# Lending Club Case Study

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# EDA approach

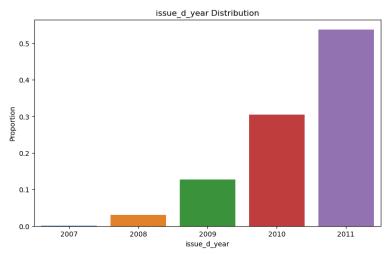
Data Cleaning Data Univariate Analysis Segmented Univariate Analysis Conclusion

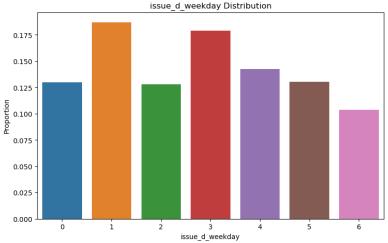
Removing null values unnecessary variables and checking null value percentage

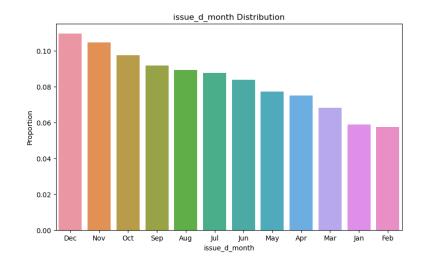
Working with data dict to understand columns Analysing each column and plotting distribution. Analysing data columns with categorical data Analysing multiple variable behaviour and plotting patterns

Concluding recommendations for business by analysing all plots.

# Growth of Lending club

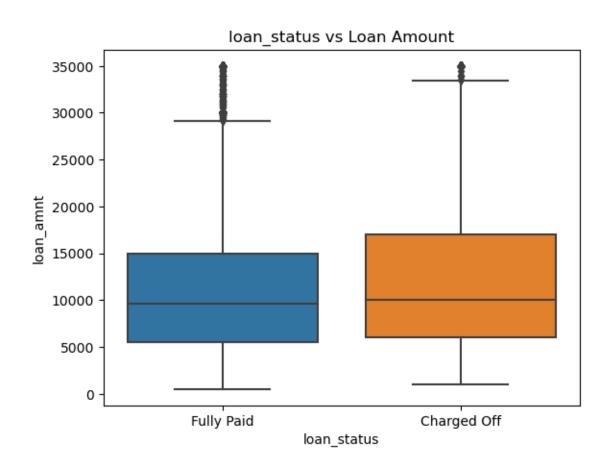






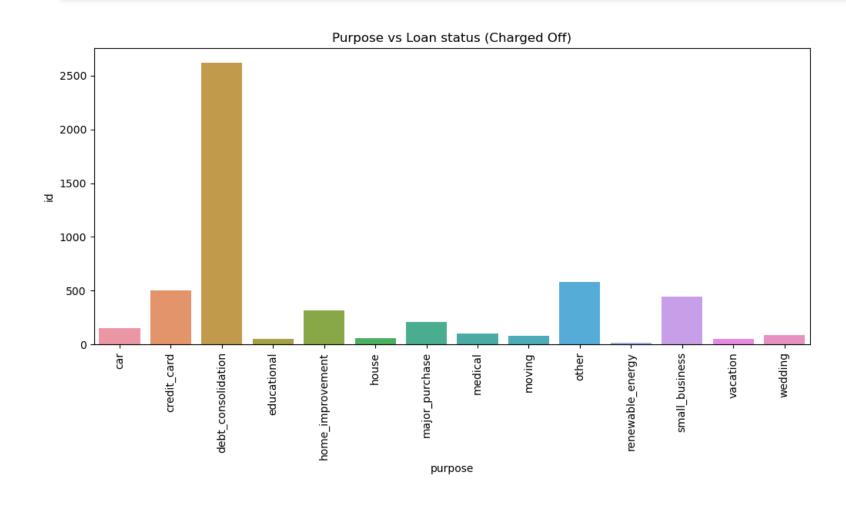
- Lending Club has doubled its expansion in issuing loans every year
- 3<sup>rd</sup> quarter of fiscal year i.e Oct, Nov, Dec is peak business quarter for Lending club.

#### Loan Amount & Interest Rate



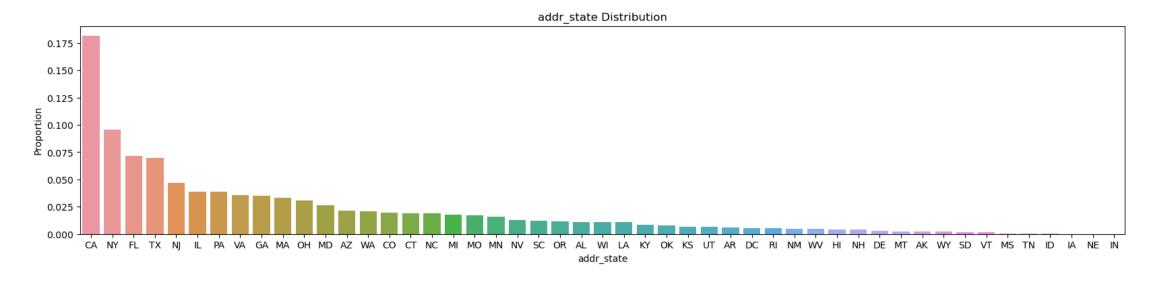
The higher the Loan amount, the more the loan gets defaulted.

## Purpose vs Loan status



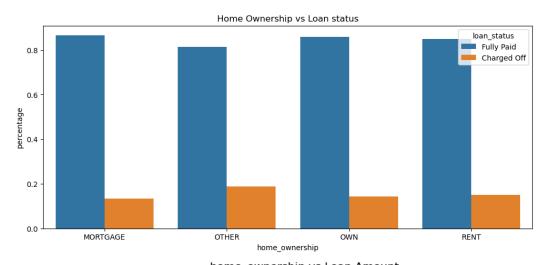
 Borrowers who took loan for debt\_consolidation purpose have defaulted more.

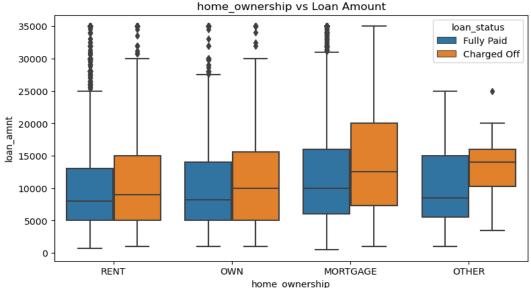
# Top defaulted states



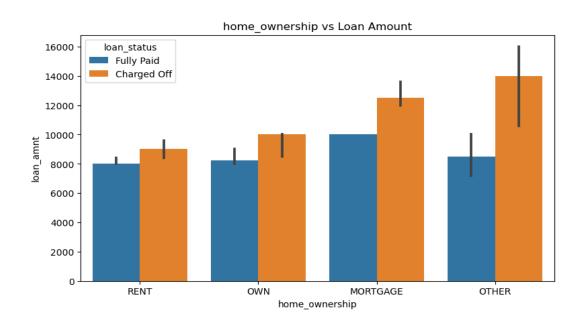
Top 3 defaulted Borrowers are from CA, NY & FL.

## Home Ownership

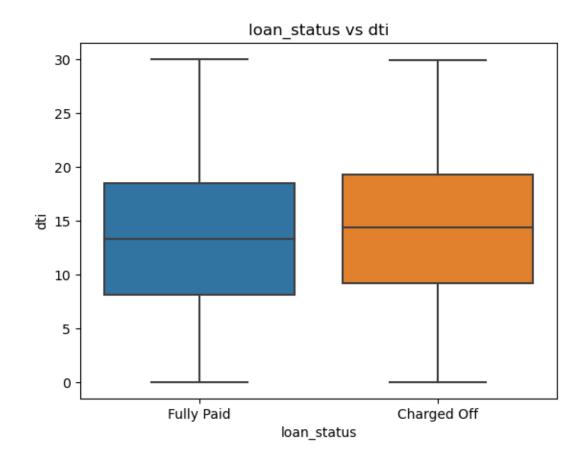




- Borrowers who live in Mortgage homes are more likely to default
- Around 20% chance of loan default in each home category

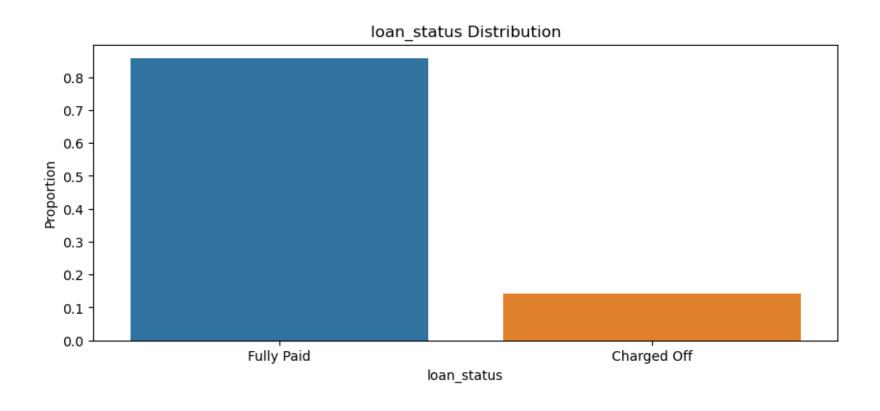


### DTI distribution



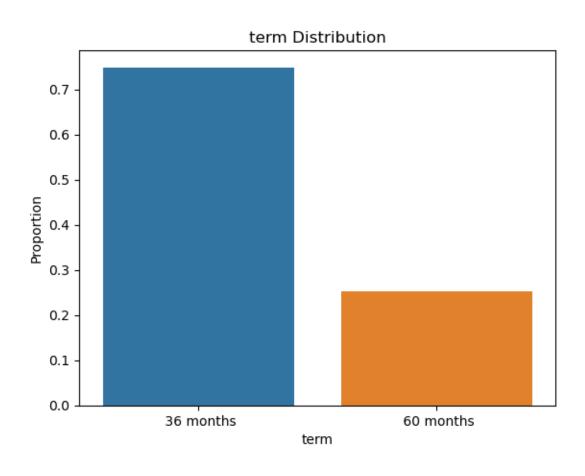
Borrowers with high DTI are more tended to default

#### Loan status distribution



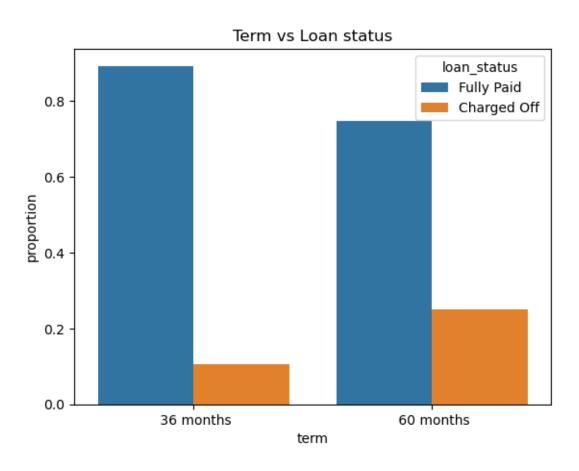
- Around 85% of the loans issued are Fully paid
- 15% of loans issued are defaulted

#### Term distribution



- Lending Club issue loans only on 2 terms.
- 36 months and 60 months

## Default metrics



 Charged off Loans are more in for the tenure 60 months.

#### Conclusions

- · Lending Club has doubled its expansion in issuing loans every year
- The last two quarters of the year are busier compared to the first two quarters.
- Around 85% of the loans issued are Fully paid 15% of loans issued are defaulted
- Lending Club issue loans only on 2 terms. 36 months and 60 months
- From the above analysis and charts, The Loan amount range from 500 35000, most no. of loans issued are around the amount 10000
- Loans with a 36-month term have a higher default rate compared to those with a 60-month term.
- Loans with grades B, C, and D have a higher default rate compared to loans with other grades.
- The top 5 subgrades with the highest default rates are B5, B3, C1, B4, and C2.
- Borrowers who own their homes have a lower default rate compared to those who do not own a home.
- The state CA has the highest number of defaulters among all states.
- Individuals earning more than 30,000 are more inclined to default on their loans compared to those earning less than 30,000