



Lending Club Case Study

Group Members: Akash Jain Sharibe Alam





The Problem:

COMPANY

Lending Club is the largest online lending market place, facilating personal loans and financing for medical procedure

Borrowers can easily access lower interest rate loans through a fast online interface.

CONTEXT

Lending Club wants to understand the driving factors behind loan defaults i.e. driver variables which are strong indicators of default.

The company can utilize this knowledge for its portfolio and risk management.

PROBLEM STATEMENT

As a data analyst working for Lending Club analyzing the dataset containing information about the past loans application using EDA to understand how consumer attributes and loan attributes influence the tendency for default.





Problem solving methodology

Data Data Analysis Analysis Analysis

Data Cleaning

Removing the null valued columns, unnecessary variables and checking the null value percentage and removing the respective rows.

Data **Understanding**

Working with the Data Dictionary and getting knowledge of all the columns and their domain specific uses

Univariate Analysis

Analysing each column, plotting the distributions of each column.

Segmented Univariate Analysis

Analysing the continuous data columns with respect to the categorical column

Bivariate Analysis

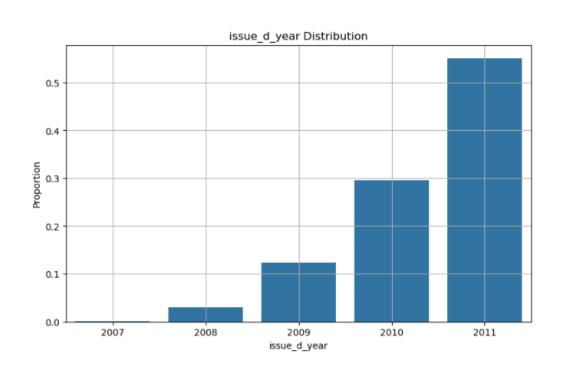
Analysing the two variable behaviour like term and loan status with respect to loan amount.

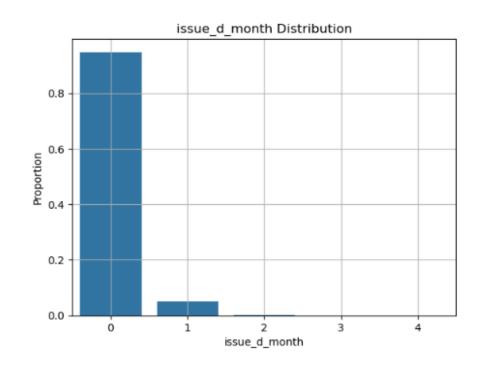
Recommendations

Analysing all plots and recommendations for reducing the loss of business by detecting columns best which contribute to loan defaulters.





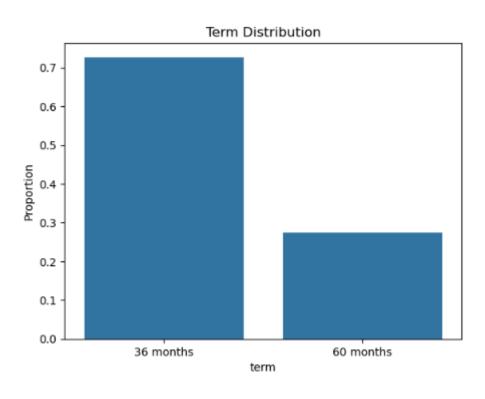


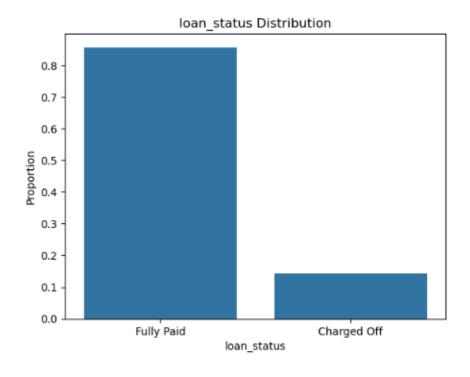


- The lending club(LC) has doubling loan issues every year
- There are more issues of loan in last 4 months every end of the ear i.e., Sep,Oct, Nov and Dec.





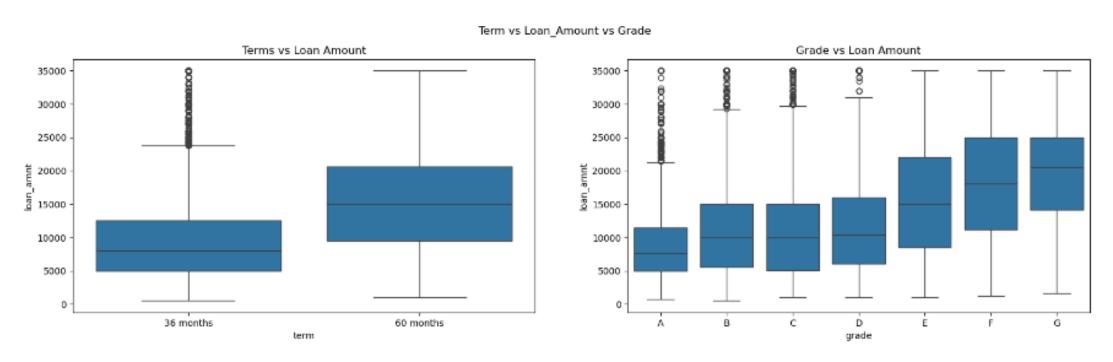




- Most Borrower's have taken loan for 36 months term.
- More than 80% have fully paid the loan.



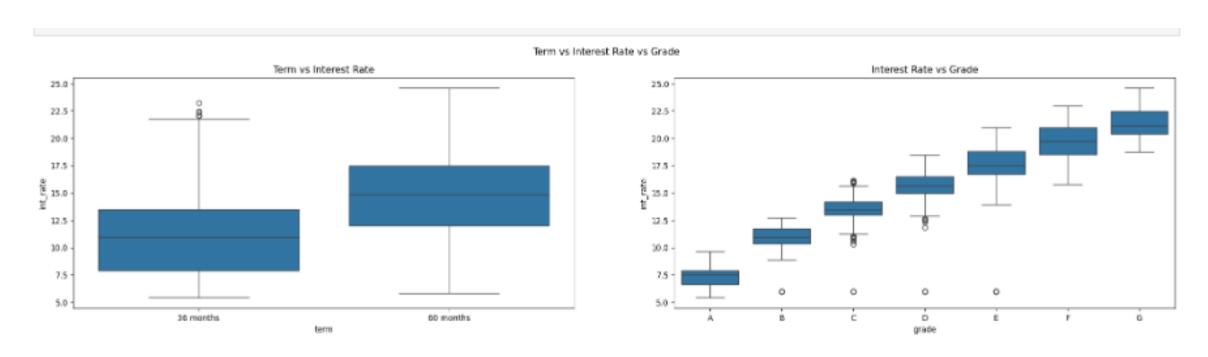




- Borrower's have opted 60 months terms for higher loan amount.
- As Grades are decreasing the loan amount is increasing. Grade 'A' has taken lowest amount of loan where as G has taken highest amount of loan.



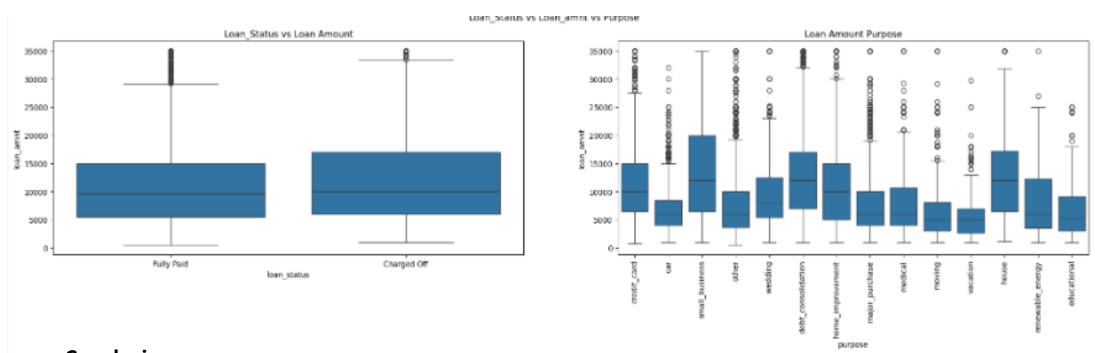




- Loan allocated for 60 Month tenure have higher interest rate.
- As the Grade have increased from (A to G), interest rate is also have increased.



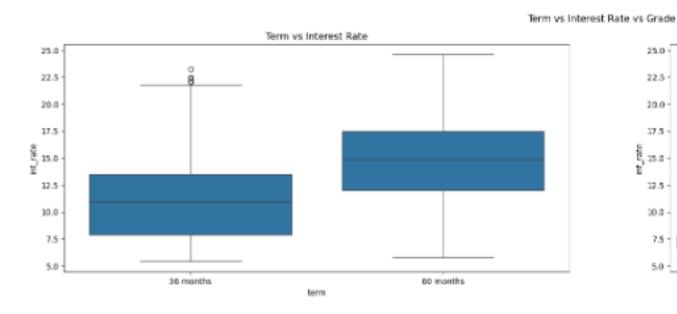


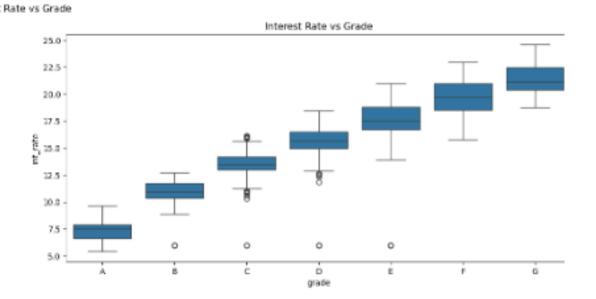


- Borrowers have taken higher amount of loan found to be Charged off(defaulted).
- Most of Borrowers have taken higher amount of loan for small_businesses.





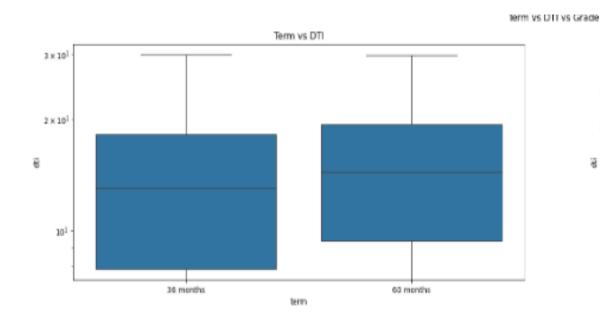


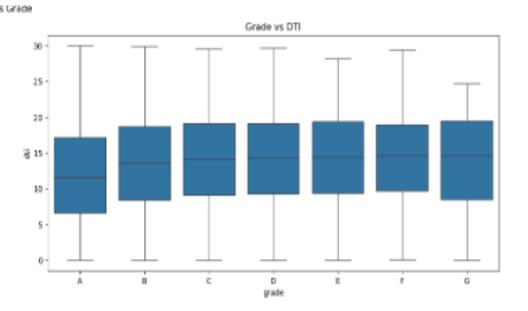


- Loan allocated for 60 Month tenure have higher interest rate.
- As the Grade have increased from (A to G), interest rate is also have increased.







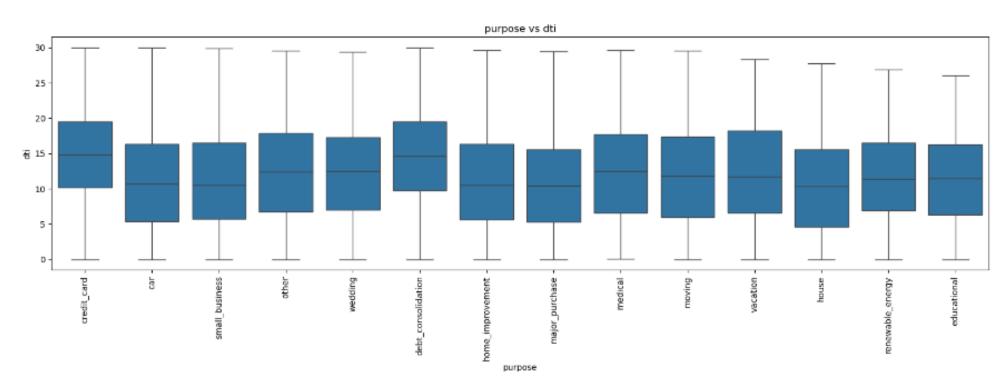


Conclusion:

60 months term DTI for borrowers is bit higher. DTI for Grade 'A' seems low.







Conclusion:

Credit card and Debt consolidation purpose has more DTI than other purposes.





- Lending club 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).
- Small business loans are defaulted more. Lending club should stop/reduce issuing the loans to 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.