LENDING CLUB CASE STUDY SUBMISSION

Amit Gupta
&
R Arvind

Objective

1. Identification of the traits of loan applicant based on data set who are defaulting on their payment

2. Understanding the variable and it relation with other variable which ultimately causing defaulting on payment

Method used for Analysis

- Understanding The Dataset

- Dataset cleaning

- Dataset preparation

- Exploratory data analysis
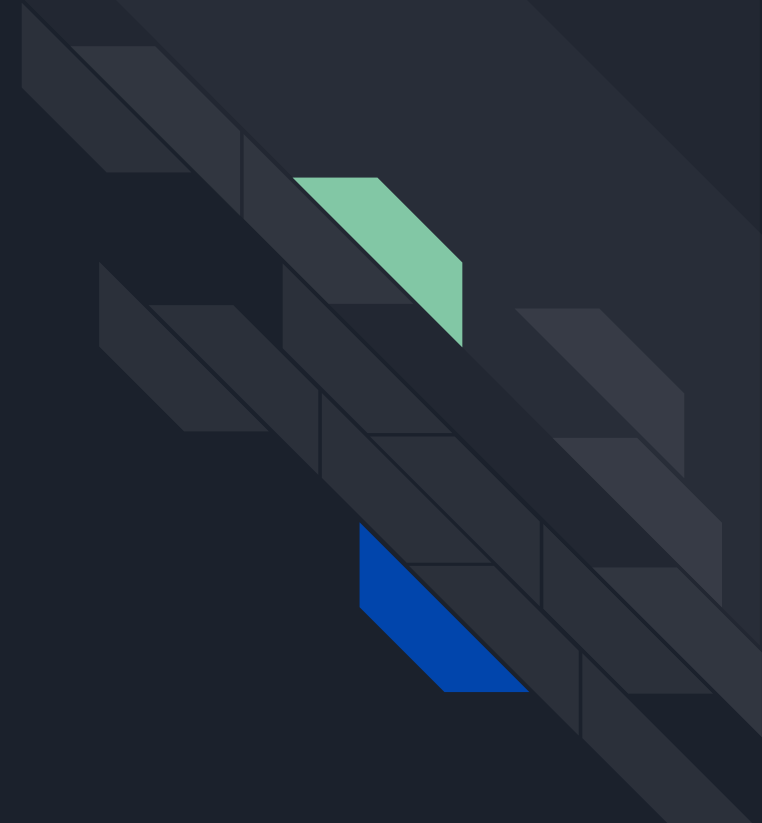
Data cleaning & Data preparation

1. Removing column which have zero or one value in all rows as they don't provide any useful information in analysis

2. Removing rows having outlier

3. Removing missing value data by deleting the row or adding relevant data

4. Removing the duplicate rows

5. Updating data in correct format to make analysis easier

6. Converting dates in proper date type type to help with analysis

Methods of Analysis

- Univariate Analysis : observing single

  variable and how they behave

- Bivariate Analysis: we will be using one

  variable against another variable and see
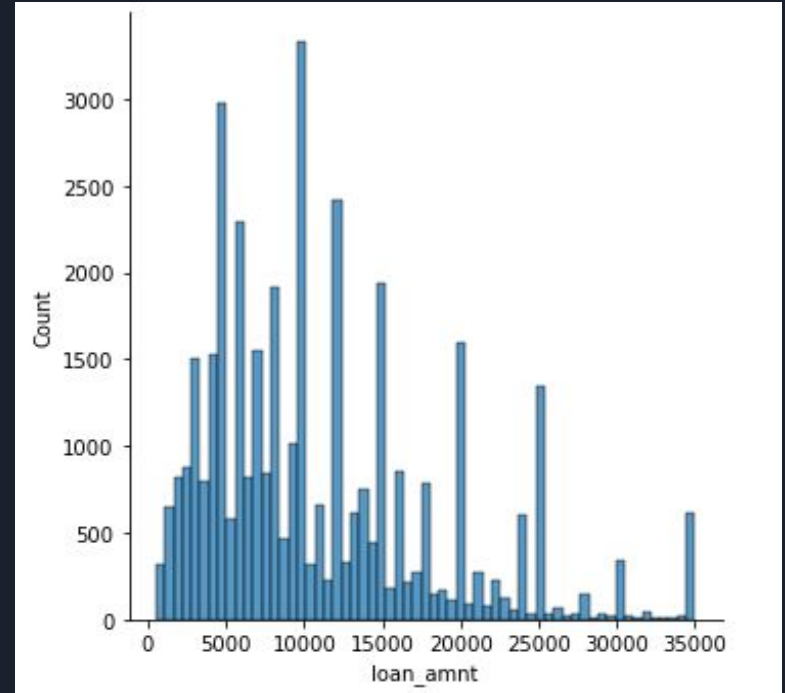
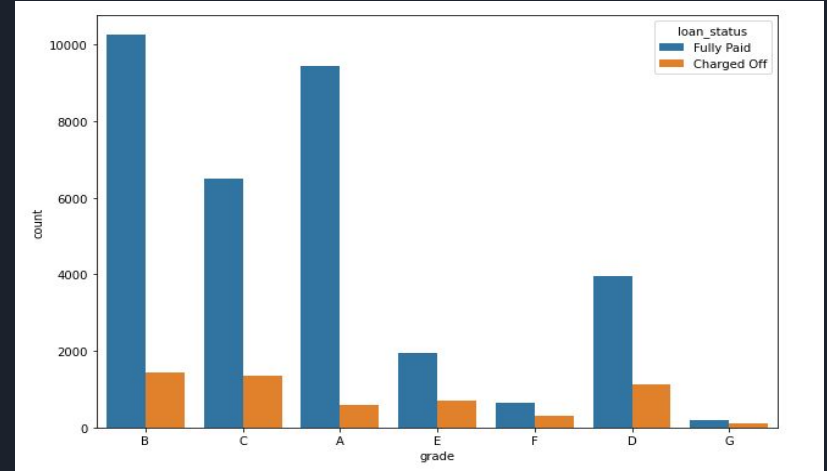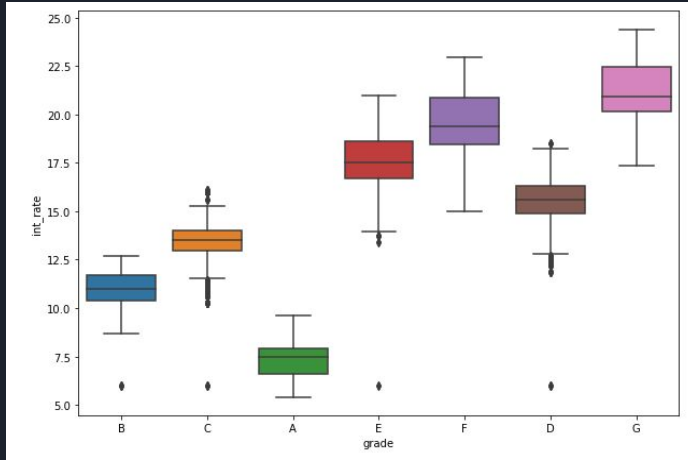 how they behave against each other
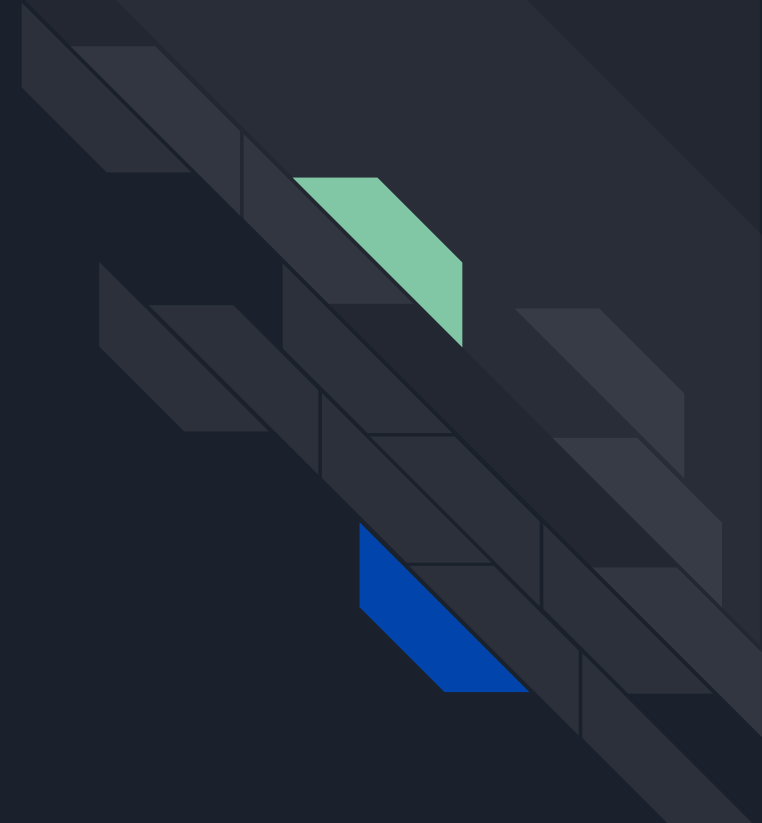
Analysis of Loan Amount
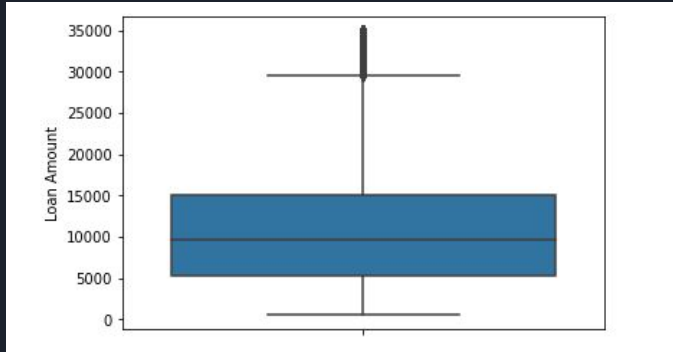
Observation

1. Most of the people borrow money between 5000$ to 15000$
2. People have tendency to borrow money in rounded figure like 5000, 10000, 15000… and so on.
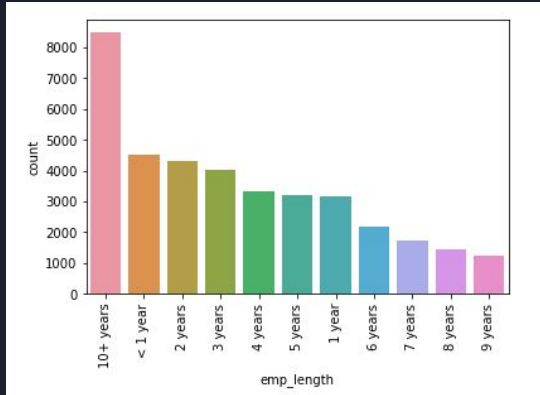
Analysis of Grade

Observation

1. As the grade goes lower the interest rate goes higher
2. As the grade decreases the borrower defaults on their payment
3. We have to be extra cautious when approving loan to lower grade applicant
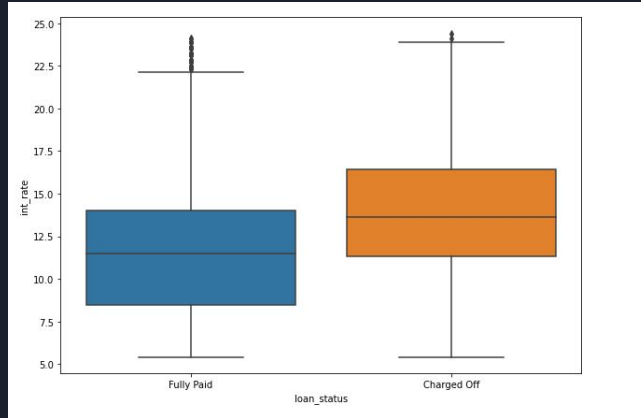
Analysis of Employee Experience

Observation

1. Most of the borrower have more than 10 years of experience
2. People having more than 10 years of experience also have higher tendency for defaulting
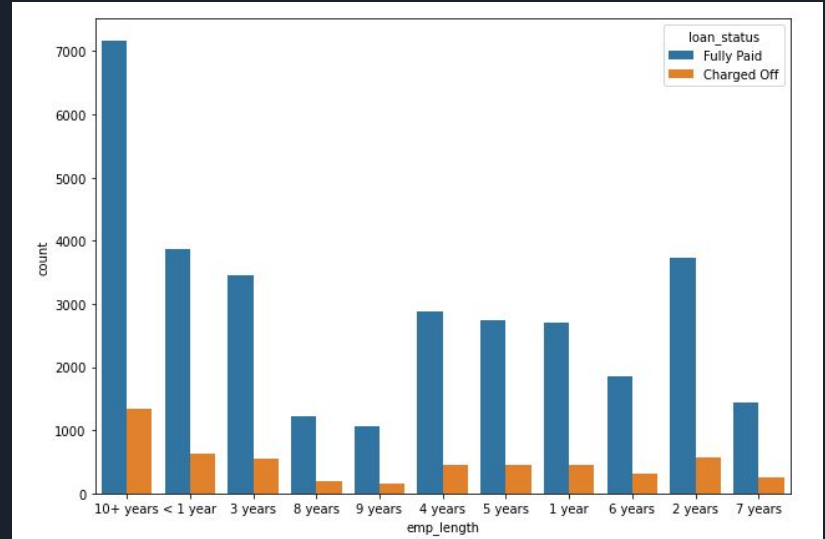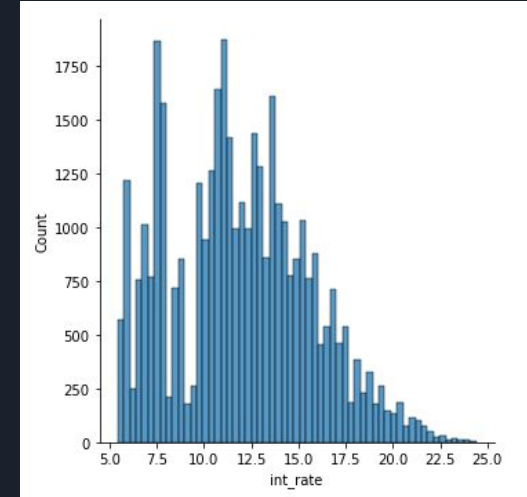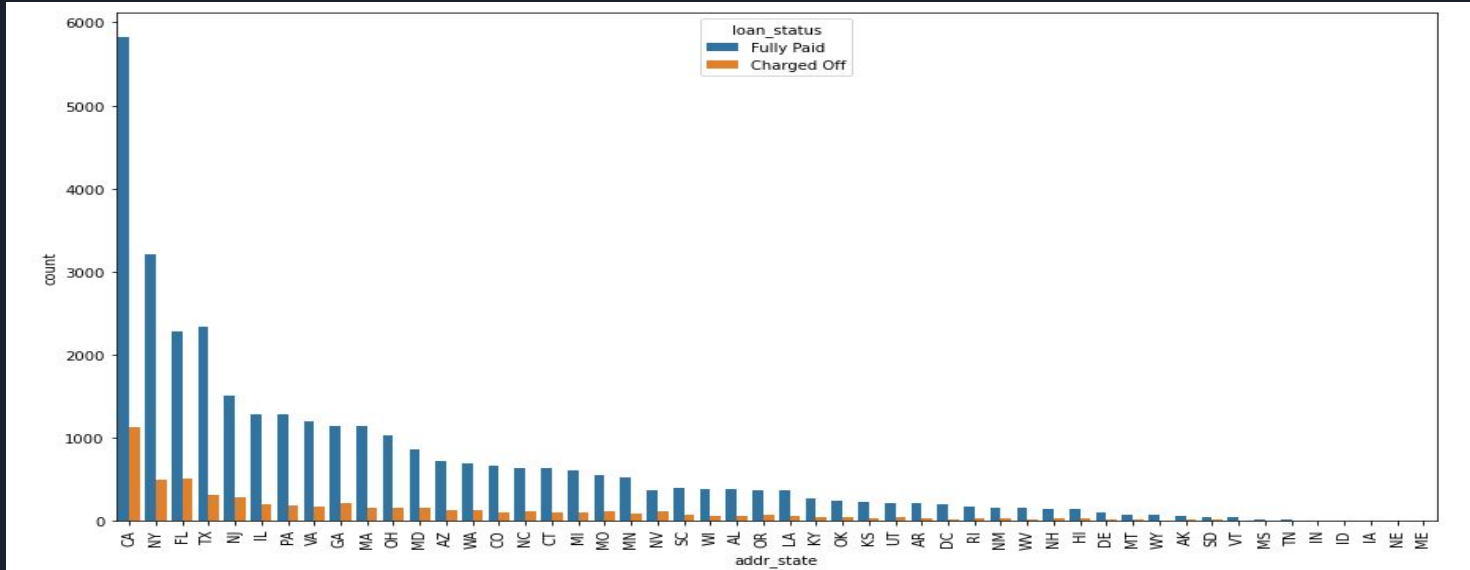
Analysis of Interest Rate

Observation

1. As the Interest rate goes higher less people want to borrow the money
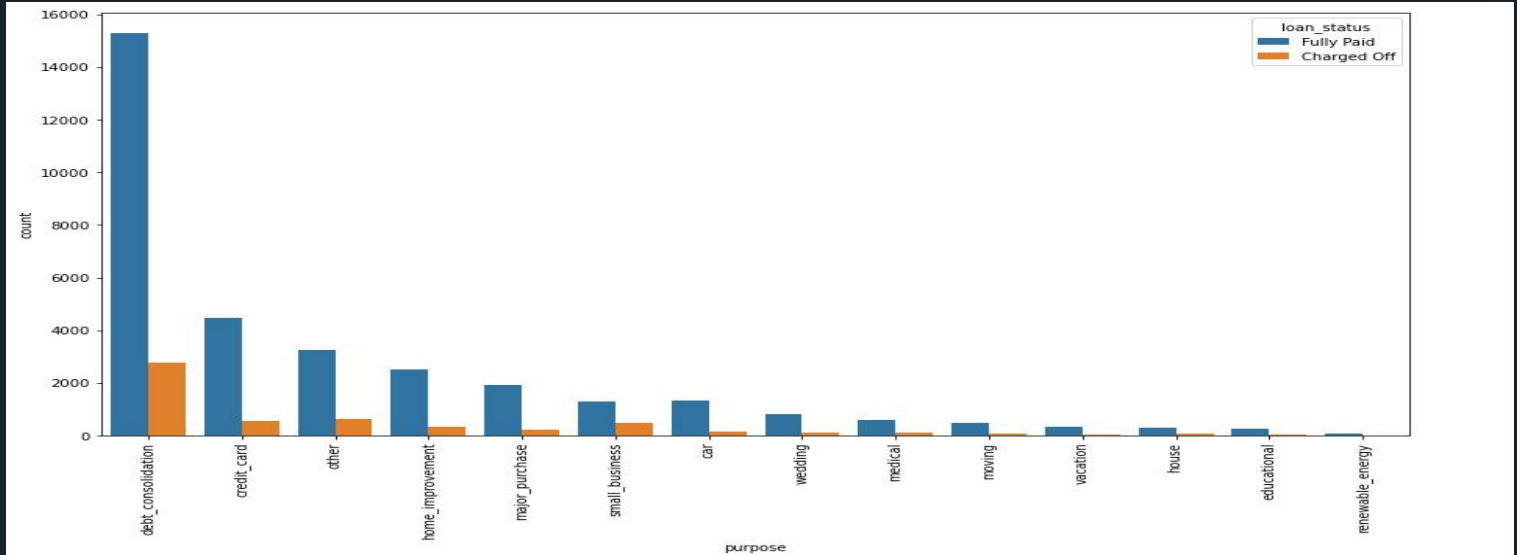2. People with higher Interest rate have higher tendency to default

Analysis of State of Applicant's

Observation

1. People of State CA have higher tendency to apply for loan
2. People of CA also have higher tendency to default
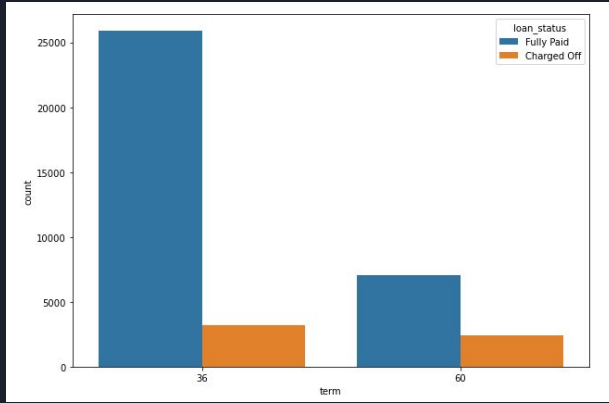
# Analysis of Purpose of Applicant

Observation

1. Most of the loan granted were for Debt Consolidation
2. People who apply for loan because of debt consolidation tends to default repayment
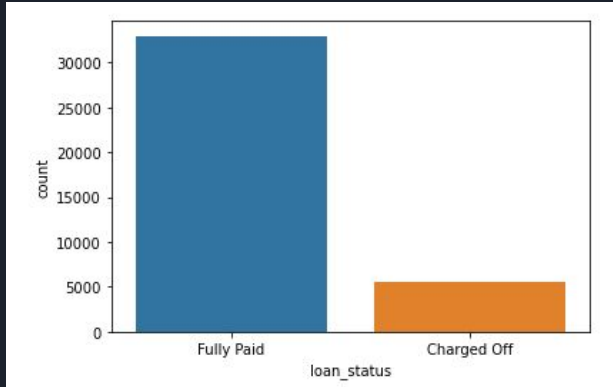
Analysis of Loan Term in Months

Observation

1. Most of the loans granted of 36 months
2. Loans granted for 60 months have higher percentage of defaulting
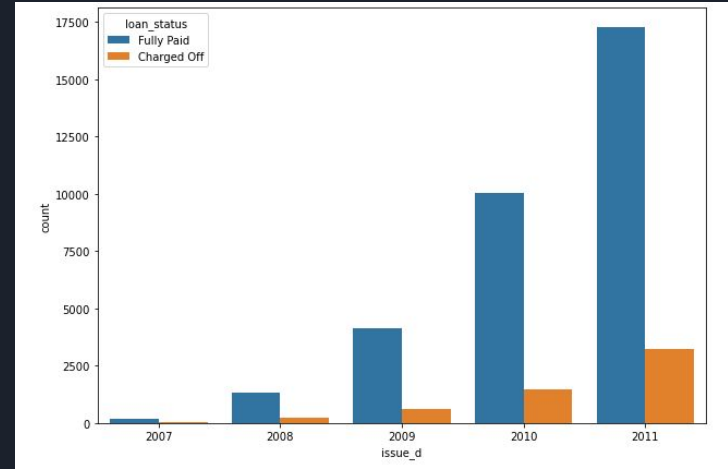3. For 60 month loan Interest rate is generally higher
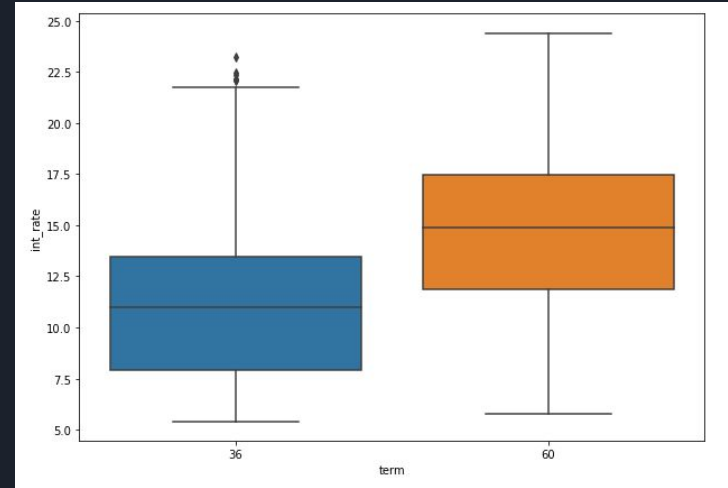
Analysis of Loan Status

Observation

1. Most of the loans are fully paid
2. 14% of the borrower were defaulted on their loan repayment
3. Every year Loan applications are increasing exponentially

Conclusion

- Lower Grade Loan applicants have higher chance for defaulting. So Grade system is working as expected
- Higher Interest rate loans have higher chances of defaulting. We need to be carefully while setting the interest rate for certain applicant higher interest rate may burden the loan applicant
- We could see people of state CA have higher chance to apply for loan and higher chance to default. So we need to thorough background check before approving the loan
- Loan application in which term for 60 month need to be careful while approving the loan as they have higher chance of defaulting
- People with purpose for debt consolidation have to be thoroughly checked as they have higher chance to default