

Lending Club Case Study Submission

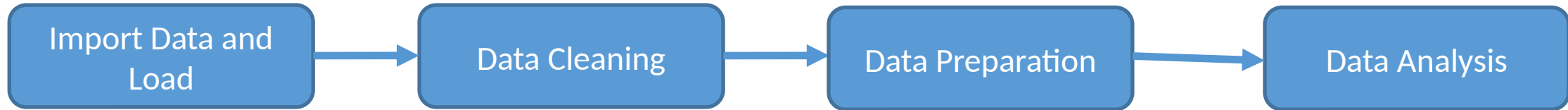
Group Members:

Aswini Kumar Tripathy

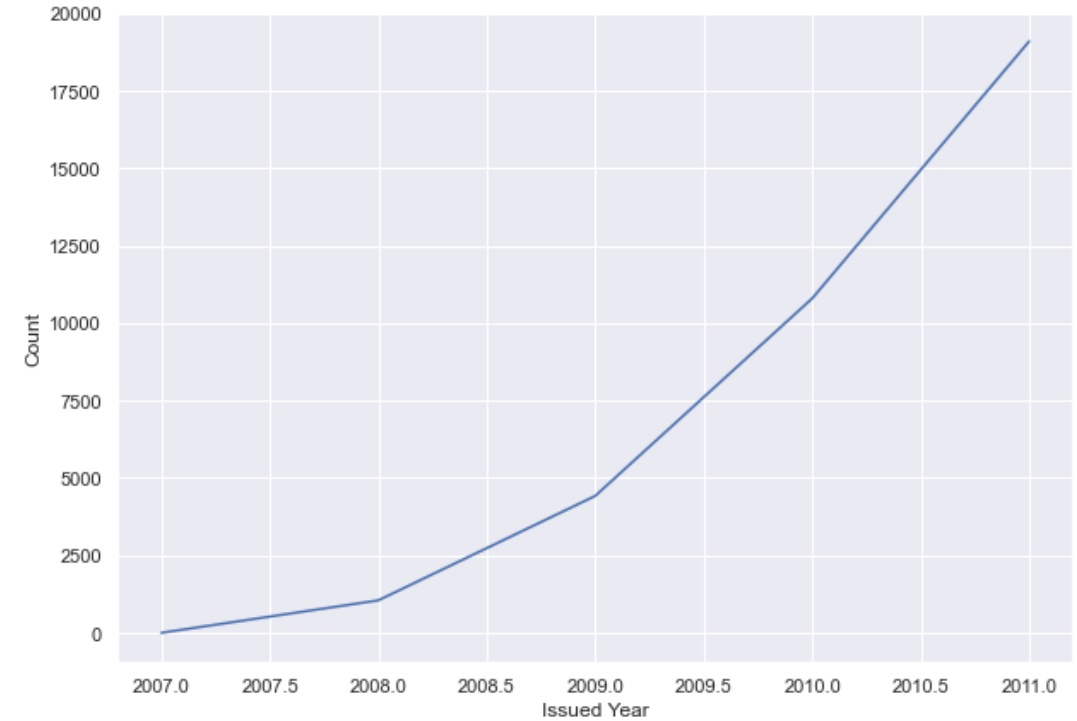
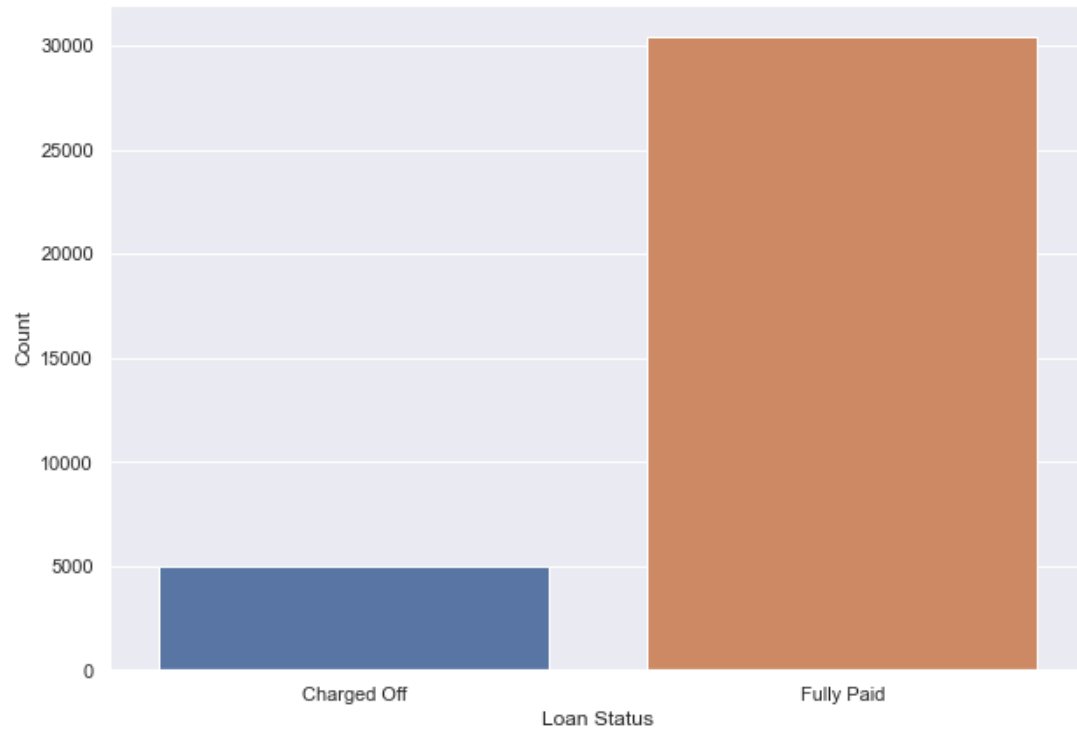
Hiresh Dandekar

Objective:

- Identification of Loan Applicant traits that are reasons for Default
- Identification of Loan default variables and its impact on decision about loan approval
- Lending Club to utilize the above knowledge for Portfolio & Risk Assessment

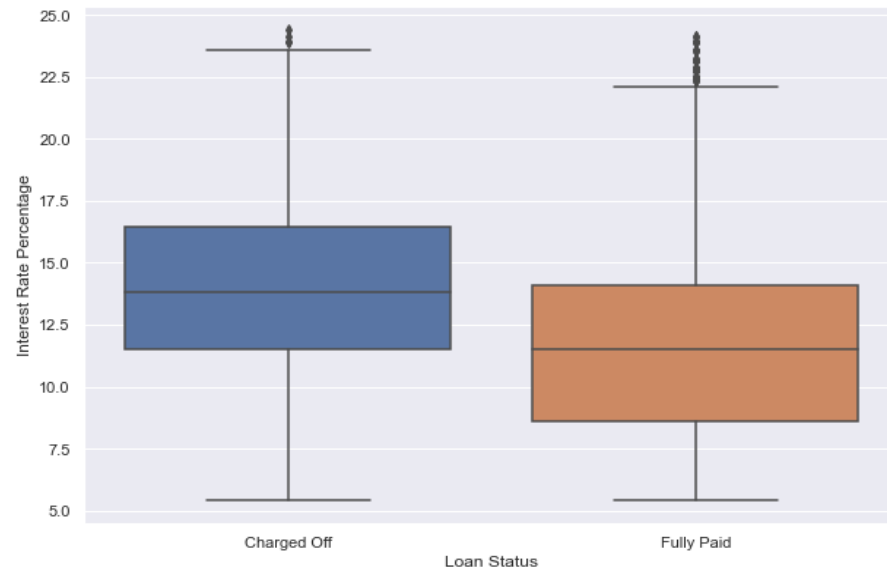
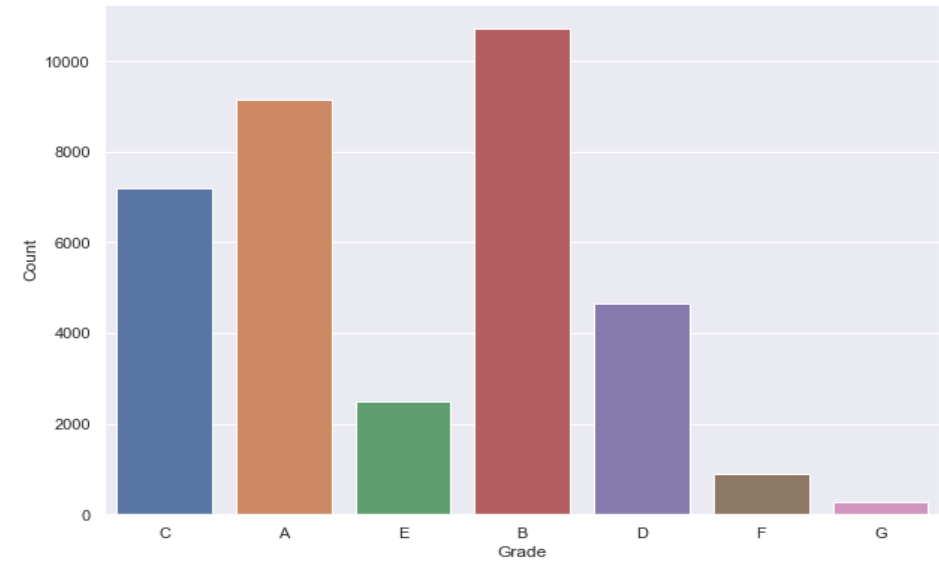
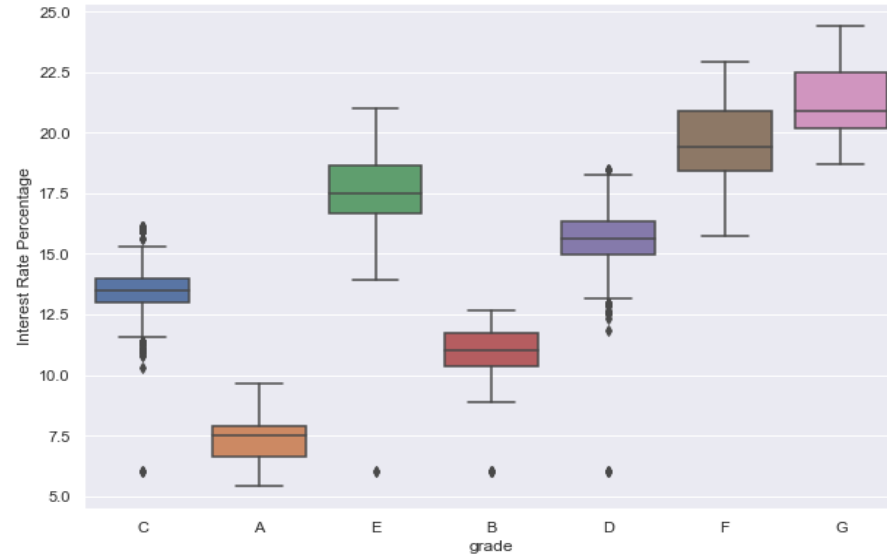


Data Cleaning	Data Analysis
<ul style="list-style-type: none">• Remove unnecessary columns need to be deleted• Remove outliers (high and low value that are affecting the analysis in a diverse way• Remove Missing values by either deleting or replacing the missing field with appropriate values.• Remove duplicate records	<ul style="list-style-type: none">• Identify consumer and loan attributes impacting the tendency of defaulting• Identify distribution of variables using histogram and bar charts• Identify outliers by use of box plots to reduce bias.• Identify the impact of multiple variables with each other



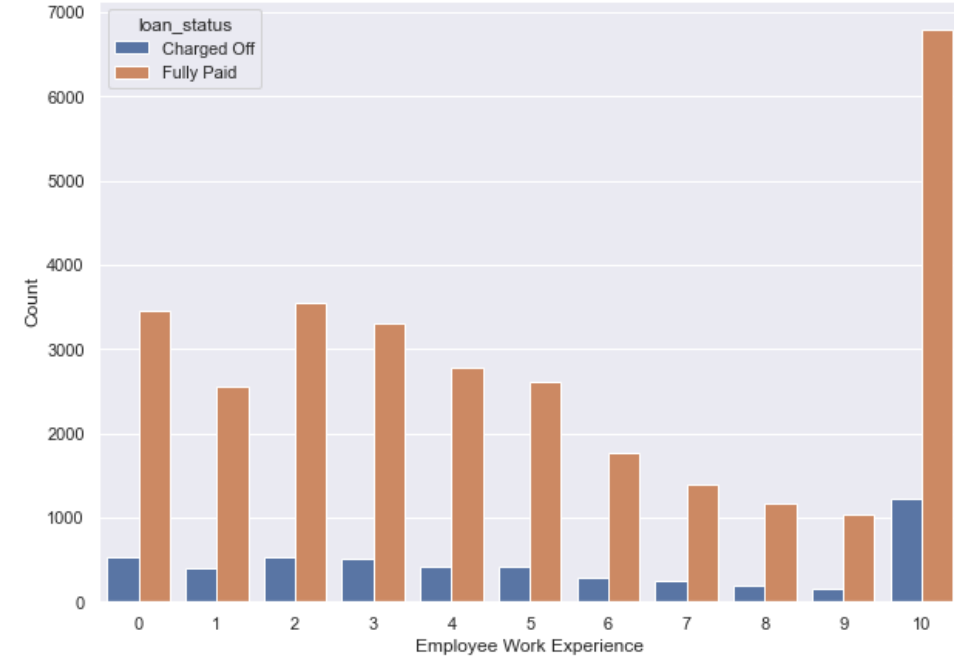
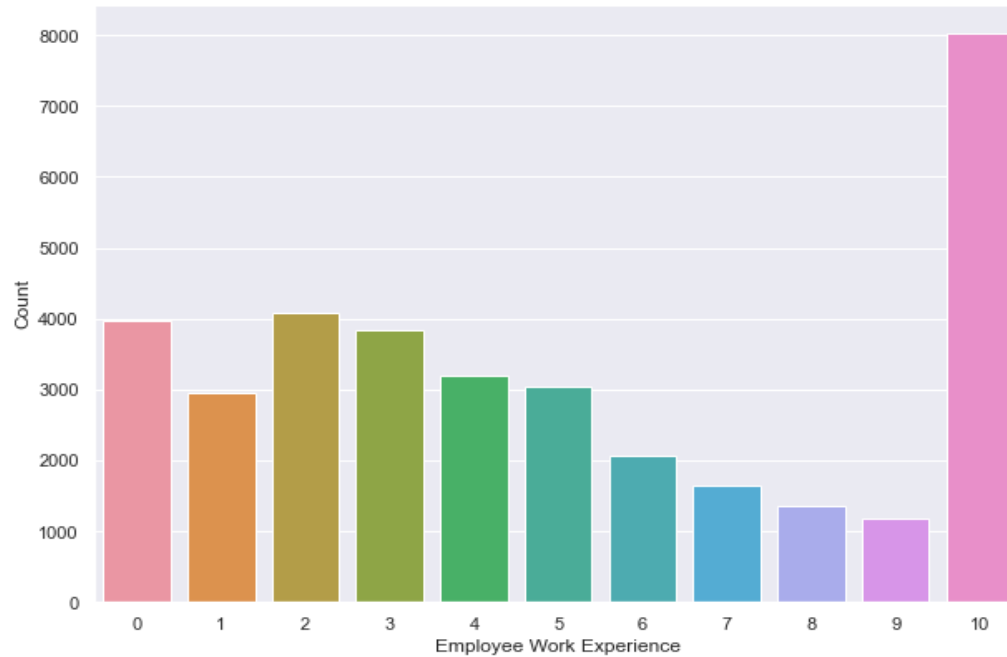
Observations :

- 1) Most of the loans are fully paid.
- 2) About 14% of the loans are having status as defaulter.
- 3) The loan has been increasing exponentially over the year



Observations :

- 1) High Quality loans have low interest rates
- 2) Most of the loans are for Grade A & B, meaning they are high grade loans.
- 3) Higher Interest rates have higher tendency to default loan.

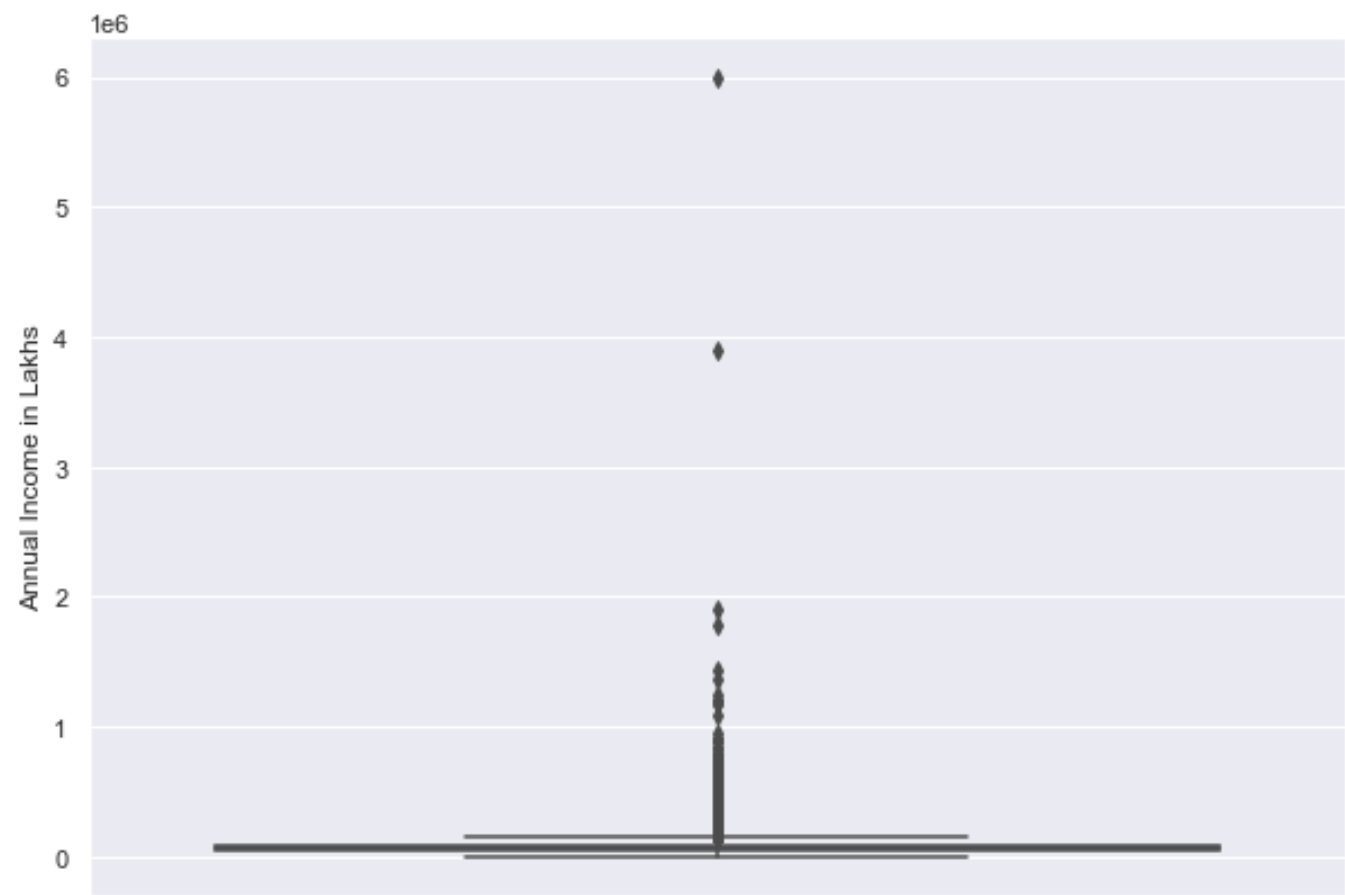


Observations :

- 1) Majority of the employees applying for the loan have more than 10 years of experience.
- 2) Tendency of person to default the loan 10 years of experience is also high which loan approval should be done with caution while granting loan.

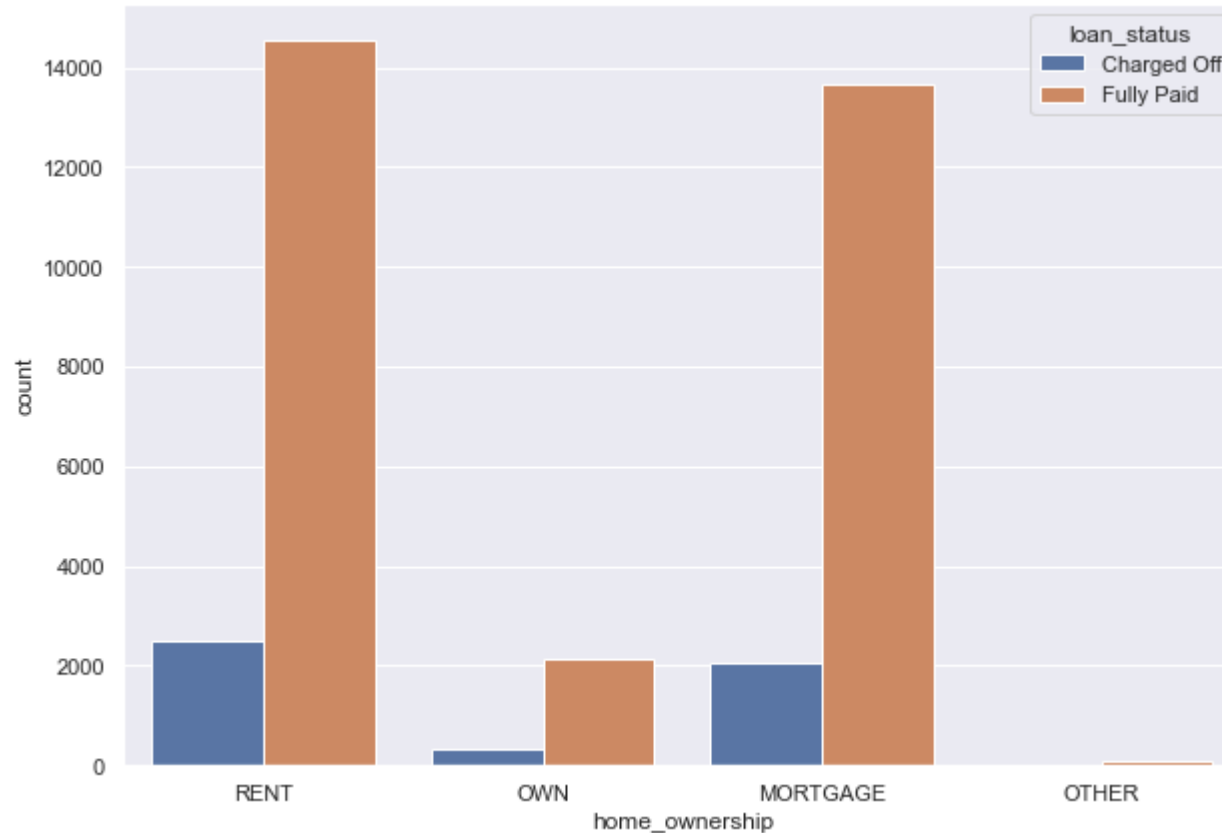


Income Analysis



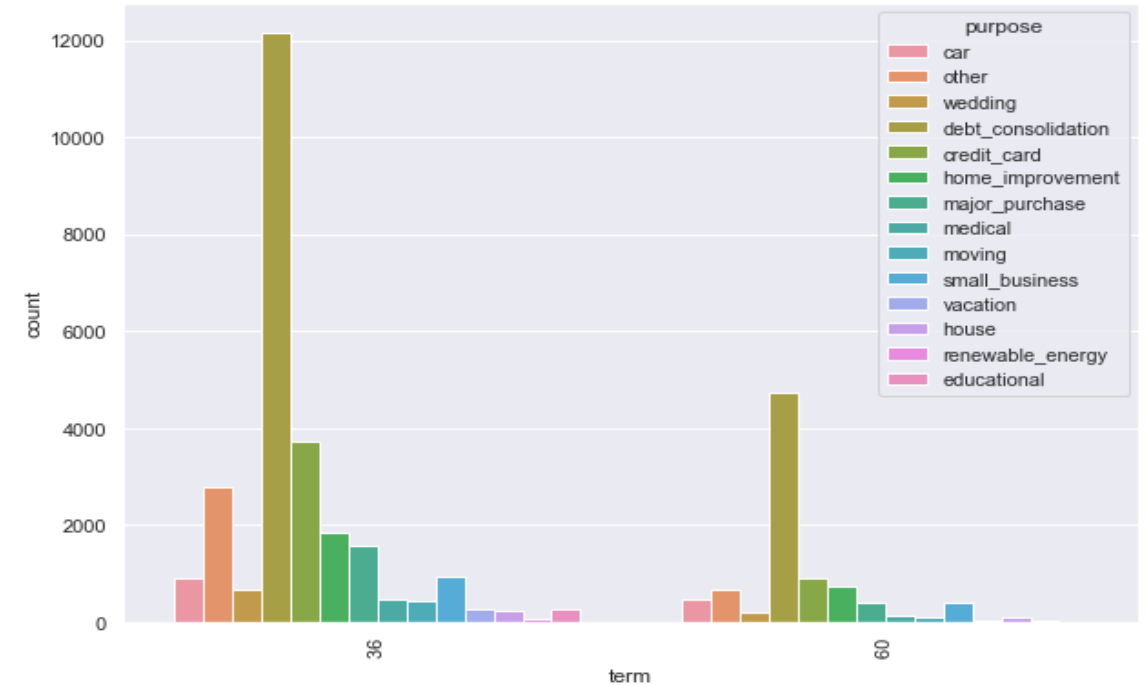
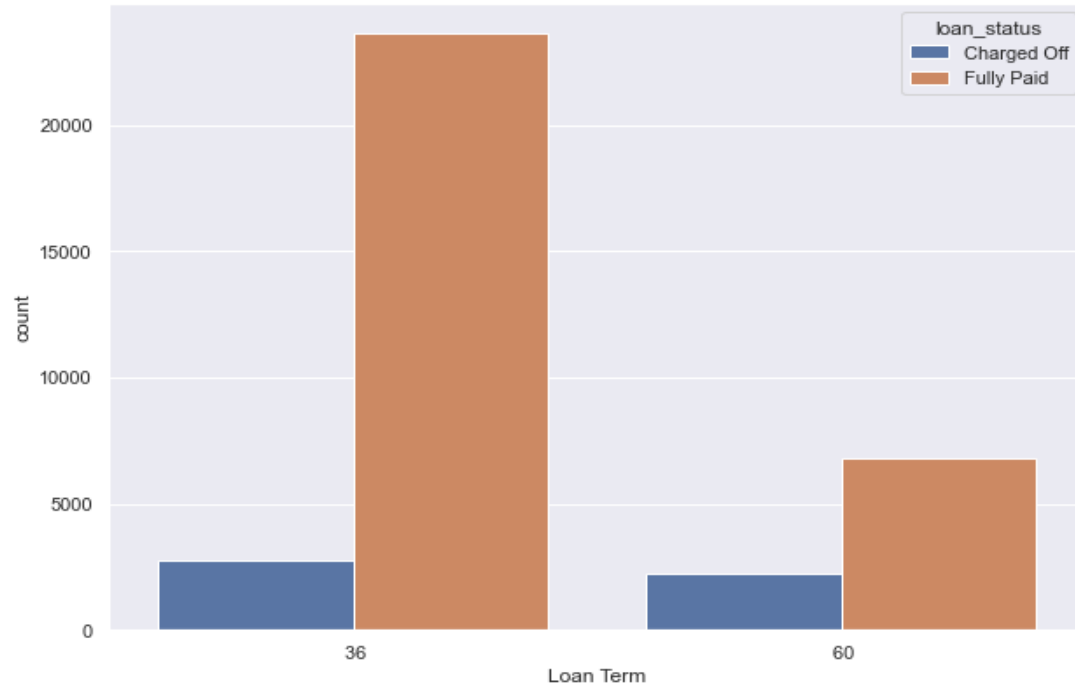
Observations :

There are 2 applicants having income above 30 lakhs



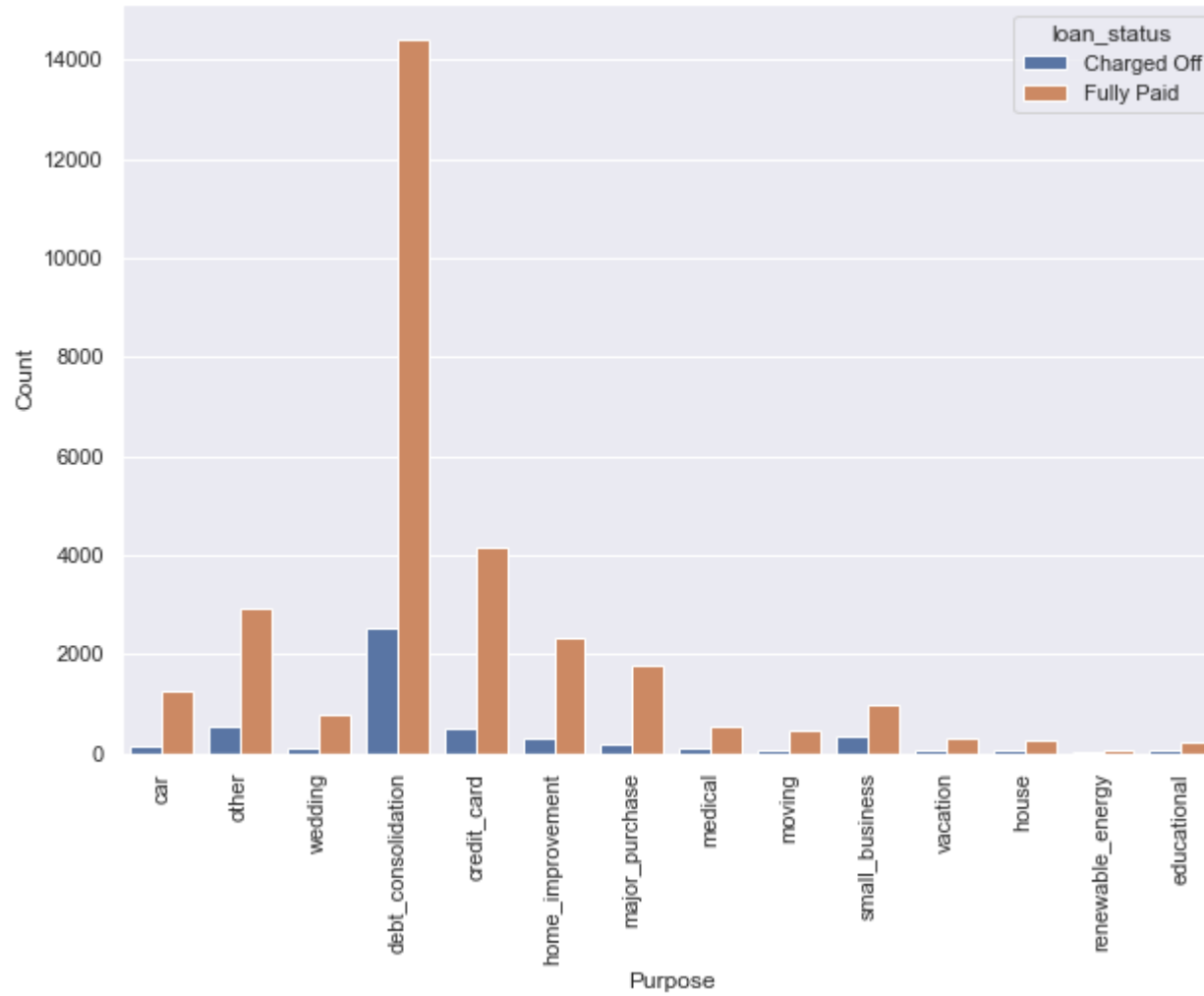
Observations :

Applicants having rented or mortgage homes have negligible impact on loan default.



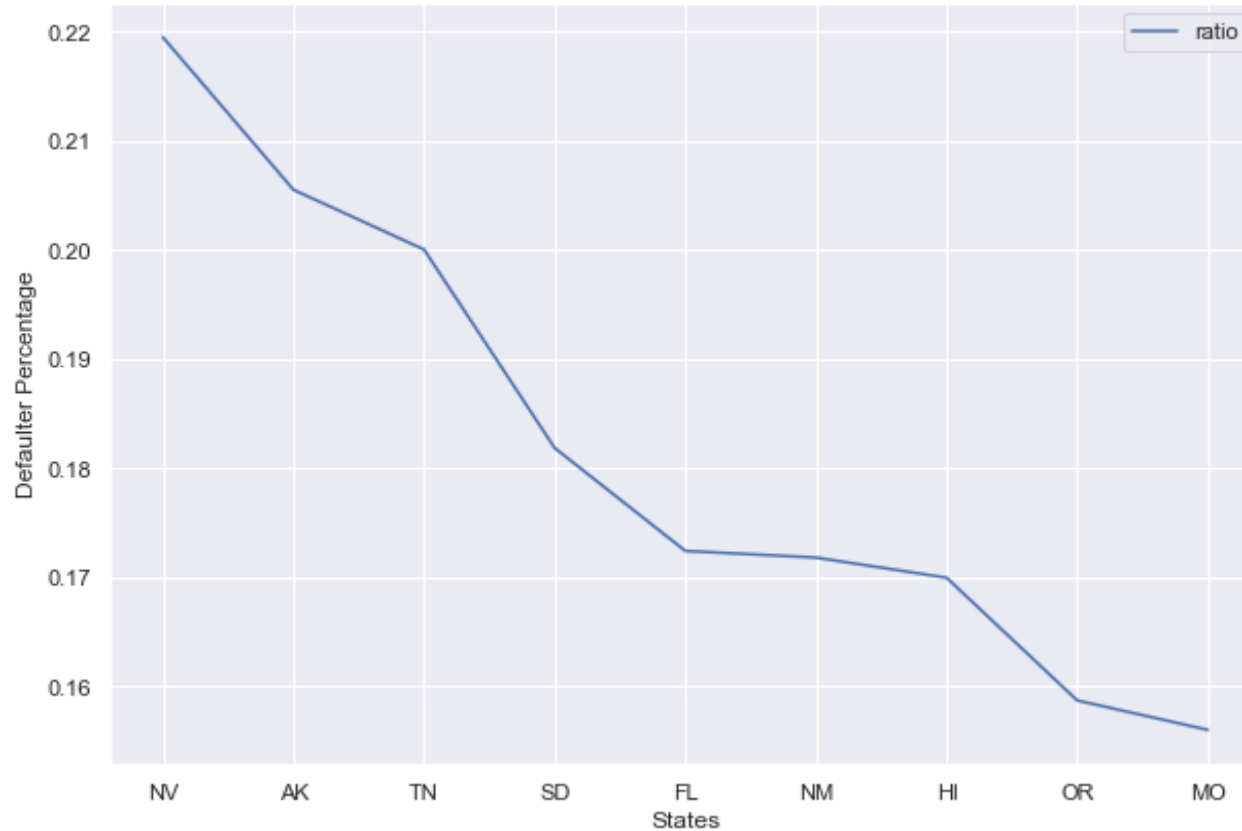
Observations:

- 1) For 36 month term, defaulter chance is less. (Approx. 10%)
- 2) For 60 month term, defaulter chance is less (Approx. 25%)



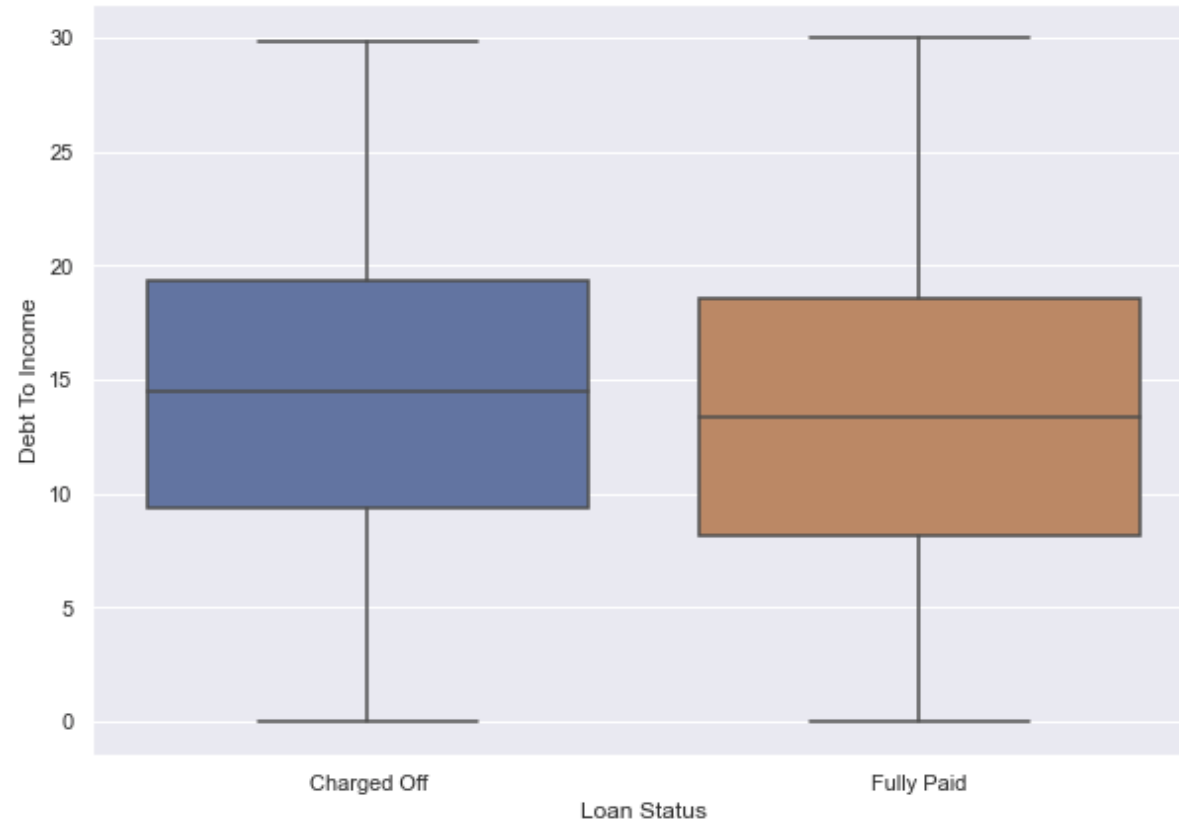
Observations:

Majority of the loan has been given for the debt consolidation purpose



Observations:

NV, AK, TN are the states having high defaulter percentage as compared to other states.



Observations:

In case of higher DTI, loan default chances are higher.

Below are the few conclusions on basis of analysis.

1. Low Grade Loans have high tendency to default(A=High Grade, G=Low Grade)
2. Higher Interest rates have higher chances of defaulting a loan.
3. Lending Club should keep close watch on individuals from NV,AK,TN states as they have higher default rates.
4. As the experience yrs increases, loan default also increases, hence Lending Club should avoid issuing high loan amount to people with more than 10+ yrs experience.
5. Home or Rent has negligible impact on loan default
6. For 60 month tenure, defaulter chances are high. Need to be careful.
7. In case of higher DTI, loan default chances are higher