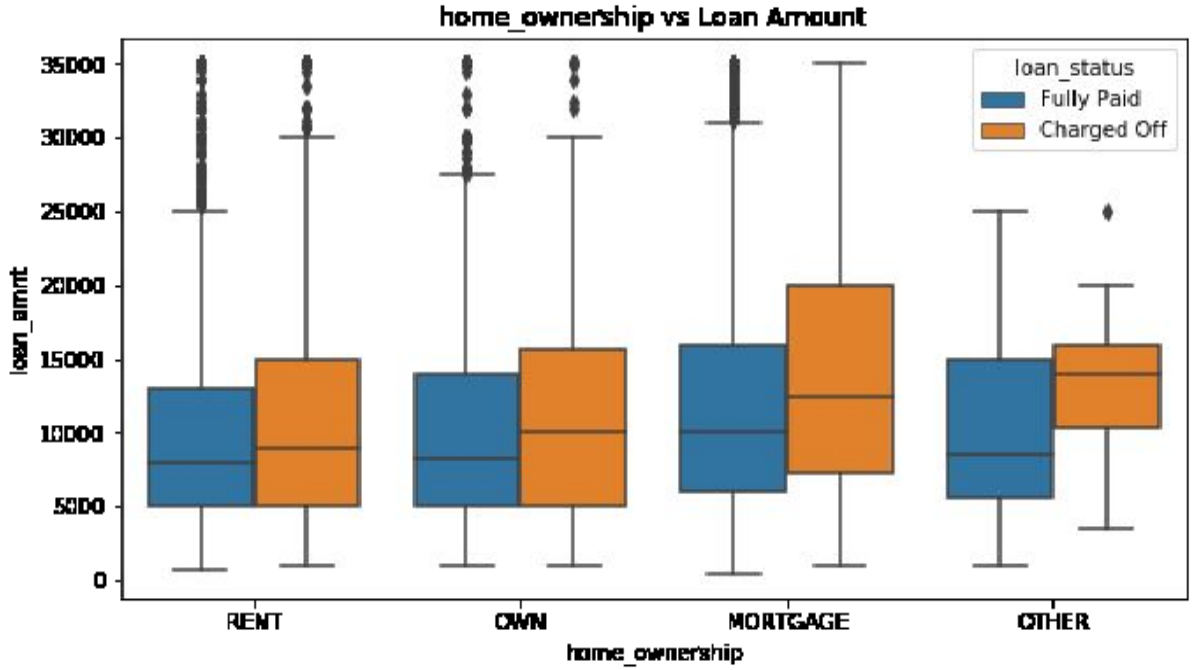
Analysis



- Loan amount, investor amount, funding amount are strongly correlated.
- Positive correlation between annual income and employment years
- Negative correlation between annual income with DTI.

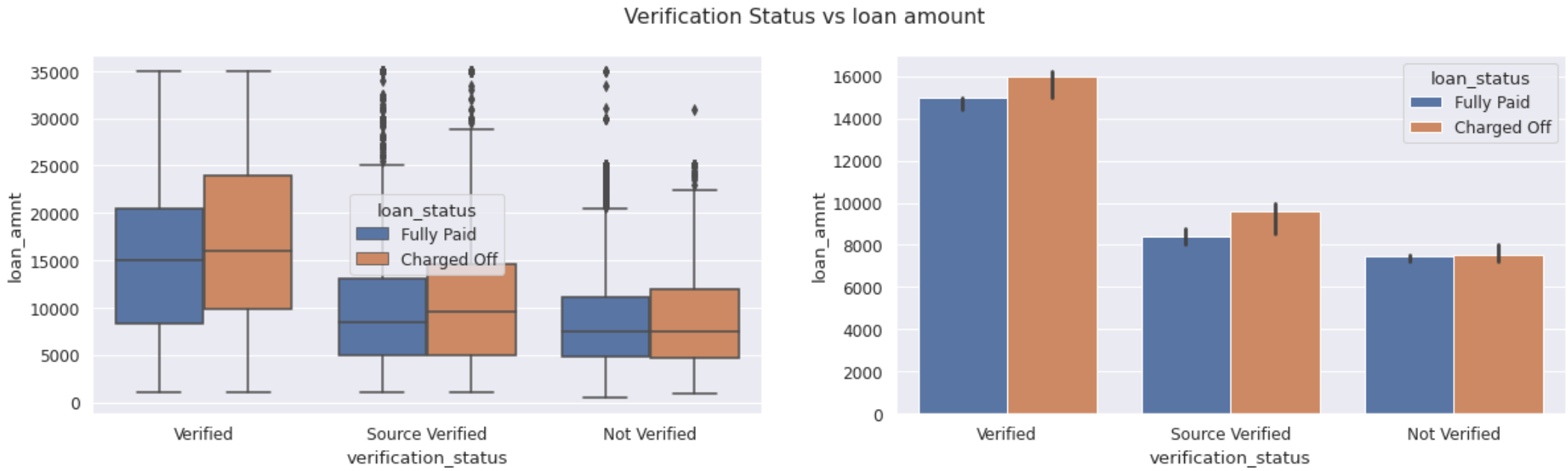
Analysis





- There is around 20% chance of loan default in each home ownership category.
- From the 2nd plot we can see the people with higher loan amounts in **mortgage** home ownership has high default rate than others.

Analysis



- Verified loans are given more loan amounts compared to others.
- There is a slight increase in loan amount for verified and source verified loan when they are defaulted

Summary:

- It should approve the load for annual higher than 30%
- It should reduce the high interest loans for 60 months tenure, they are prone to loan default.
- Grades are good metric for detecting defaulters. Lending club should examine more information from borrowers before issuing loans to Low grade (G to A).
- It should stop/reduce issuing the loans to small business them.
- Borrowers with mortgage home ownership are taking higher loans and defaulting the approved loans. Lending club should stop giving loans to this category when loan amount requested is more than 12000.
- charging higher interest rates for loans with dti greater than 20