



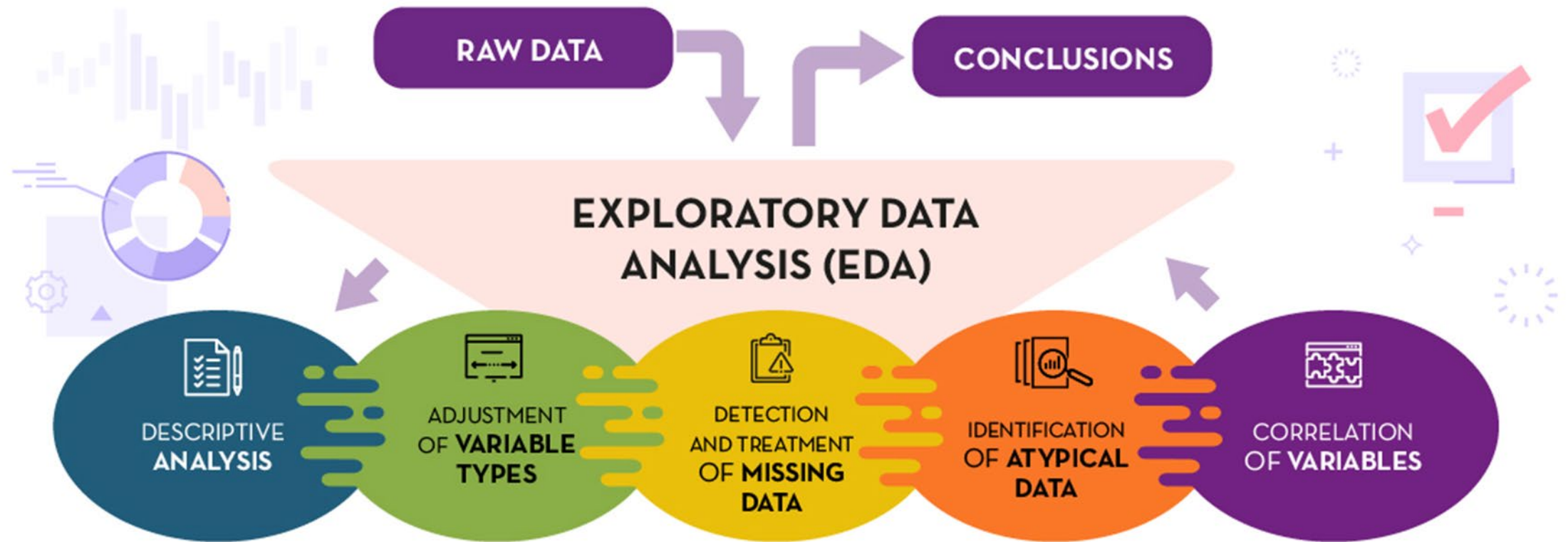
Lending Case Study

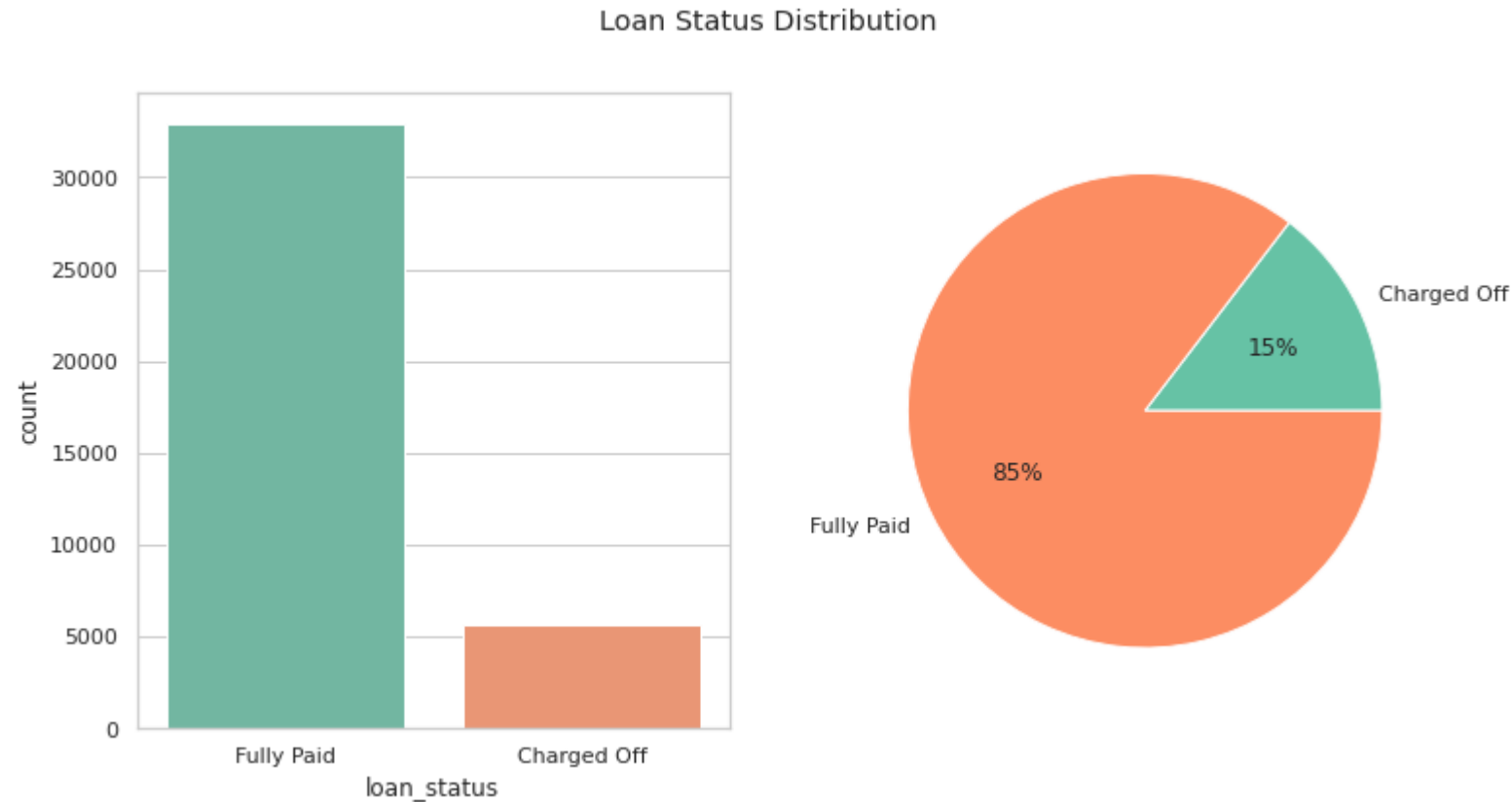
GROUP

Sumit Khanna

Chaitanya Sharma

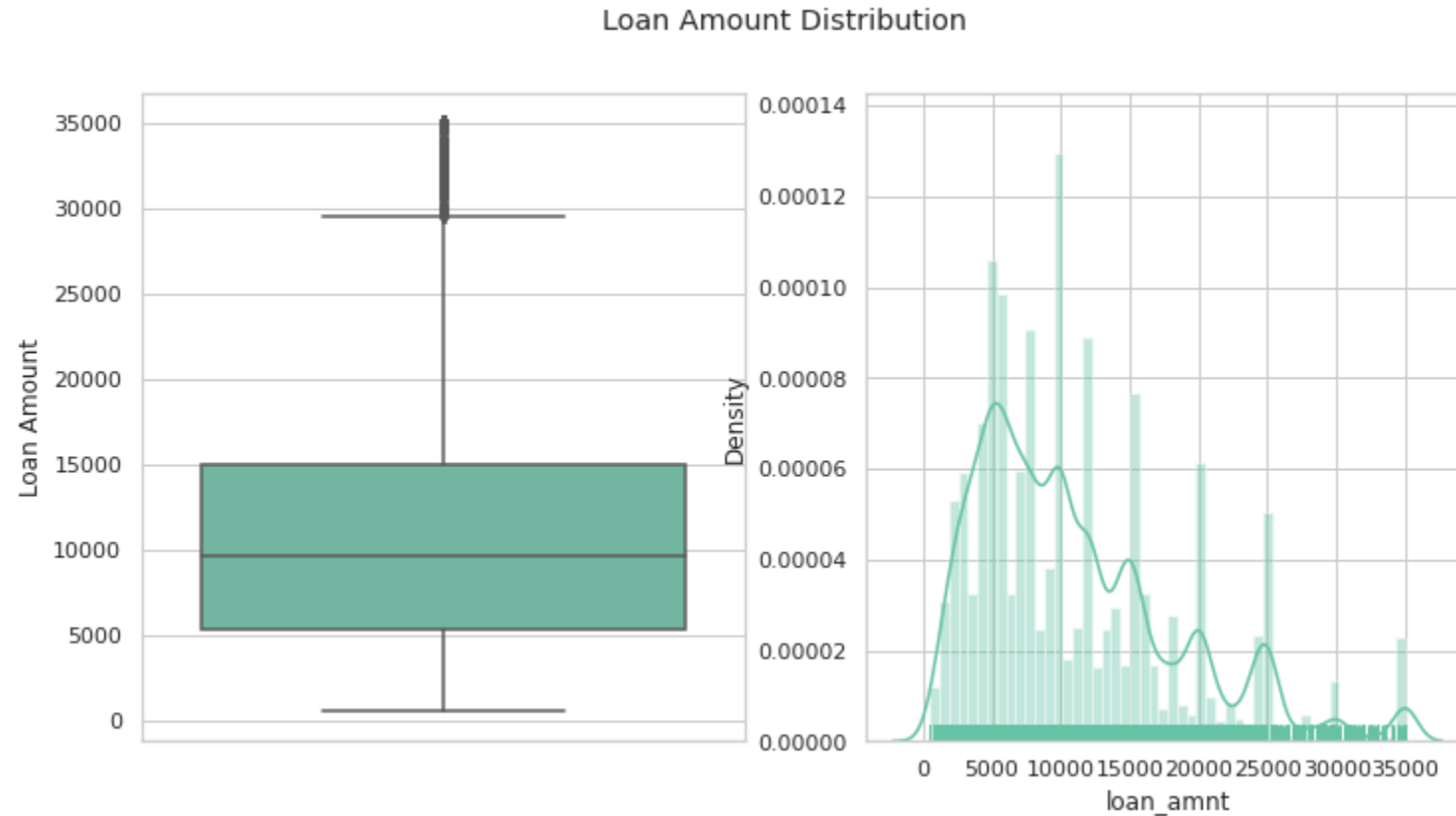
- Identification of Loan Borrower attributes that tend to 'default' paying back
- Analyse and Understand 'Driving Factors' or 'Driver Variables' behind Loan Default
- The company wants to understand the **driving factors (or driver variables)** behind loan default, i.e., the variables which are strong indicators of default. The company can utilise this knowledge for its portfolio and risk assessment.





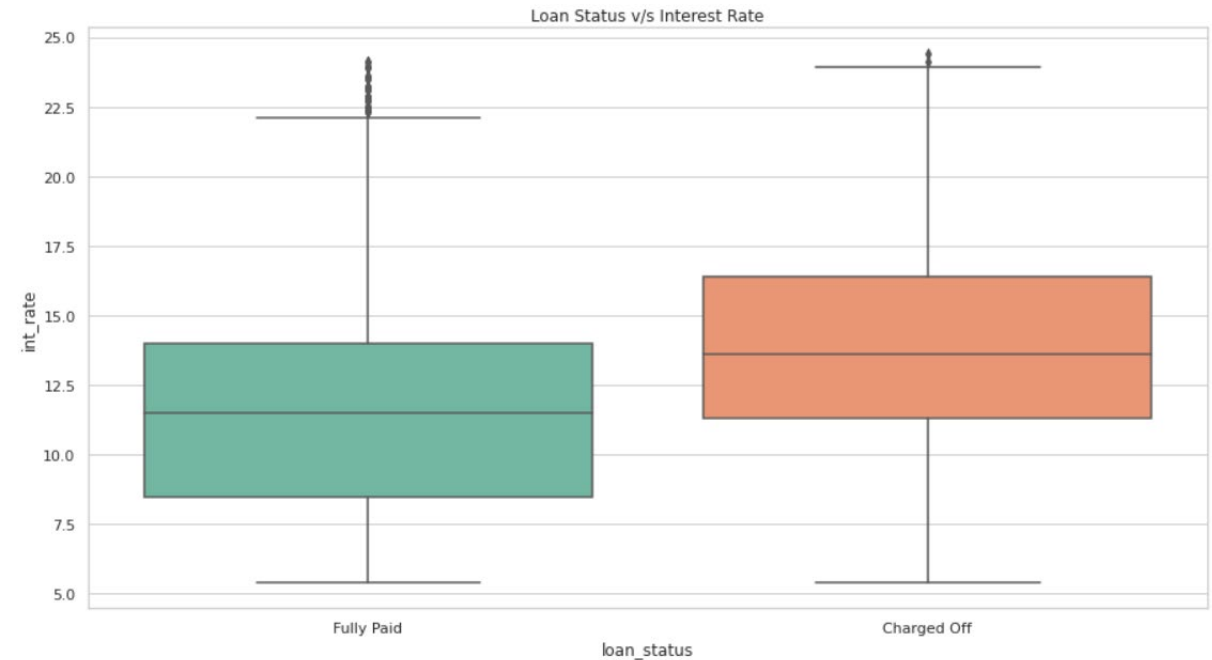
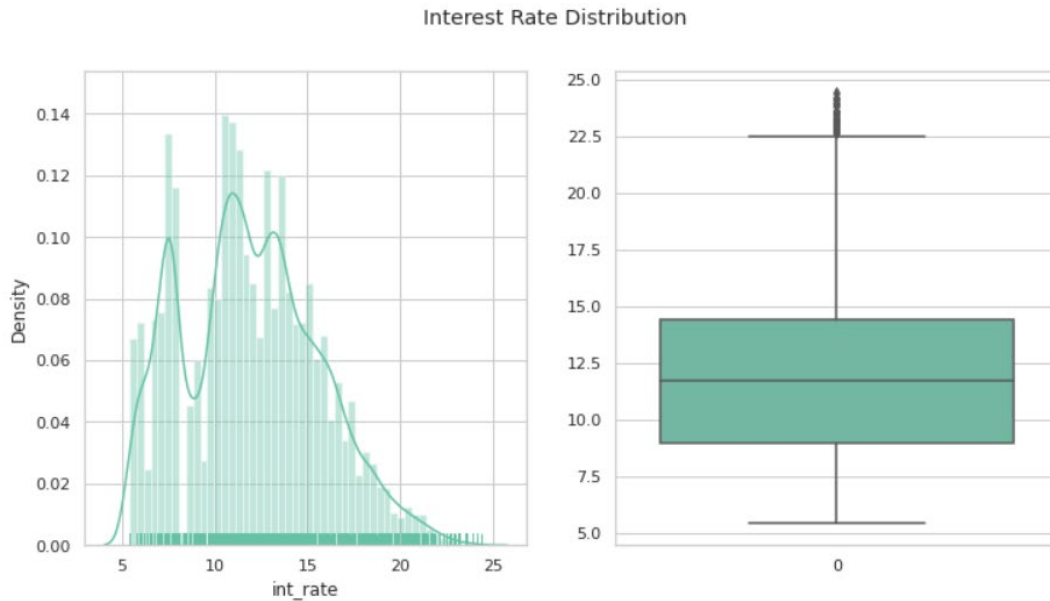
Observations

- 85% borrowers have paid full amount
- ~15% nearly borrowers have defaulted the loan



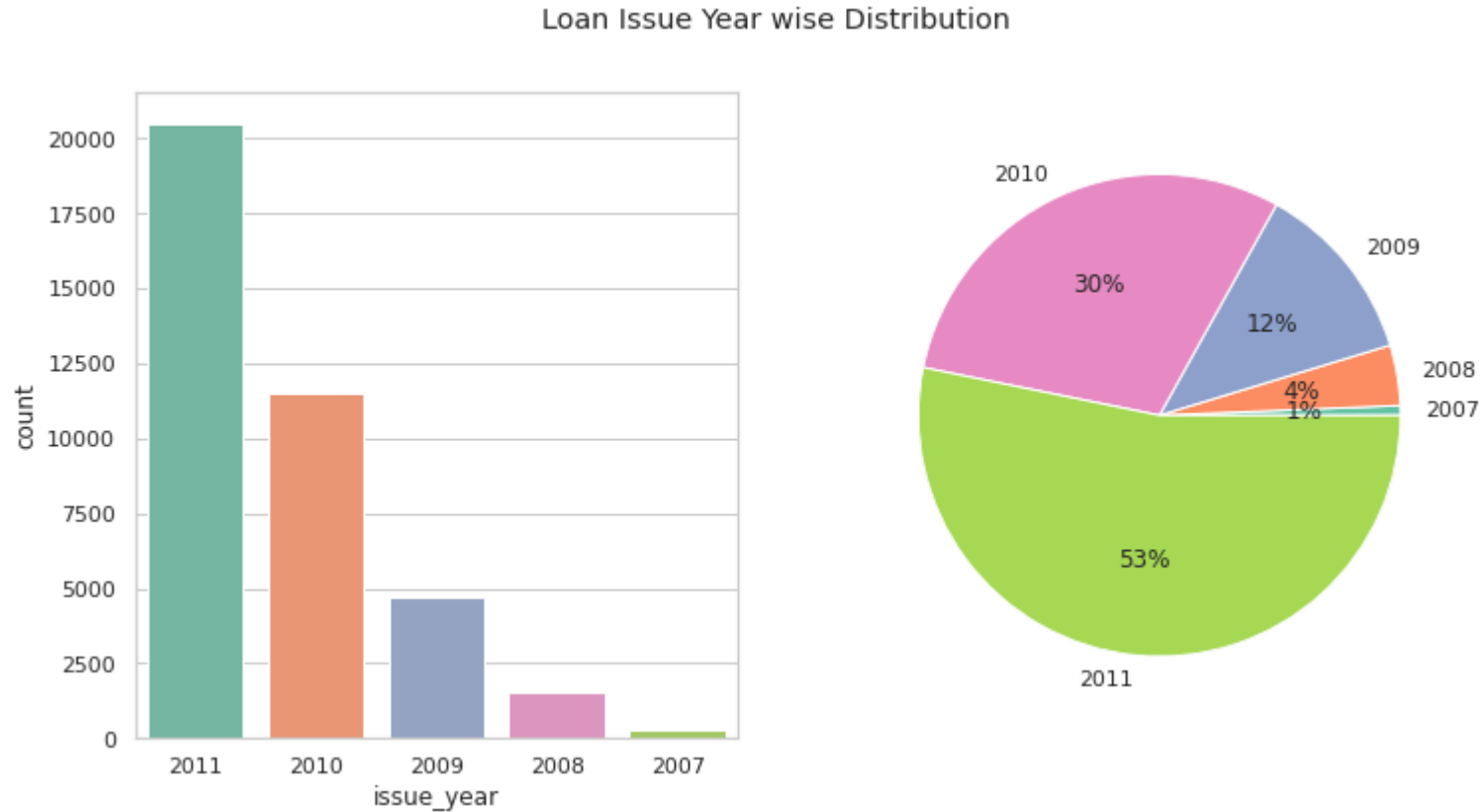
Observations

- The loan amount varies from 0 to 35,000 also mean of distribution is 10000.
- Very few borrowers took 30000 or more loan amount.



Observations

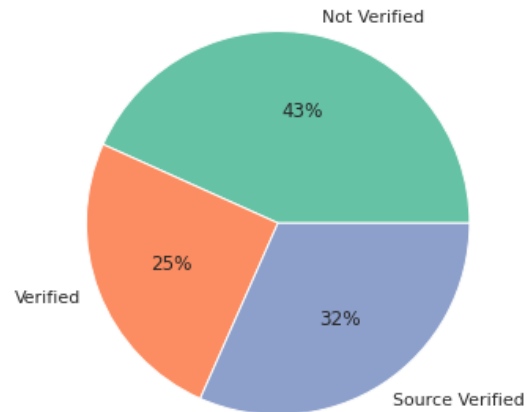
- Higher Interest has high probability of default
- Most of the interest rates lies between 9% to 14.5%.
- Some borrowers took loan at higher rates of interest 22.5% and above



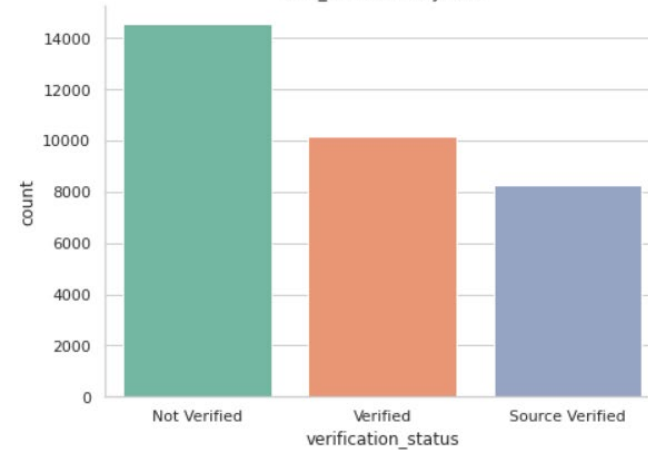
Observations

- Most of loans were taken during 2011

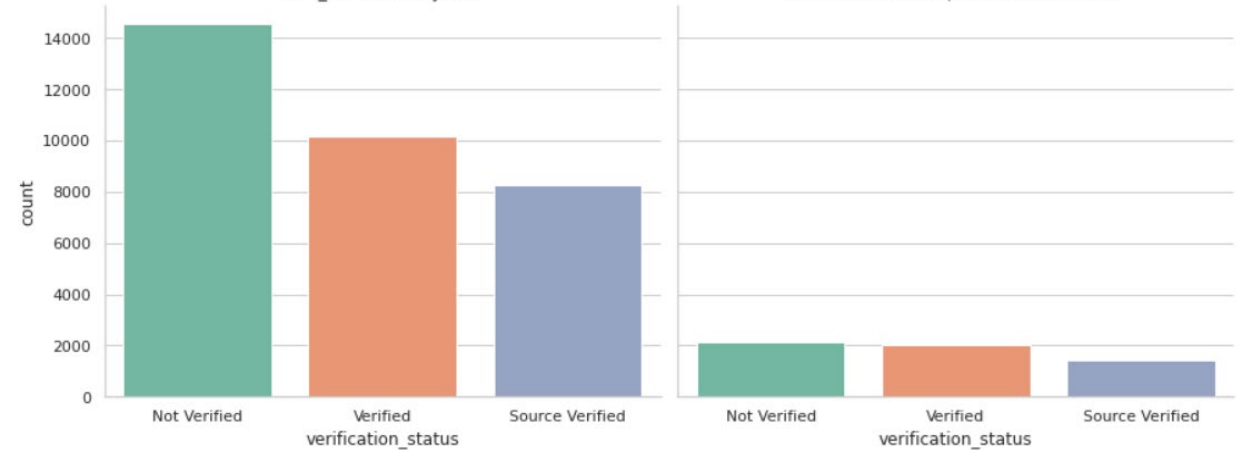
Verification Status Distribution



loan_status = Fully Paid



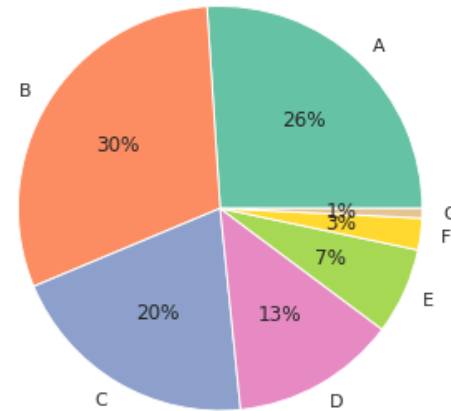
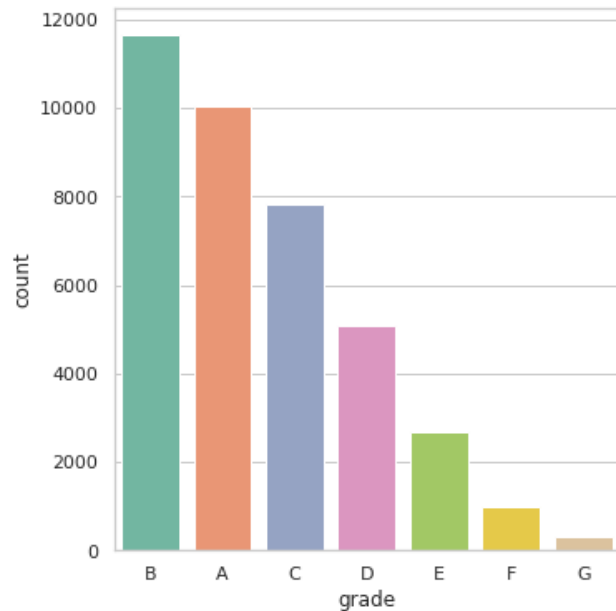
Loan Distribution v/s Verification Status



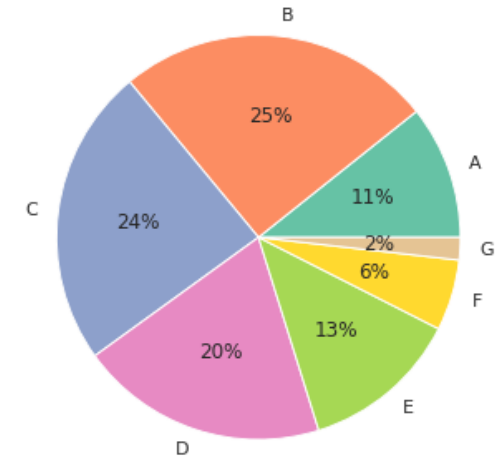
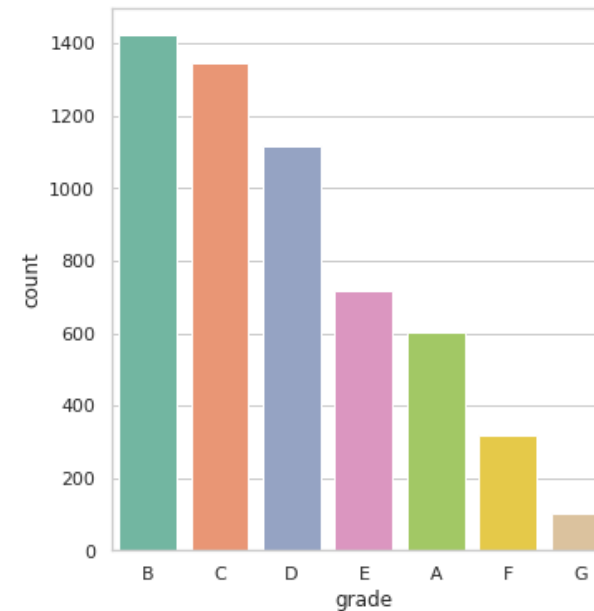
Observations

- Most of Loans were granted to non verified status. Though there is no significant difference on defaults

Loan Distribution Based on Loan Grades



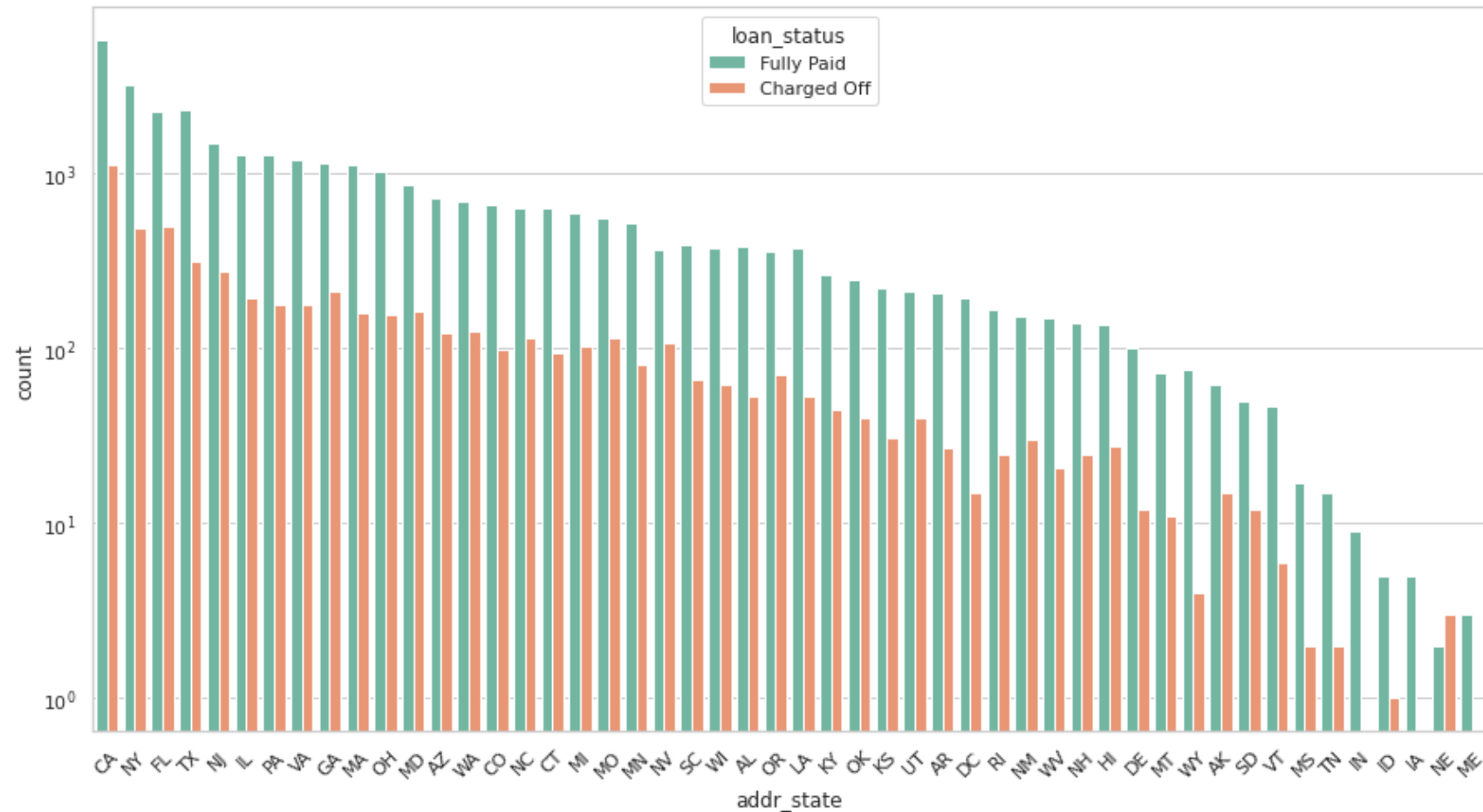
Defaulters Based on Loan Grades



Observations

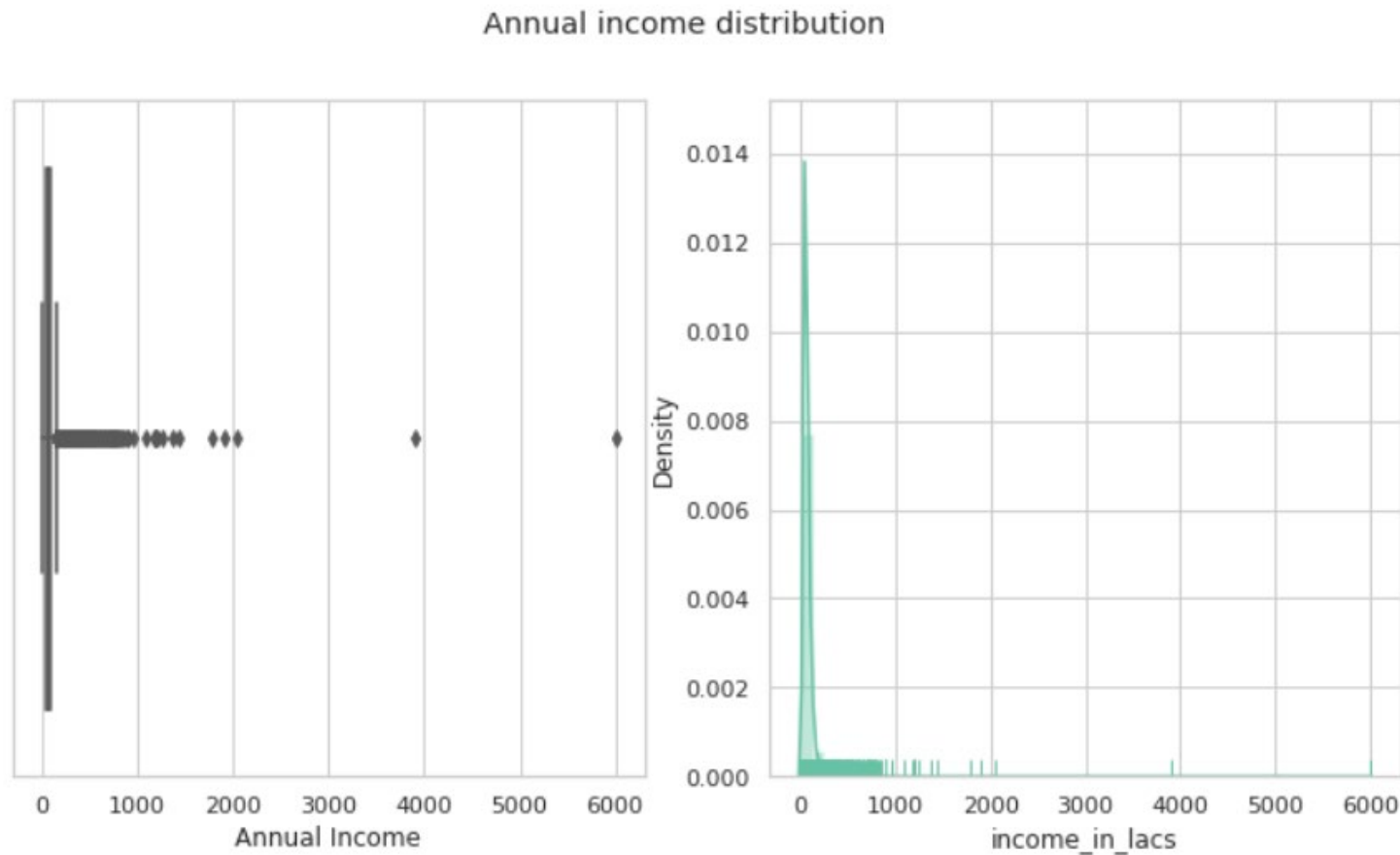
- Most of Loans have grades B, A, C. Hence most of these loans are stated as High Graded Loans
- Most of Defaulters have grades B, C, D

Borrowers Demographic Loan Distribution



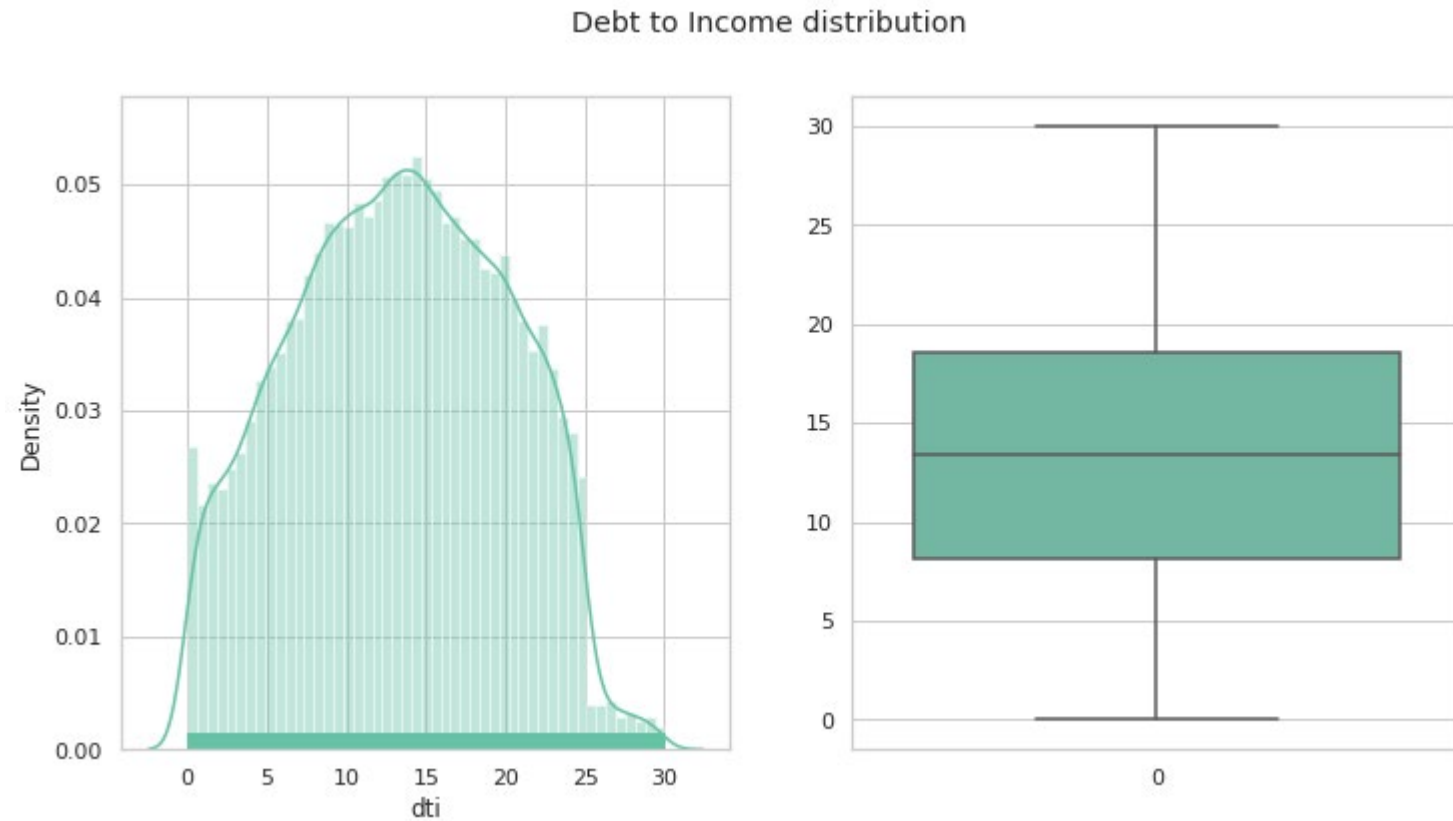
Observations

- Most of Defaulters belong to CA, NY, FL, TX states



Observations

- Most of the borrowers have annual income around 5000- 10000
- There are two borrowers with above 30 lakhs income

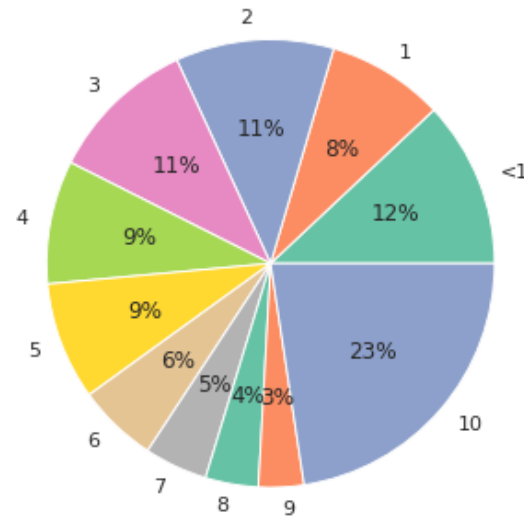
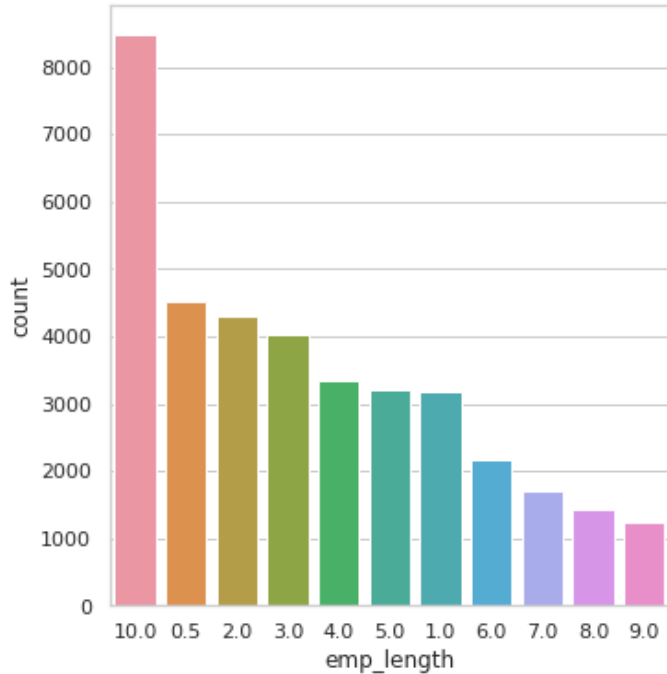


Observations

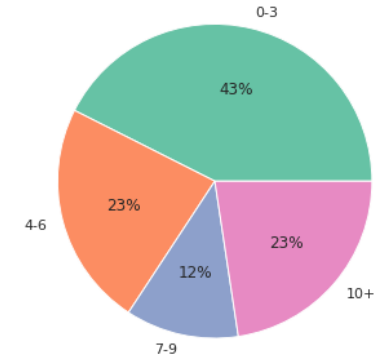
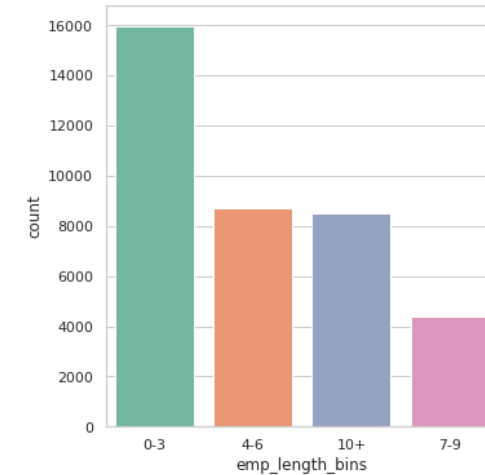
- Most of the loans are given to Borrowers who have Debt to Income ratio less than 30.

Customer Experience (Employment Length)

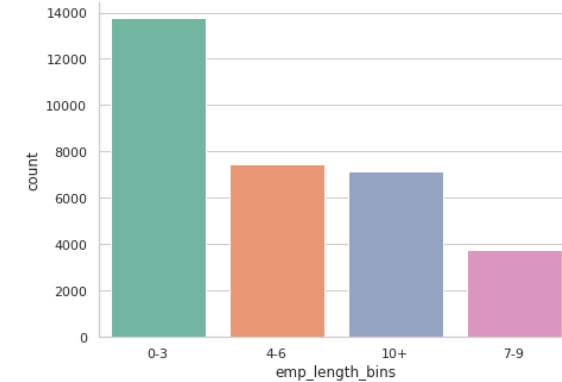
Loan Distribution Based on Customer Employment Length In Years



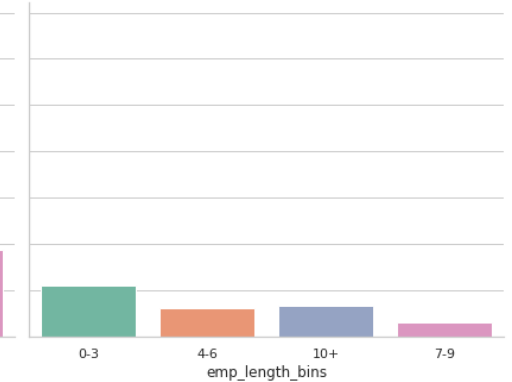
Loan Distribution Based on Customer Employment Length In Years



loan_status = Fully Paid



loan_status = Charged Off

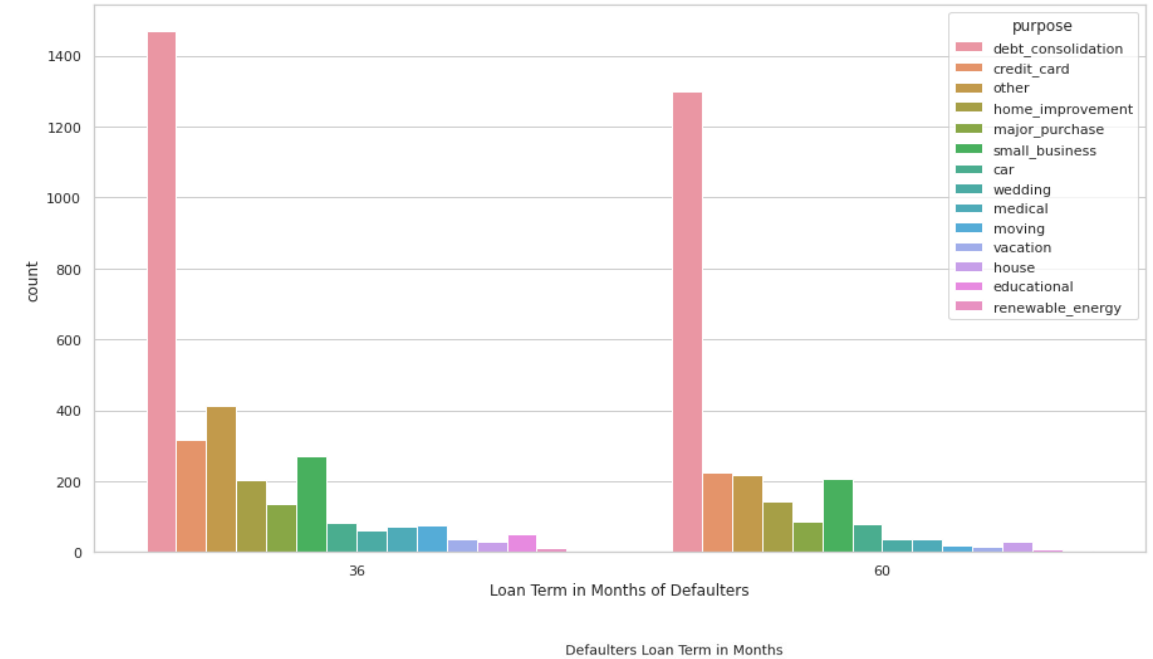
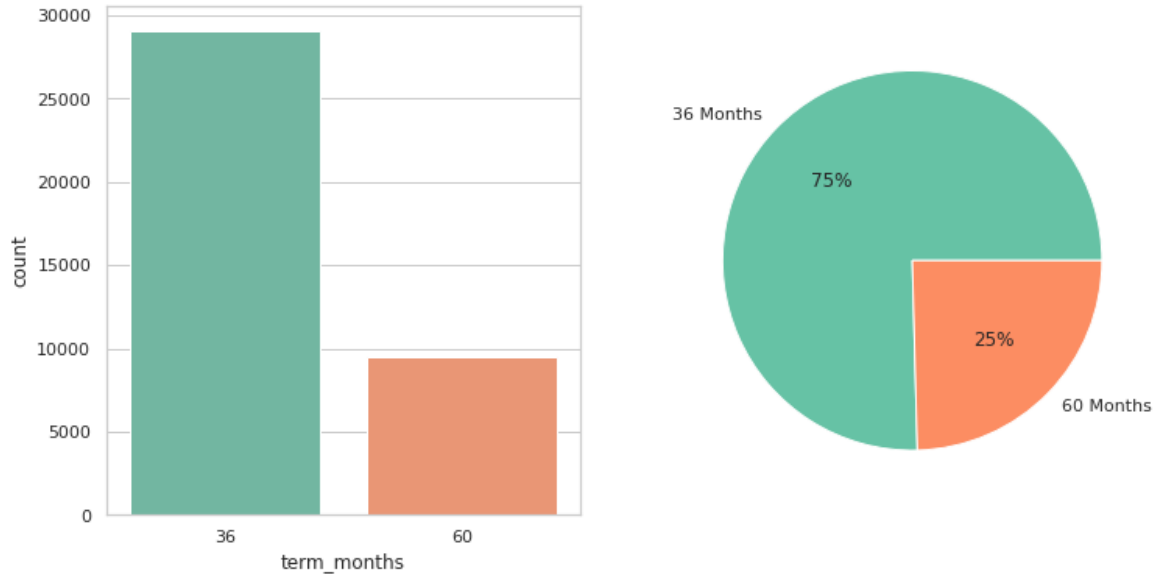


Observations

- Most of Borrowers & Defaulters have 10+ years experience
- Borrowers with 3 or lesser years of experience tend to default high

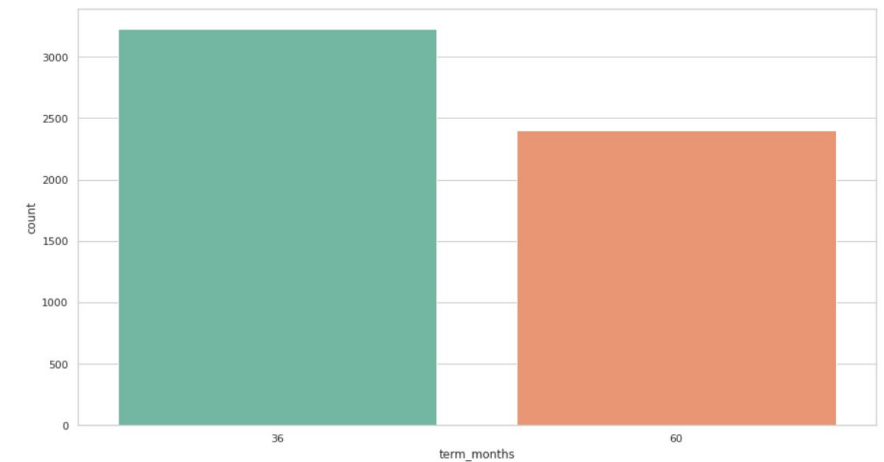
Loan Payment Term

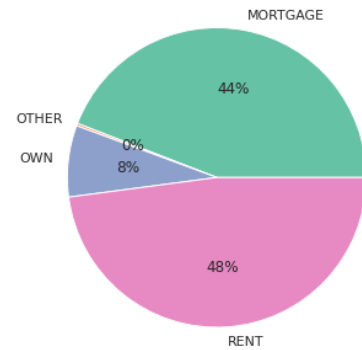
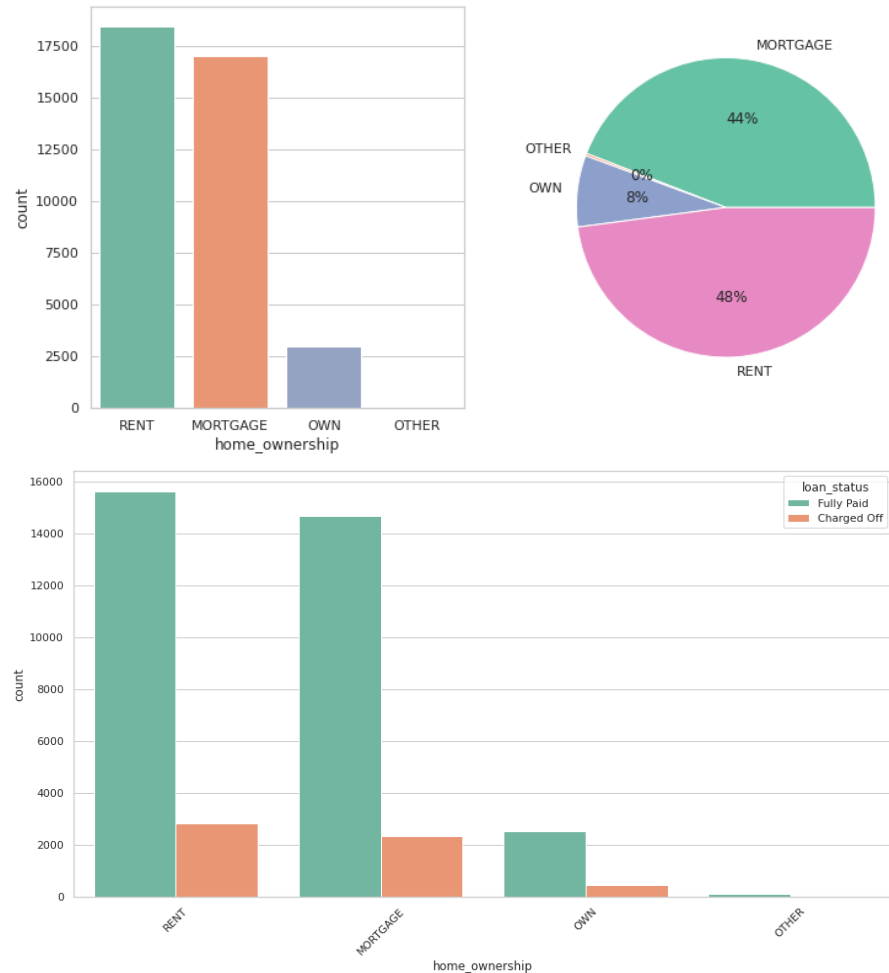
Term (in Months) Distribution



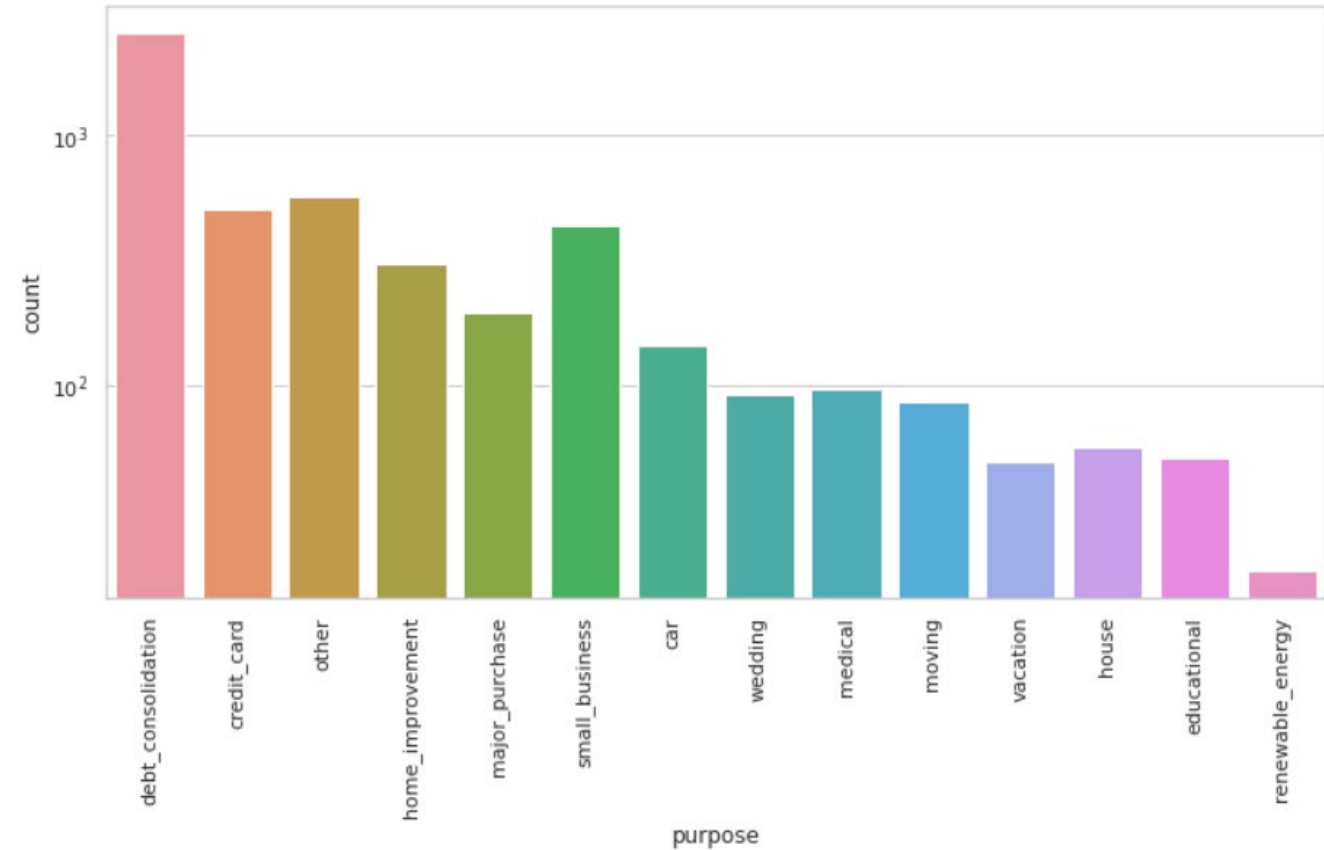
Observations

- Borrowers with tenure of 36 months have high probability to be defaulters
- Borrowers with low tenured loan and Debt Consolidation purpose tend to default high





Loan Distribution of borrowers purpose, without Home Ownership



Observations

- Borrowers with no home ownership (those who are residing on rent or mortgaged properties) have high probability of default.
- We can see their purpose of new loans is often debt consolidation



- ✓ Borrowers with **no home ownership** have high probability of default
- ✓ Young Borrowers **with less experience and Tenured experience** have high probability of default – Assuming due to job instability or debt consolidation
- ✓ More detailed scrutiny must be done for applicants belonging to **CA, NY, FL, TX** states
- ✓ Applicants with Purpose **debt consolidation** must be checked thoroughly as it has high tendency to default