

# Landing Club case study

## Contributor

Ratnesh Zinzuwadia

Rajesh Sharma

C-45, Sep-22 Batch

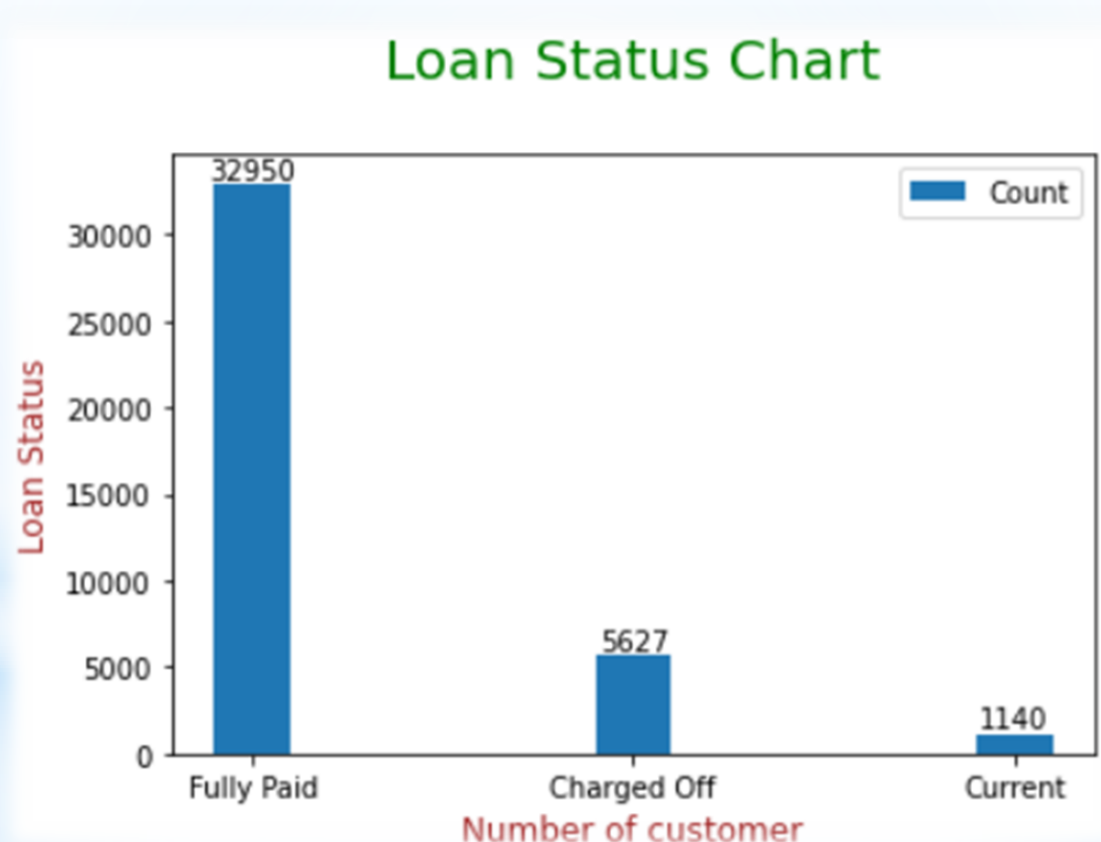
# Abstract

- Lending Club is the largest online loan marketplace, facilitating personal loans, business loans, and financing.
- Borrowers can easily access lower-interest-rate loans through a fast online interface.
- The objective of the analysis is to use the information about past loan applicants and find whether they 'defaulted' or not.

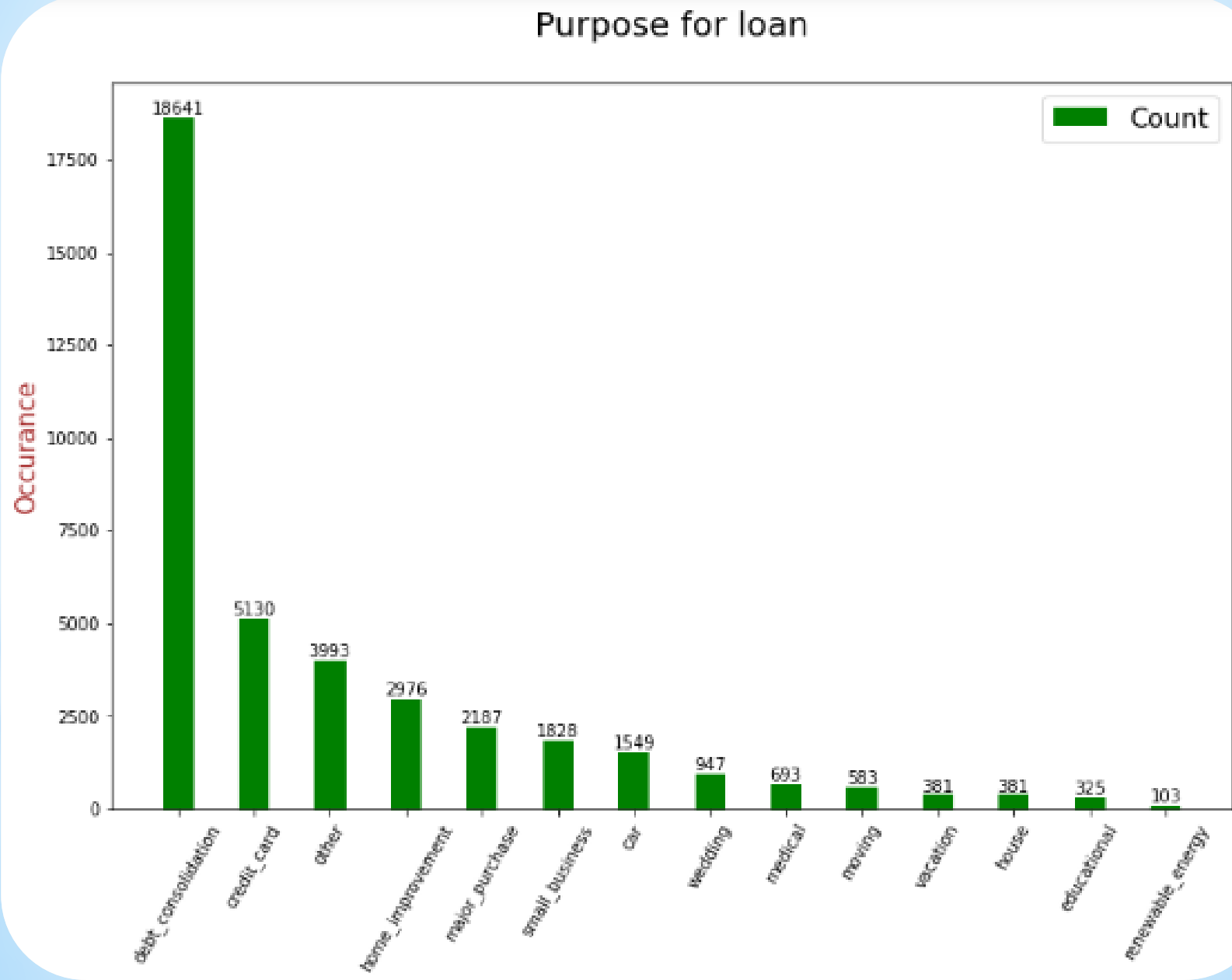
# Problem-solving methodology

- Data Cleaning
- Data Understanding
- Univariate Analysis
- Segmented Univariate Analysis
- Bivariate Analysis

# Univariate Analysis of Loan Status

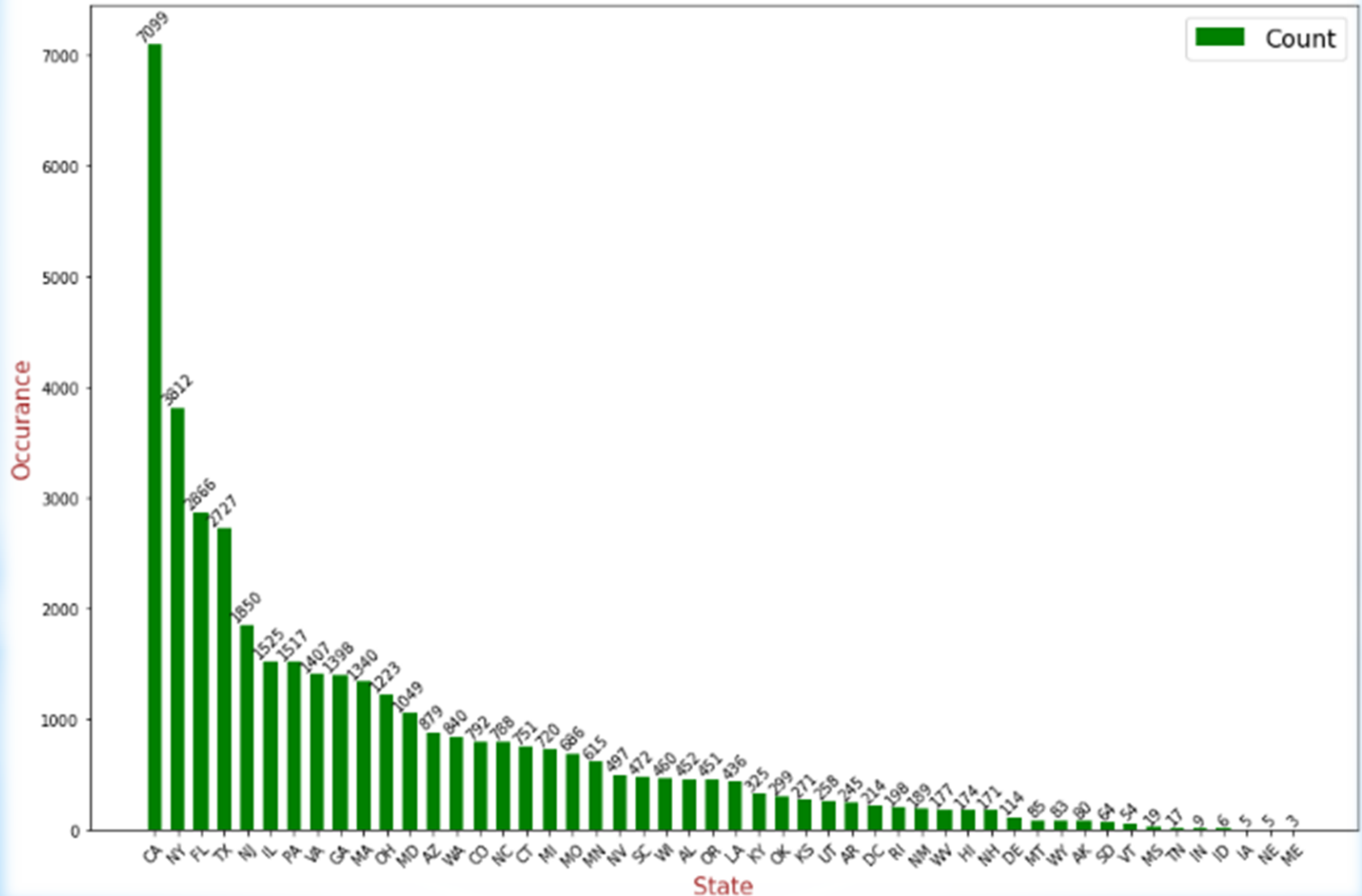


Below **Purpose** distribution chart tells, mostly borrower applied for a loan with purpose of “debt consolidation”.



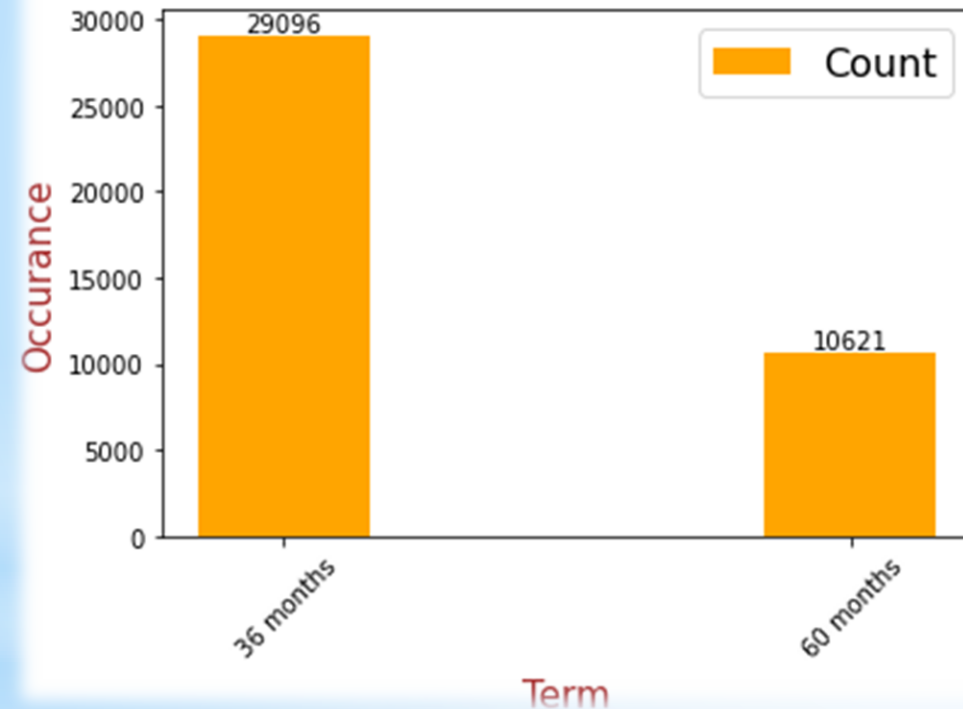
# State Loan distribution

State-wise Loan Applications



# Term Distribution

Tenure of Loan

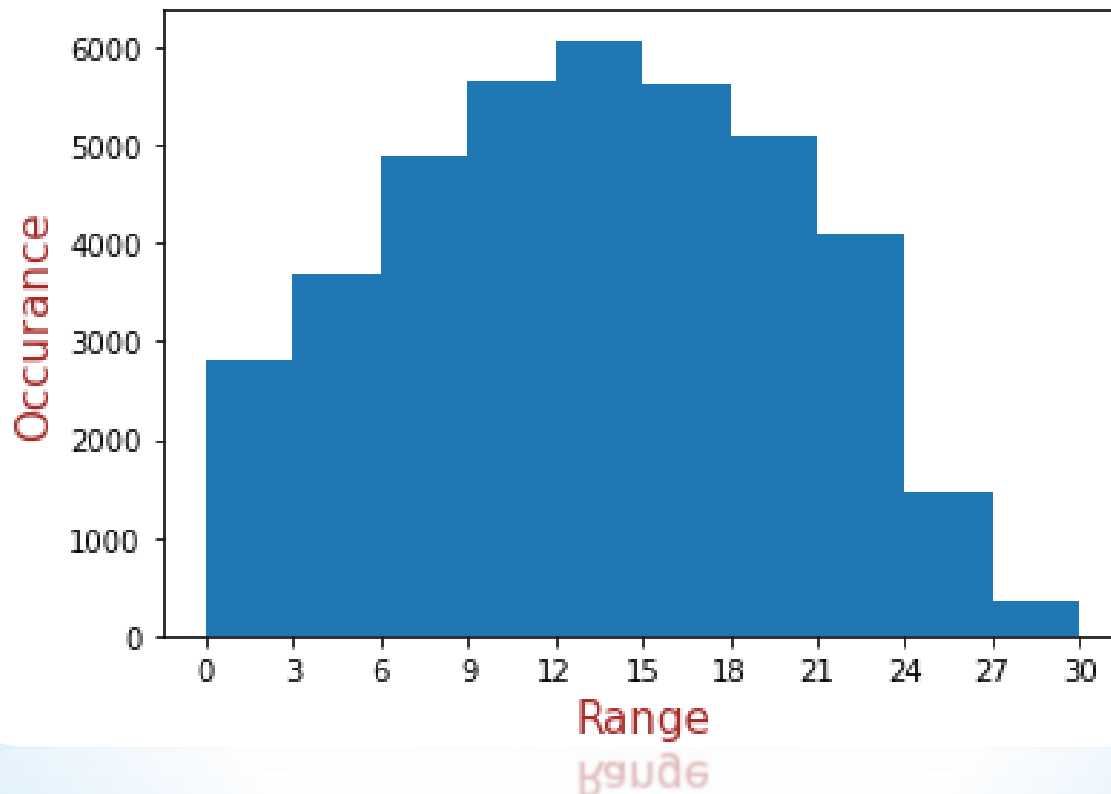


AS per this chart, loan with 36 month tenure option available with more borrowers.

# Histogram DTI range

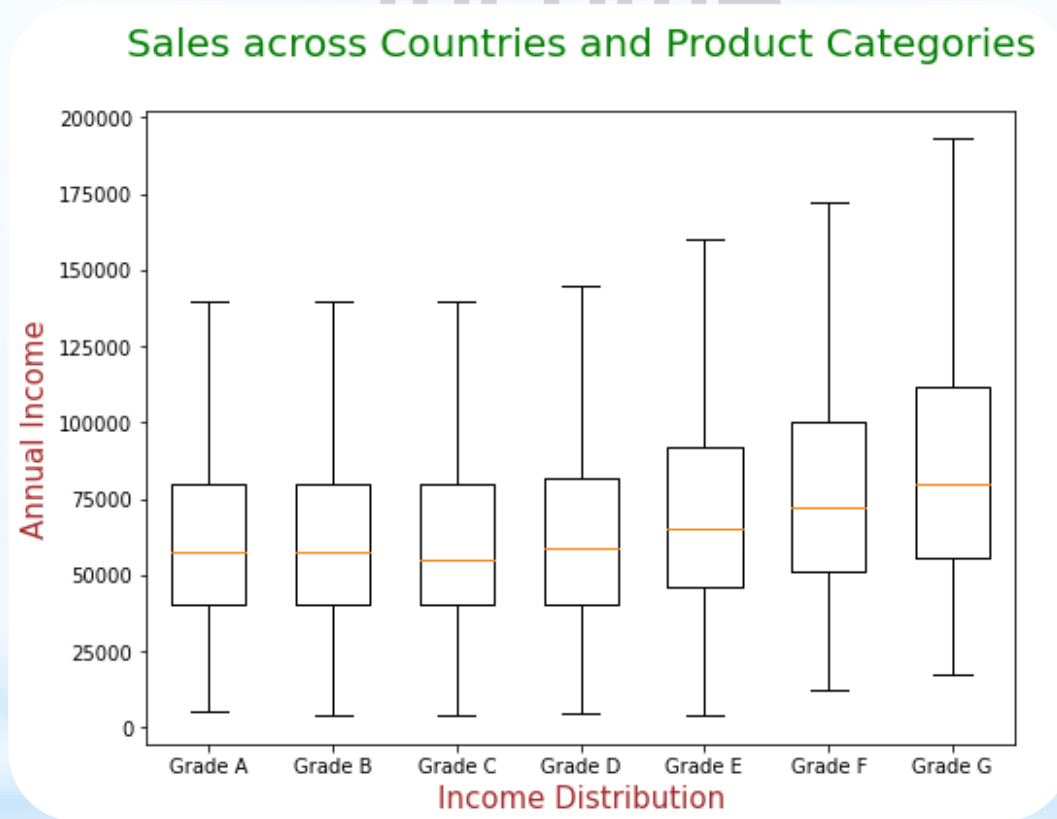
Distribution of DTI borrowers in histogram

Borrower's distribution with different dti





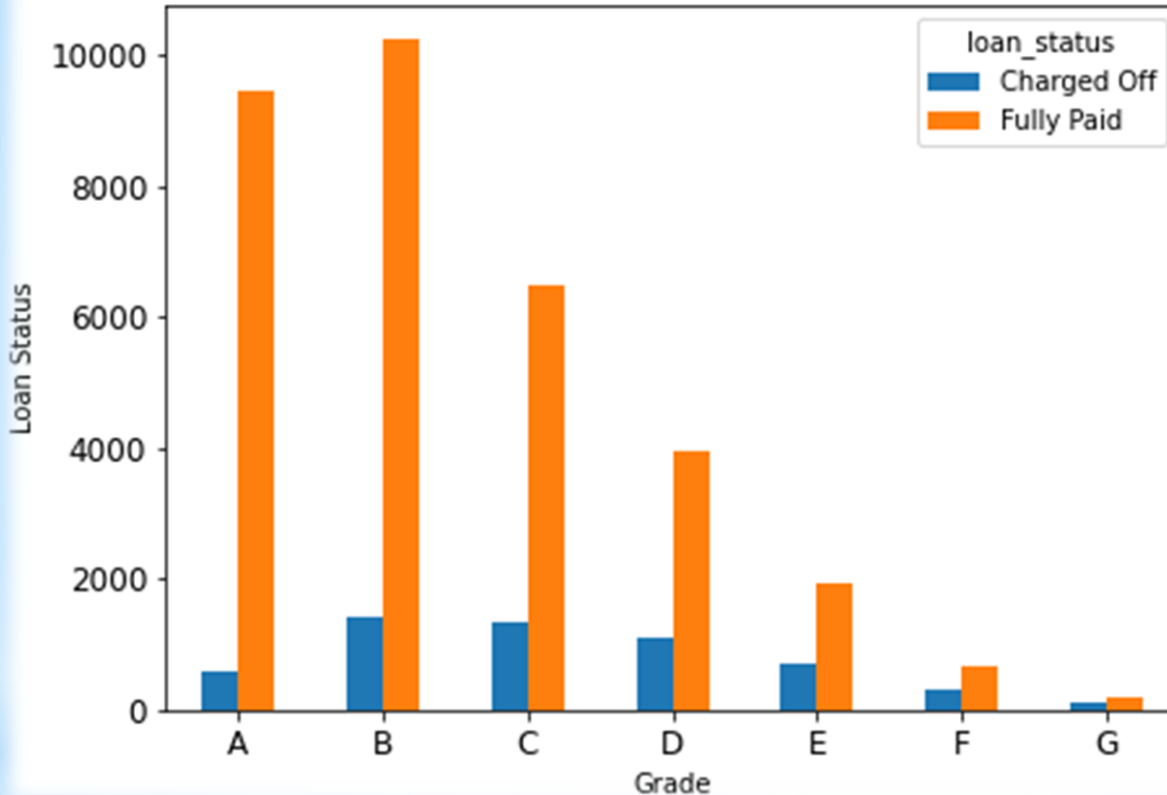
# Box plot for annual income



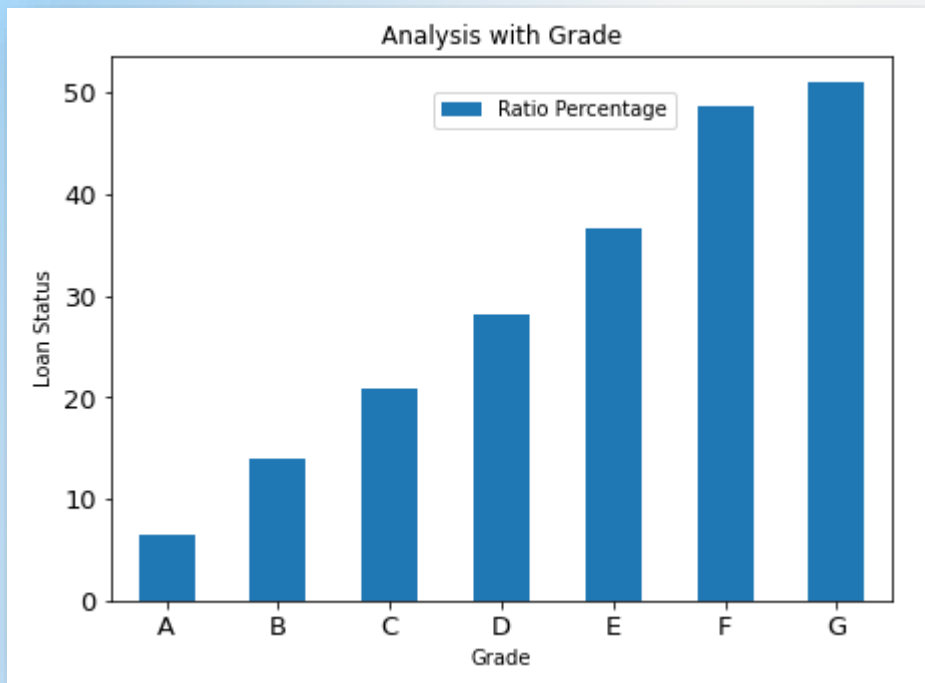
This graph shows, the Annual Income of borrower are high for Grade F and Grade G

# Grade vs Loan Status

Analysis on Grade of borrower

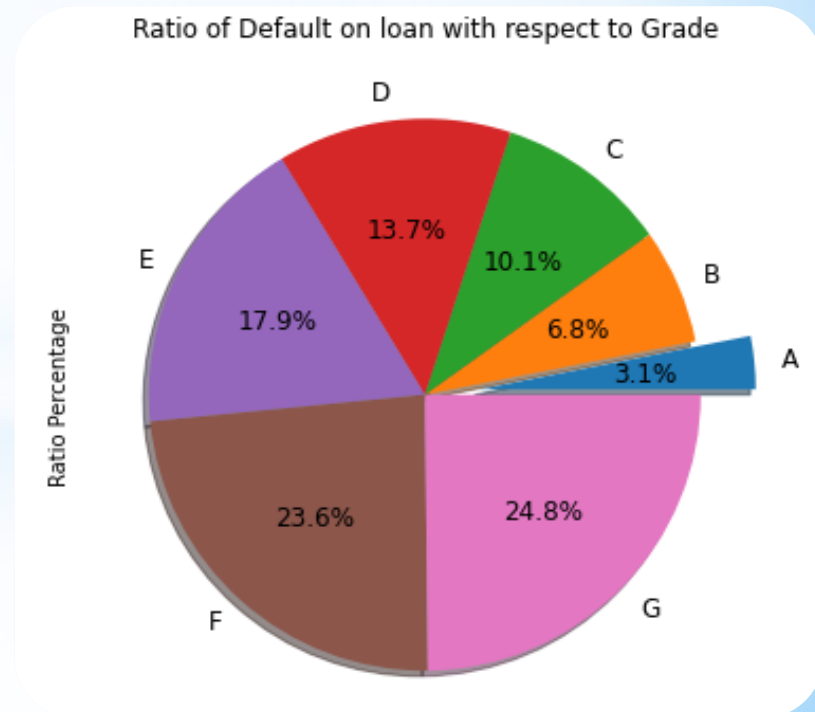


- It is observed that Grade of borrower have relation on loan status.
- Here is the graph which provides comparison between different grade of borrowers



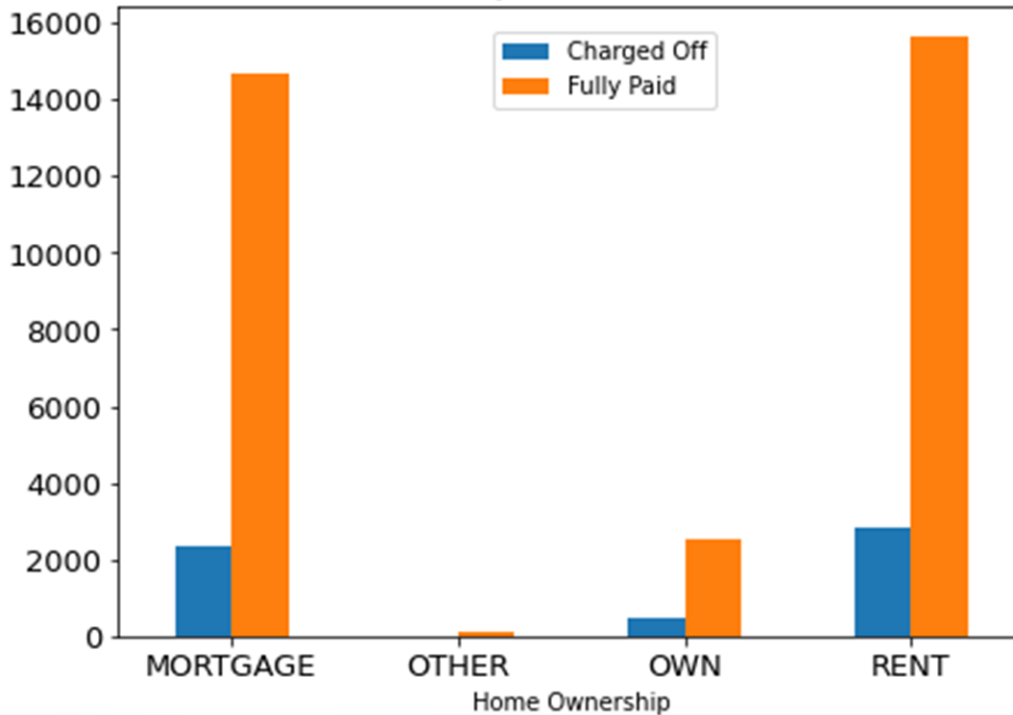
# Grade Analysis In Percentage

- As per given Bar chart Grade A have lowest Loan default rate
- If we show information in pie chart format, The relative percentage comes **lowest** around **3 % ratio** For **Grade A** borrowers.



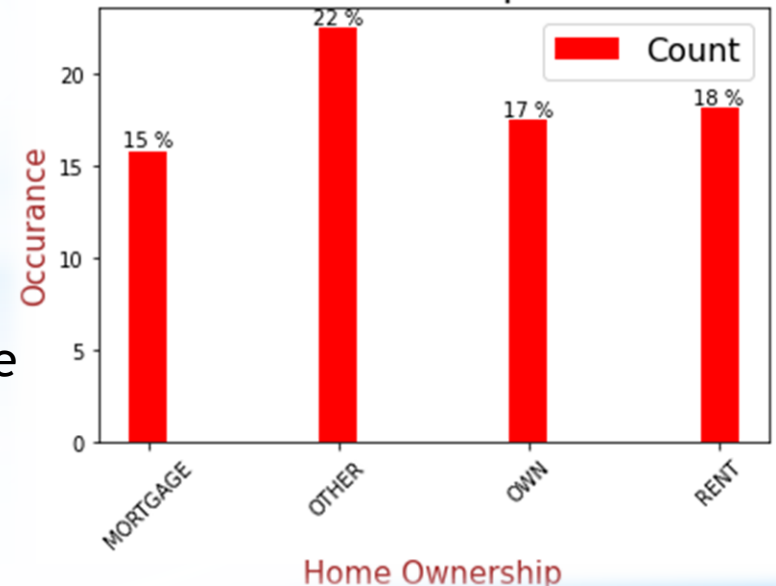
# Home Ownership vs Loan Status Analysis

Analysis with Grade

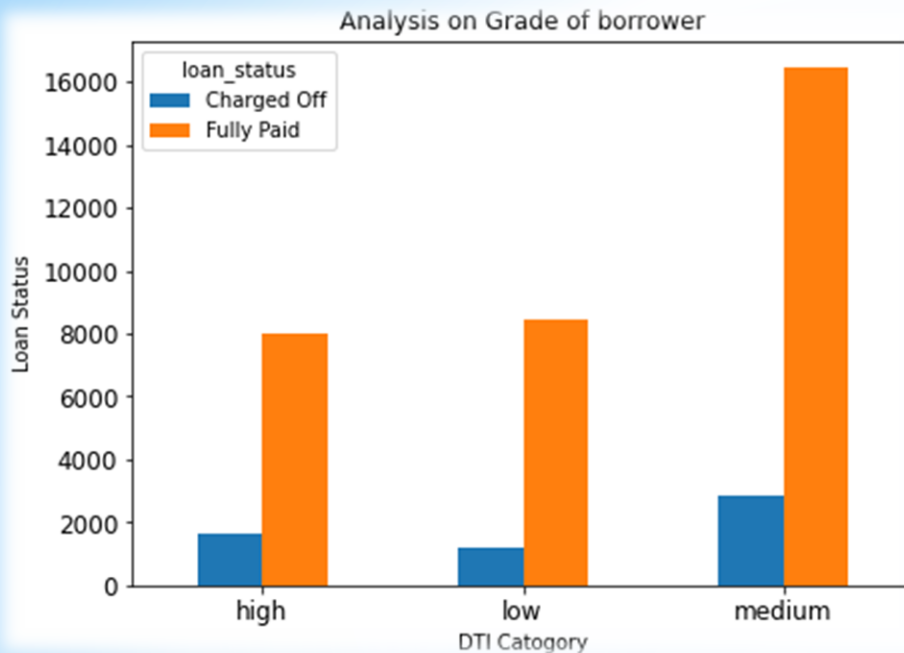


- Mortgage home ownership have **lowest** default rate in percentage
- Also The borrowers whose home Ownership is “Other” have high default rate

Ratio of home ownership to loan Default

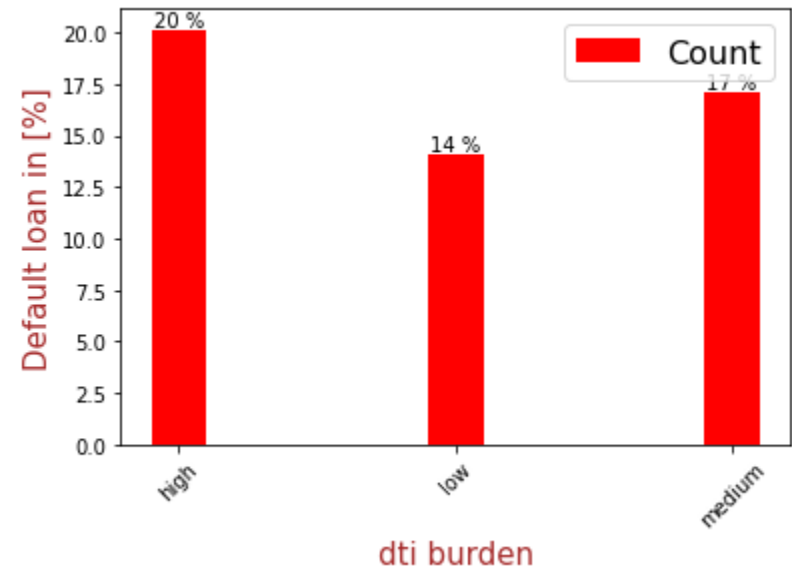


# DTI vs Loan status

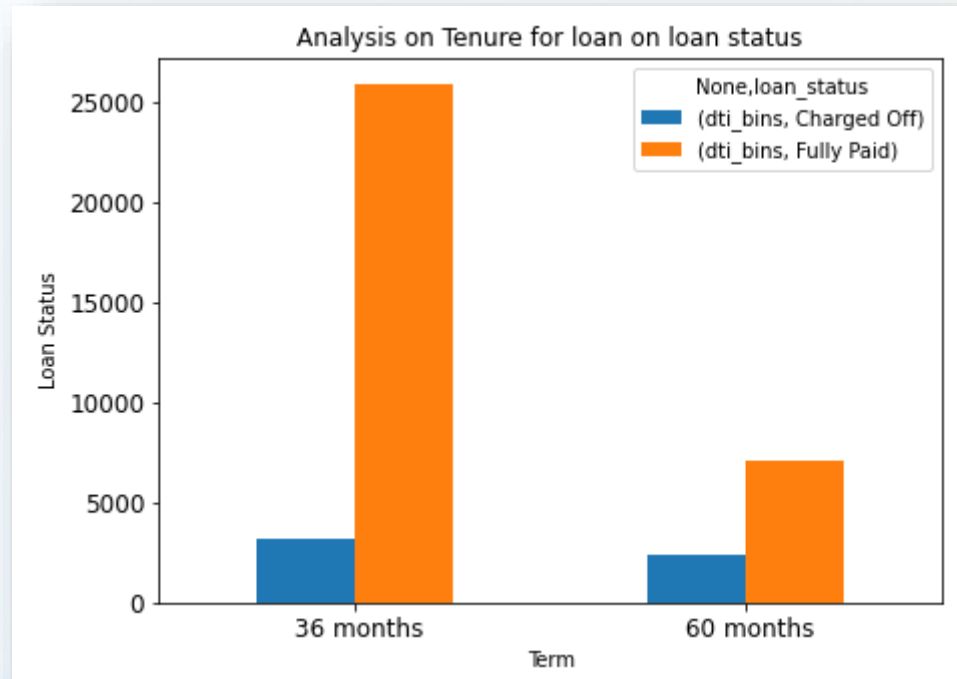


- Dti is the ratio which Provide monthly debt/expense ratio of borrowers.
- Lower the dti ratio lower the change of loan default
- It is likely that **low dti ratio** borrower Likely to pay full loan.

debt to income ratio relation with loan default



# Term vs Loan Status



- As per above bar chart, We have taken two tenure 36 month and 60 month.
- Borrower with tenure **36 month are likely** to fully pay the loan.

# Conclusions

- Lending club should check borrowers grade in order to reduce risk. **Grade A** candidate more likely to pay full loan.
- Lending club should reduce the loans for **60 months tenure**, they are prone to loan default.
- Opposite to that **36 month term** shows less loan default average
- **Home ownership with Other** are likely to default the loan. And **Mortgage** May have more chance to fully pay the loan.
- Lower the dti ratio lower the change of loan default. It is likely that **low dti ratio** borrower Likely to pay full loan.

Thank you