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Lending Case Study

GROUP

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Case Study Objectives

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- Identification of Loan Borrower attributes that tend to ‘default’ paying back
- Analyses 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.

EDA Process

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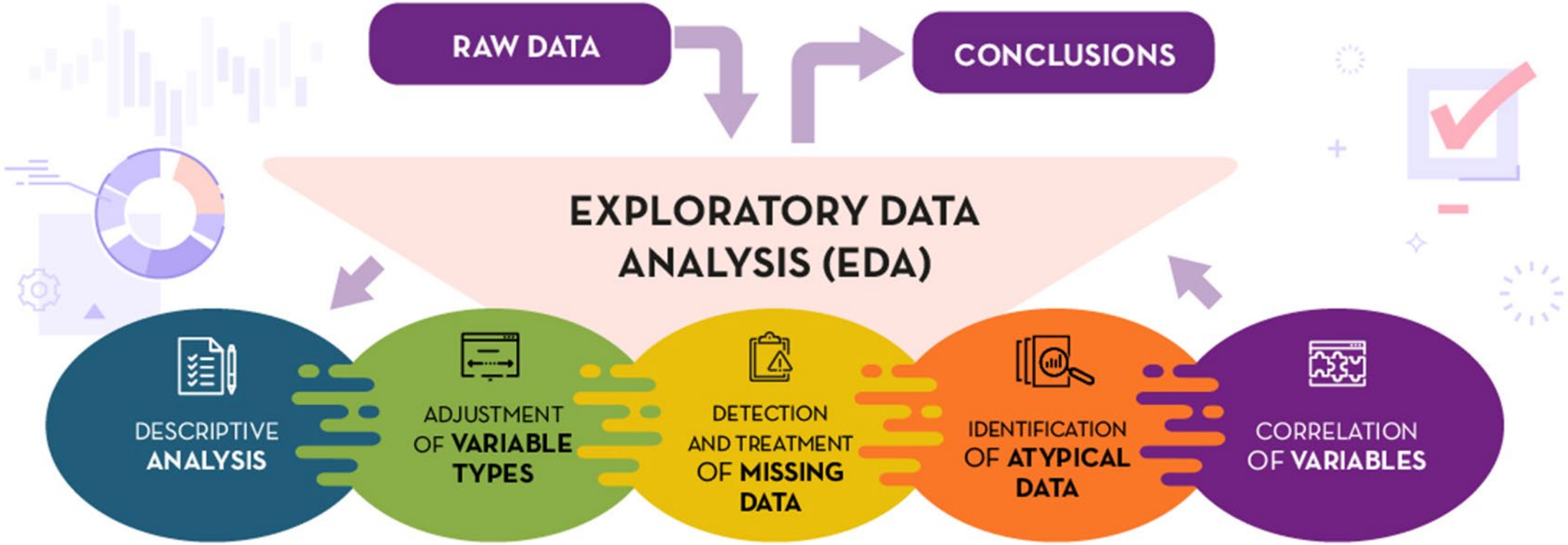

Loan Status Distribution

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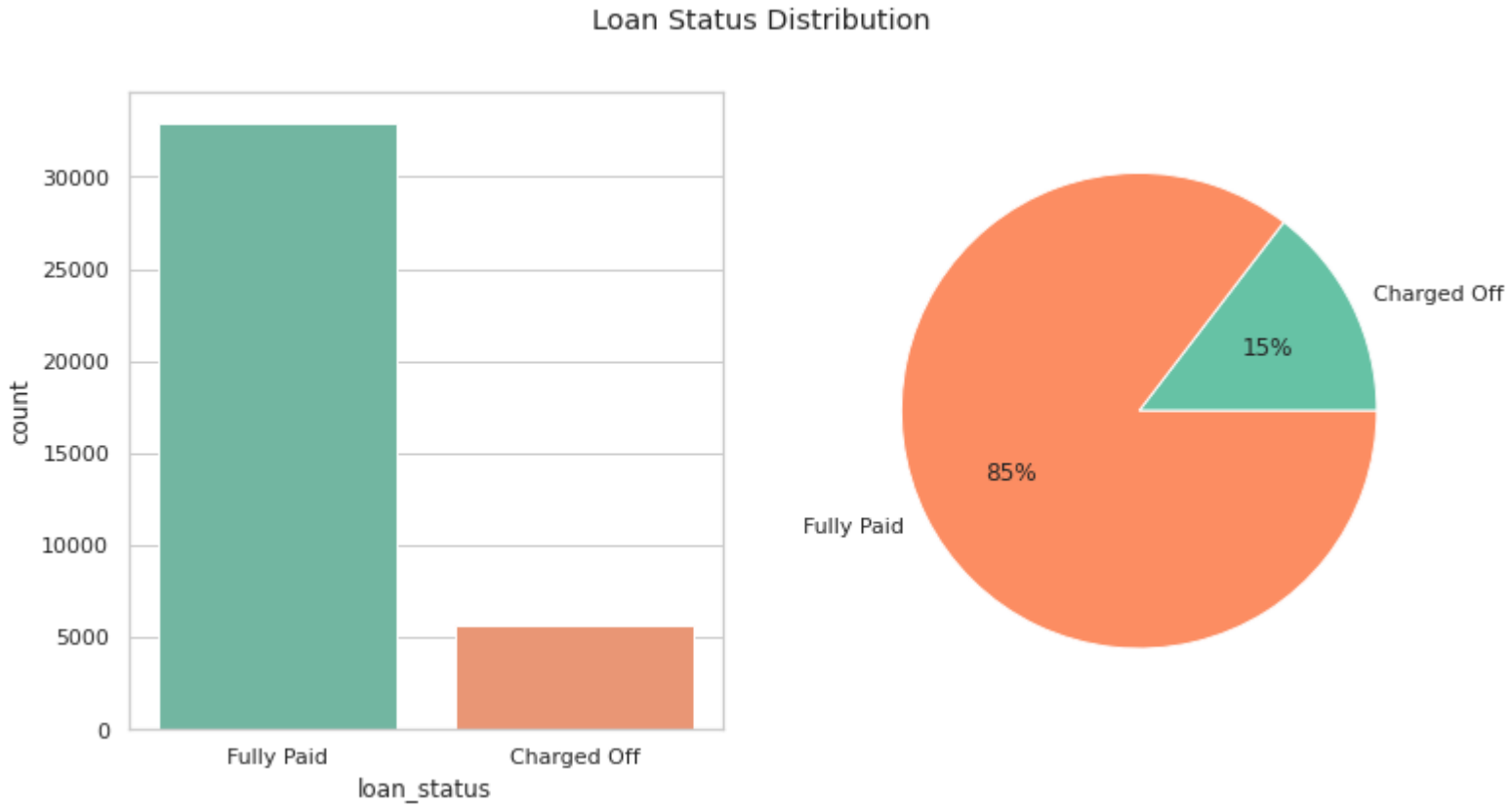

Observations

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

Loan Amount Distribution

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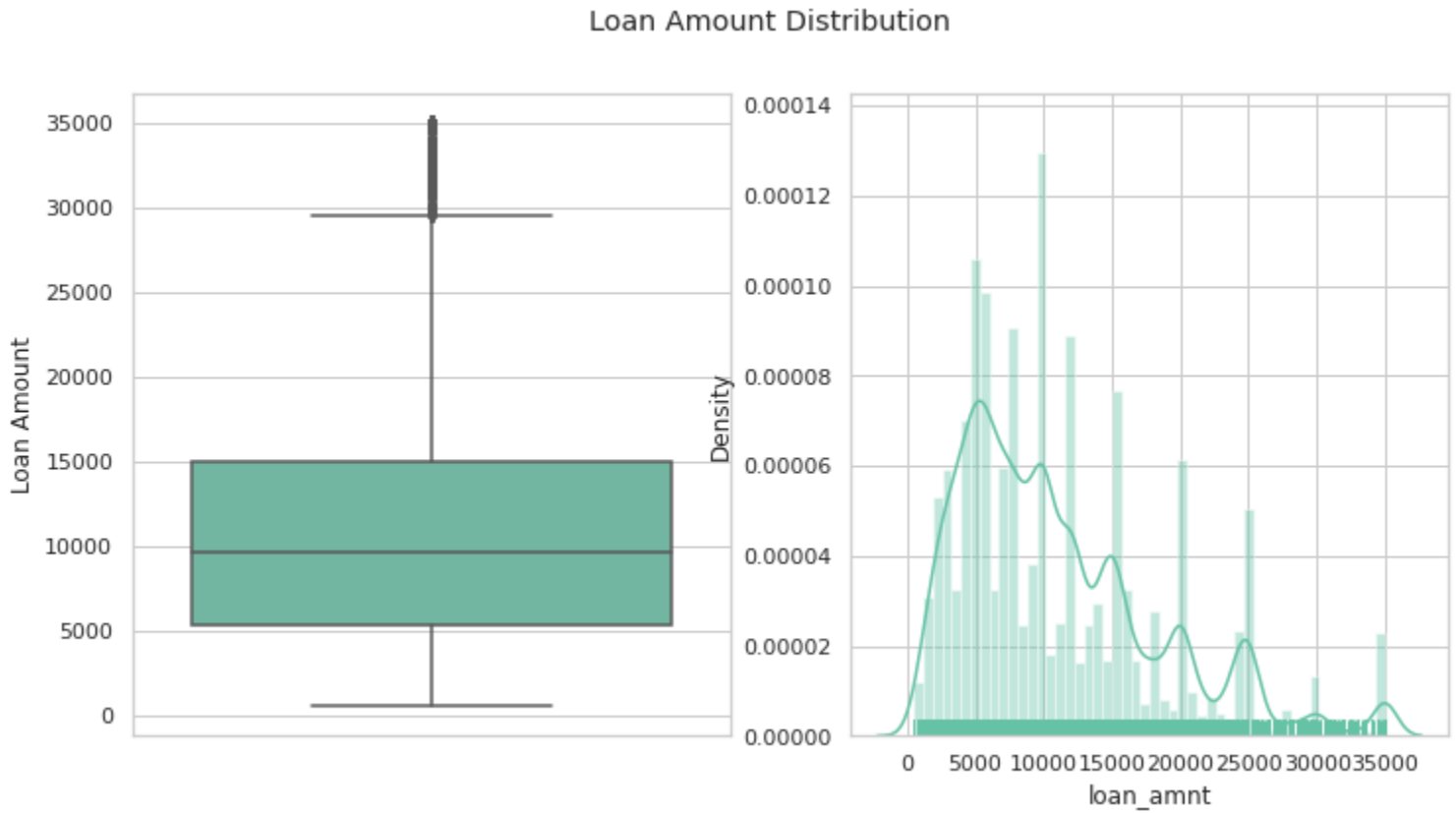

Observations

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

Interest Rates

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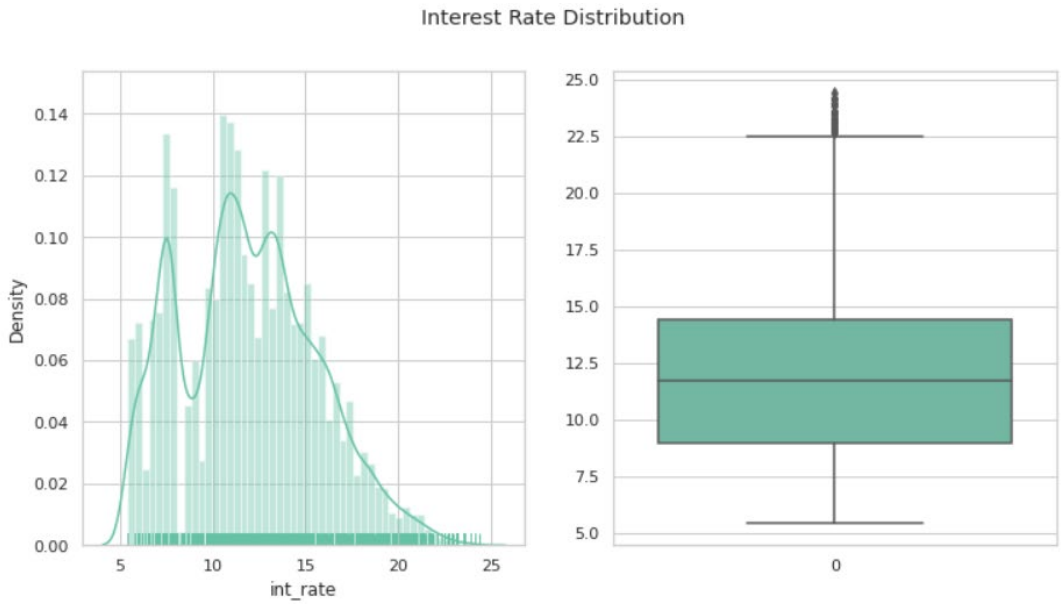

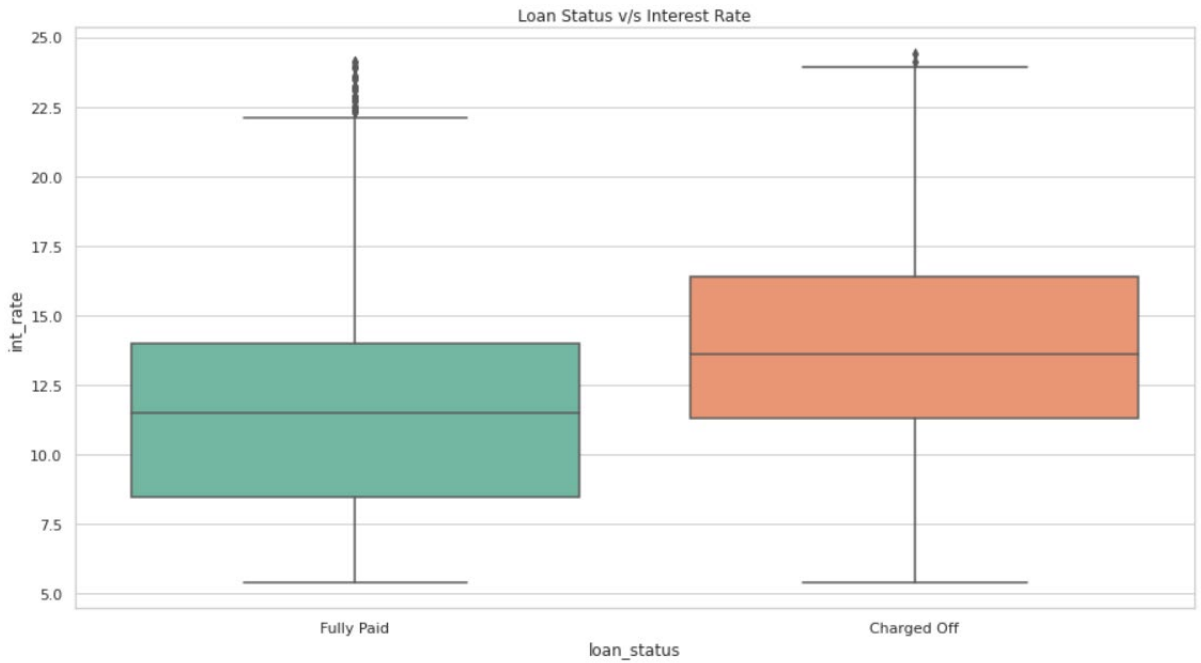

Observations

- 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

Loan Issue Year

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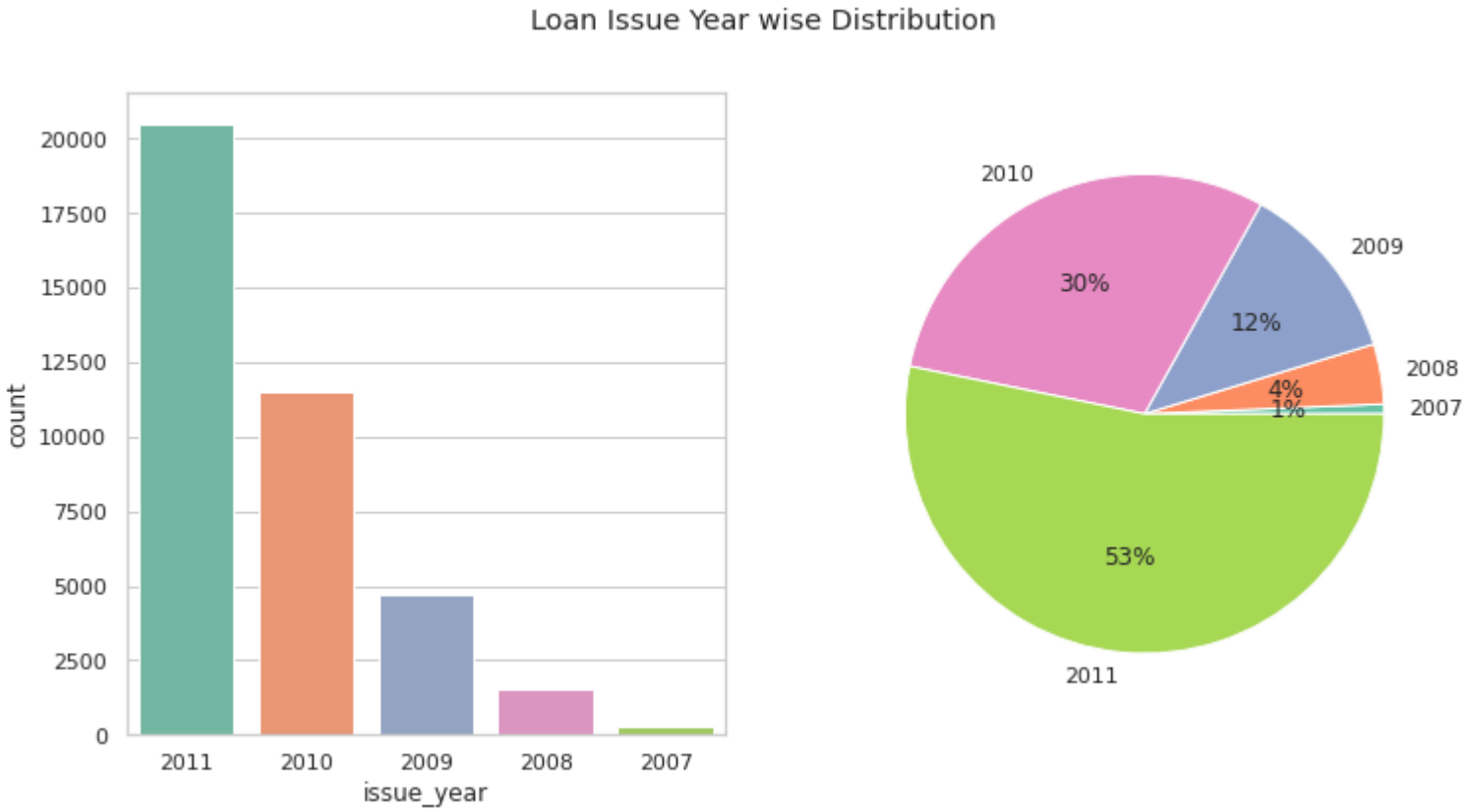

Observations

- Most of loans were taken during 2011

Verification Status

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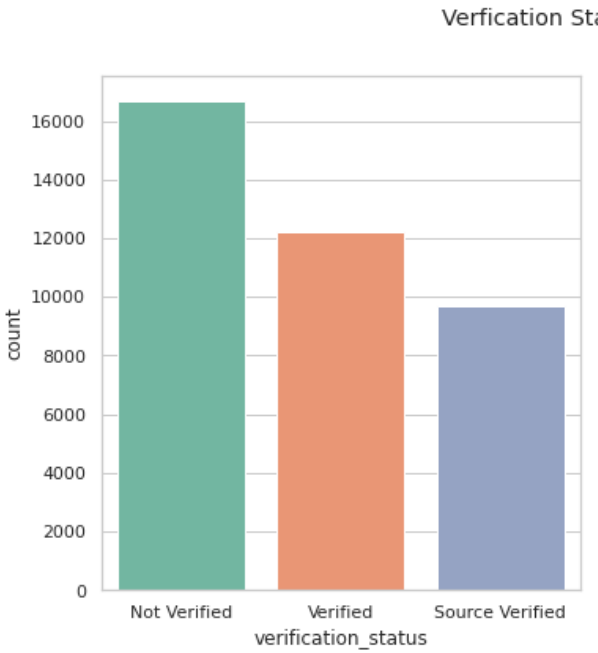

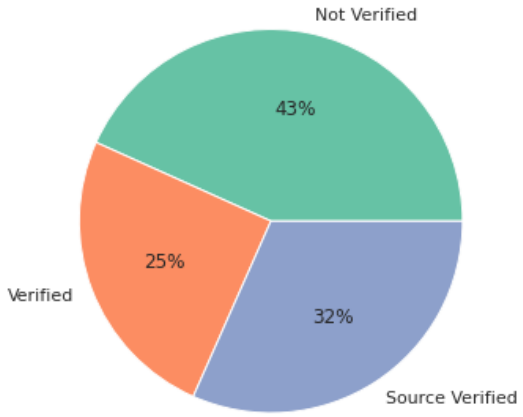

Observations

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

Loan Grades

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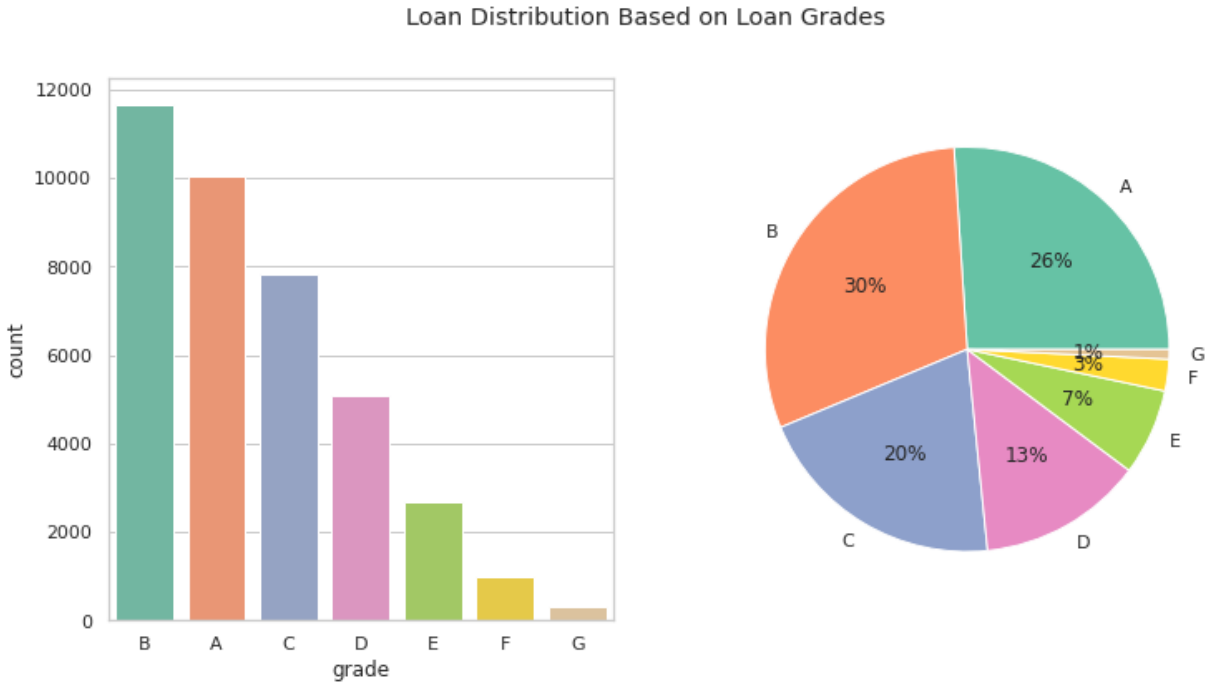

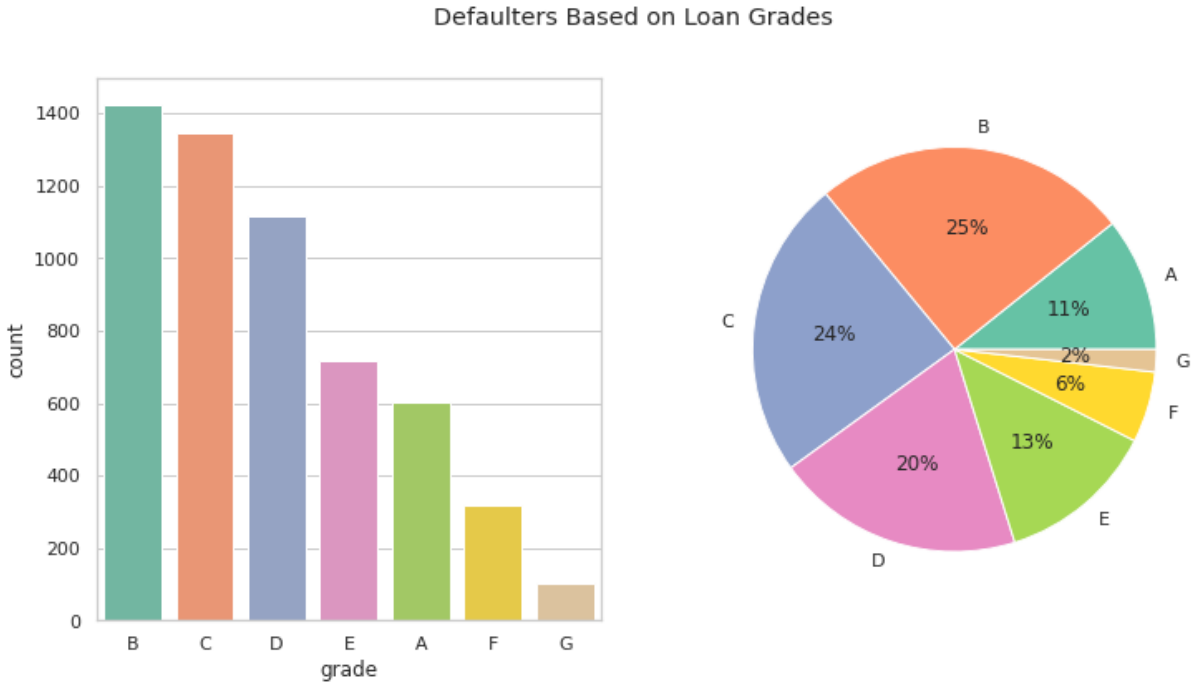

Observations

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

Borrowers Demographic Loan Distribution

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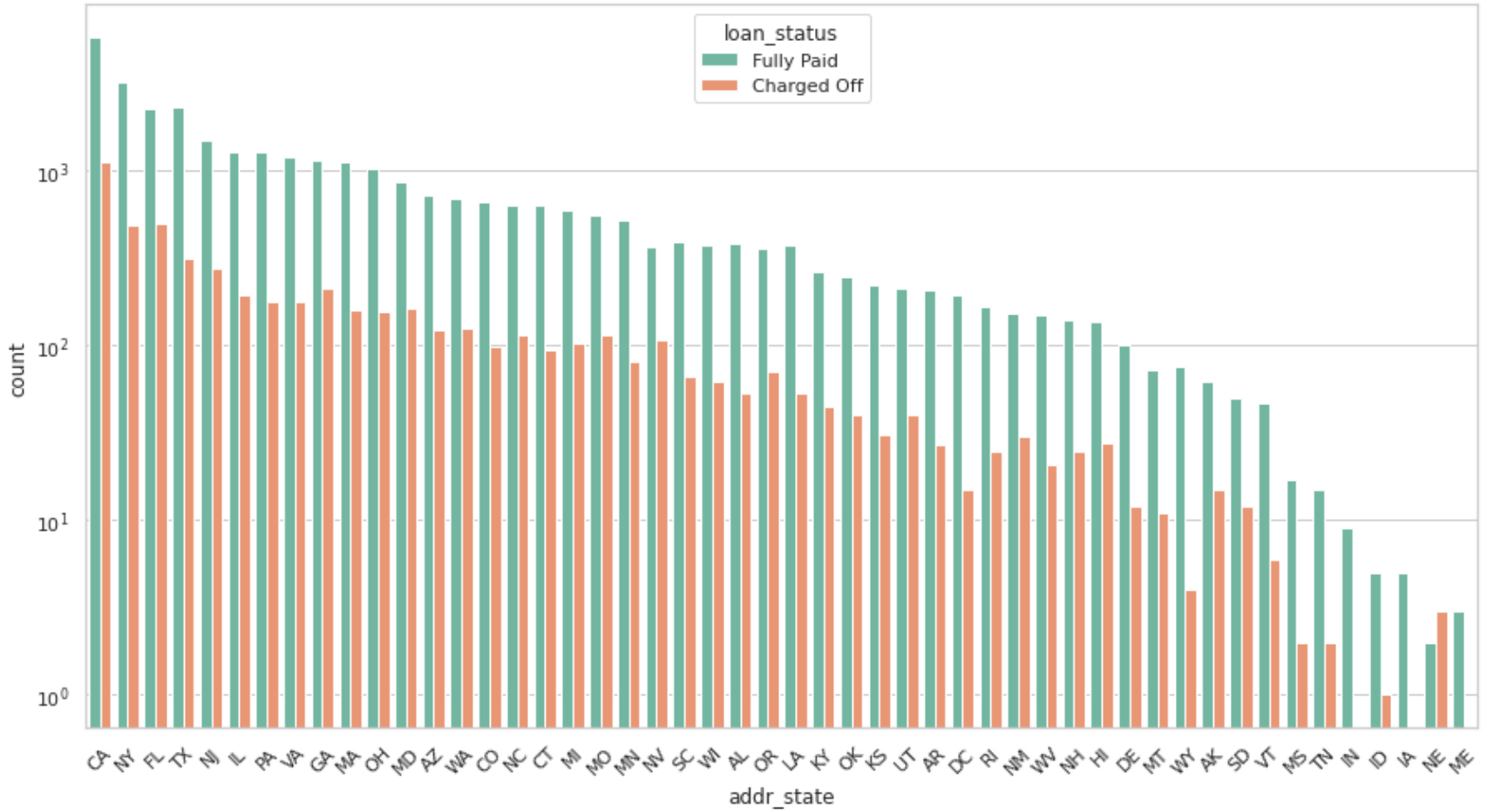

Observations

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

Annual Income Distribution

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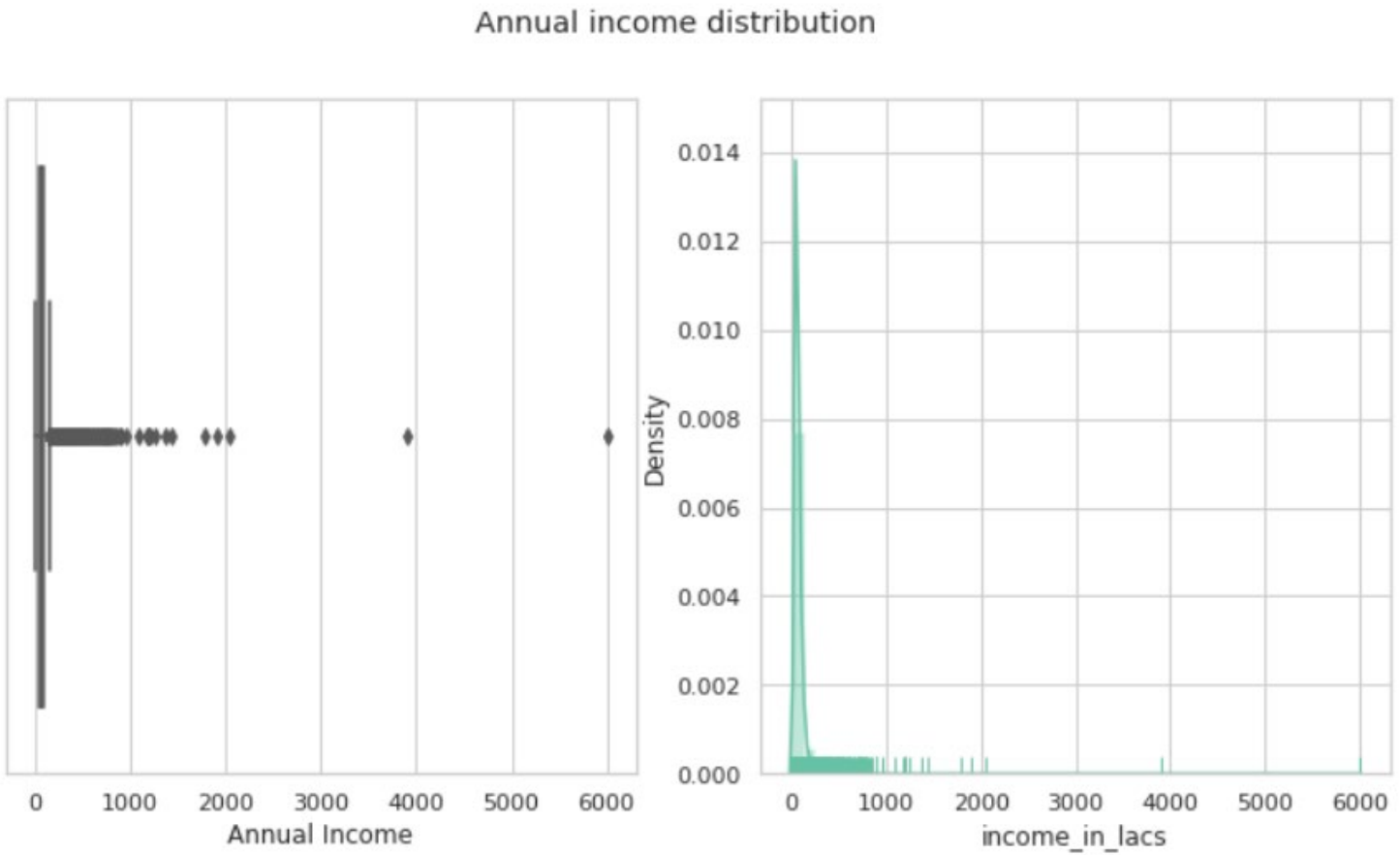
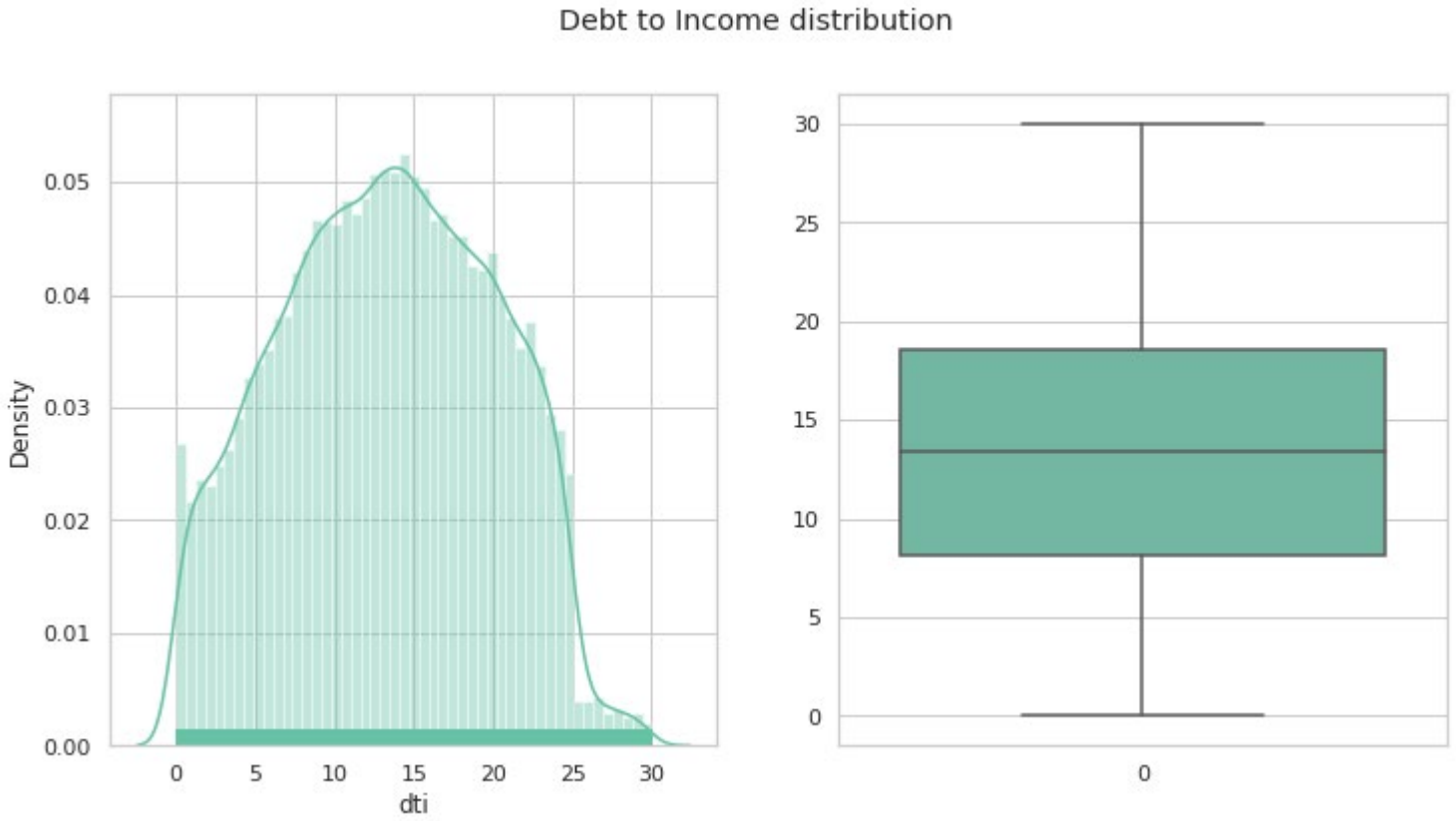


Observations

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

Debt to Income



Observations

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

Customer Experience (Employment Length)

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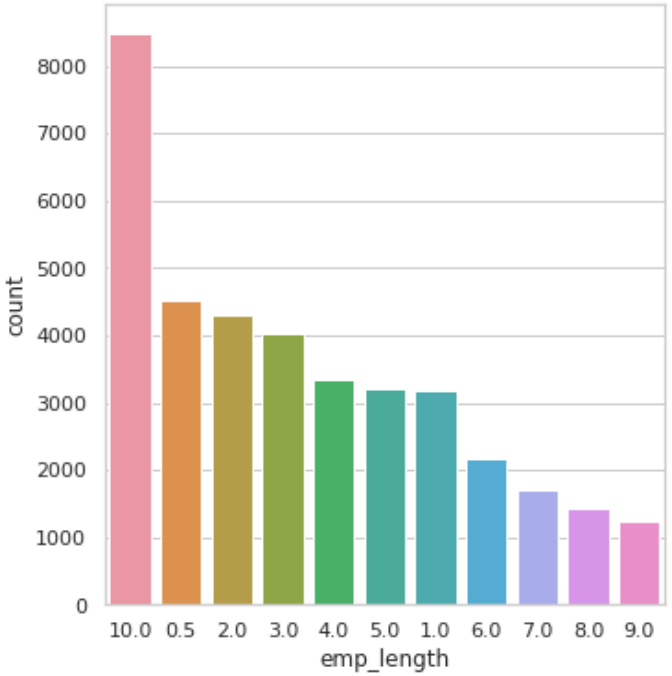

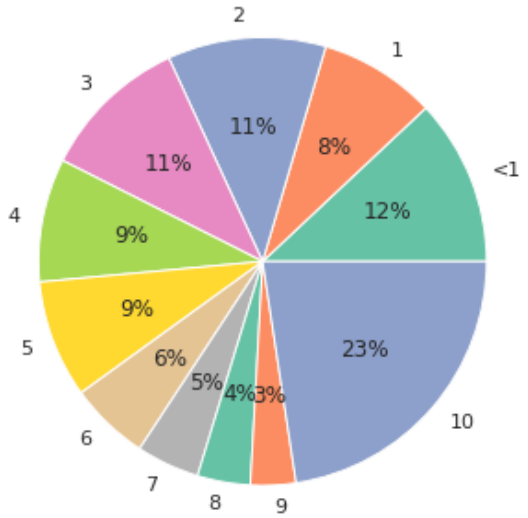

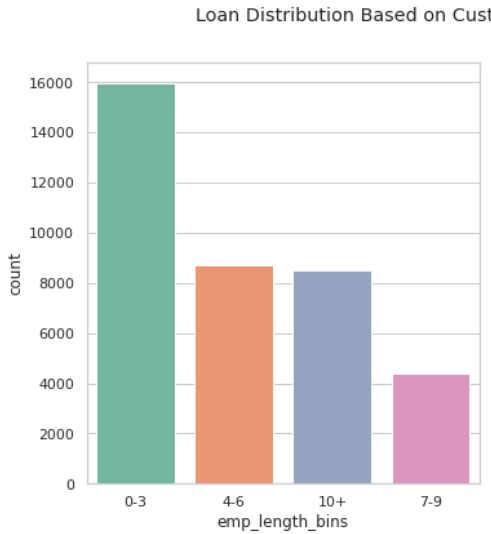

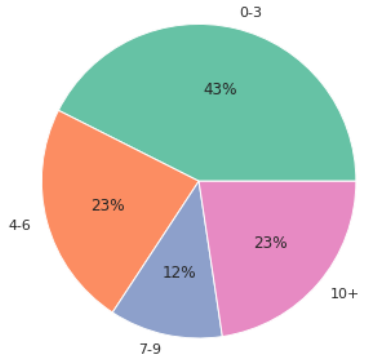

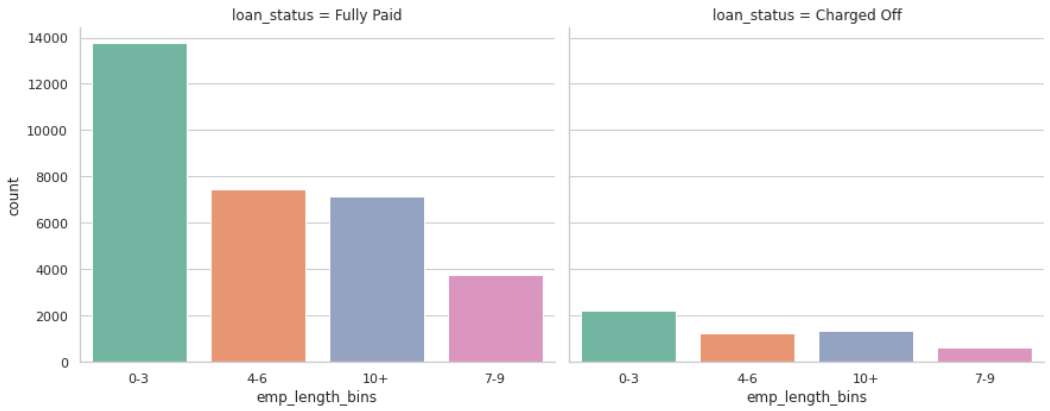

Observations

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

Loan Payment Term

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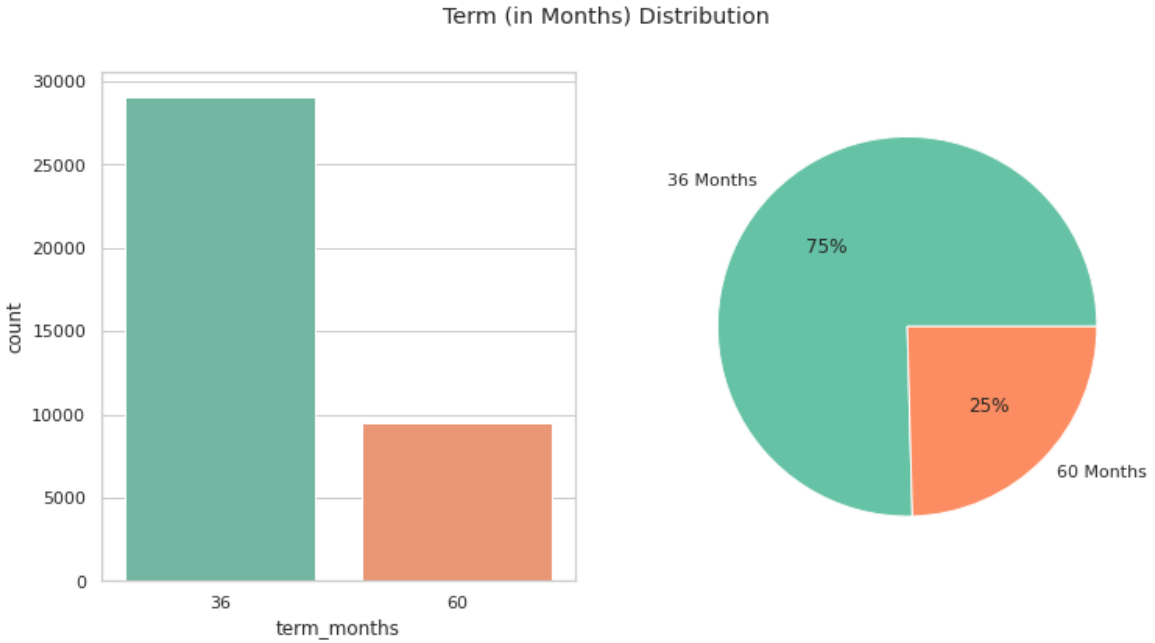
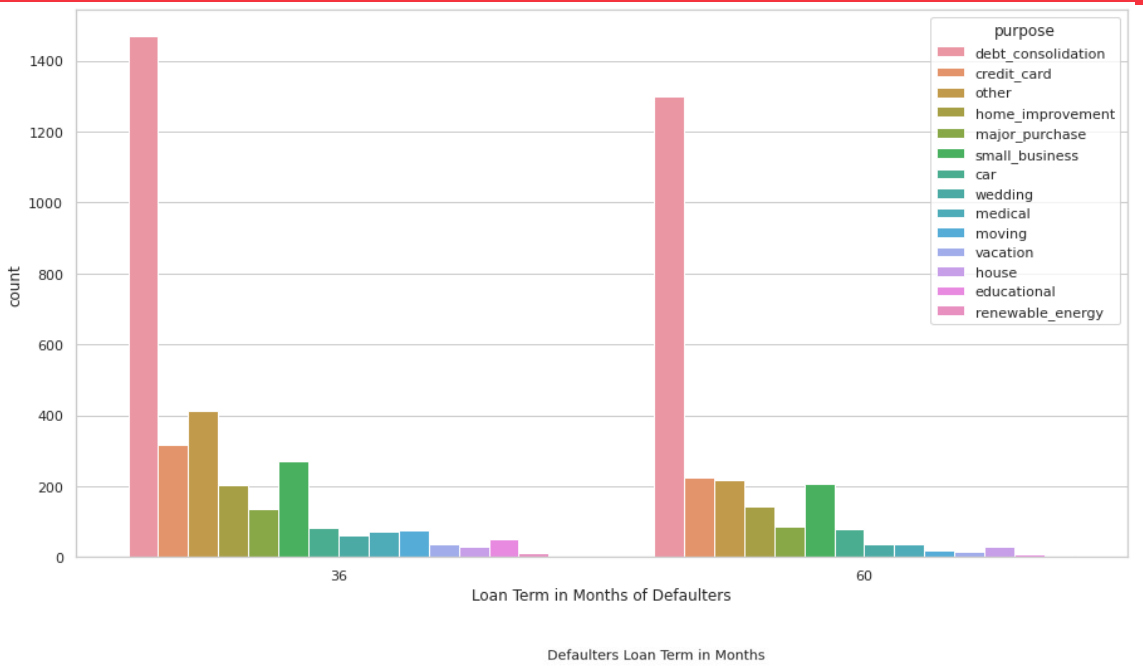
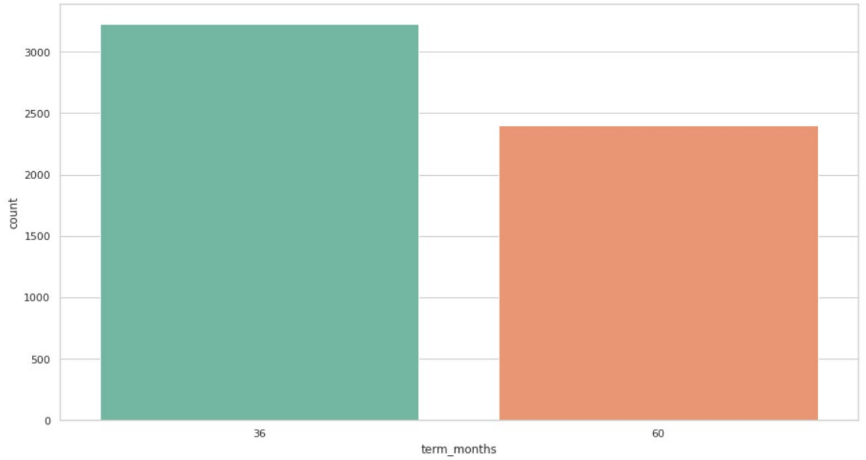




Defaulters Loan Term in Months



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

Home Ownership

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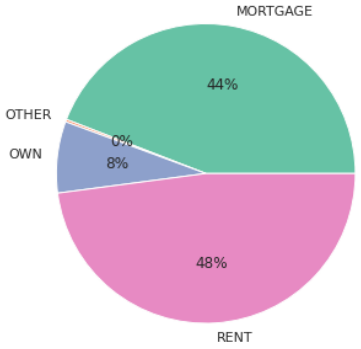

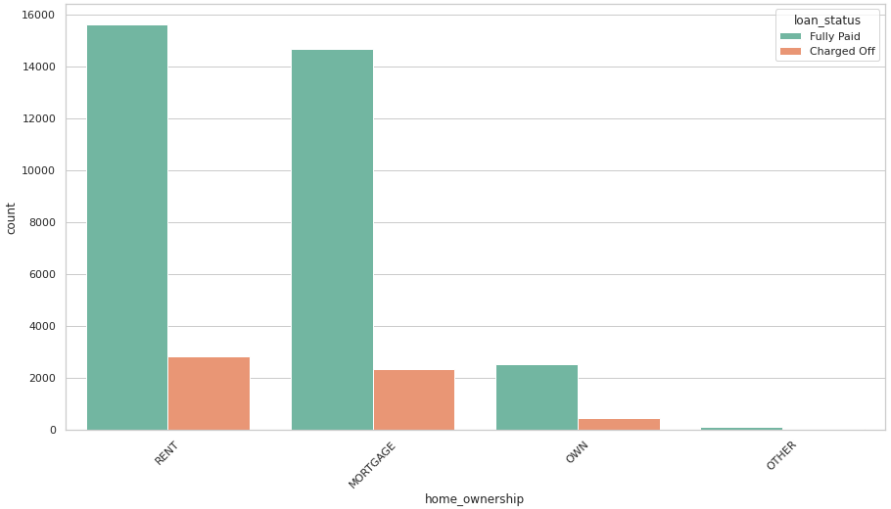

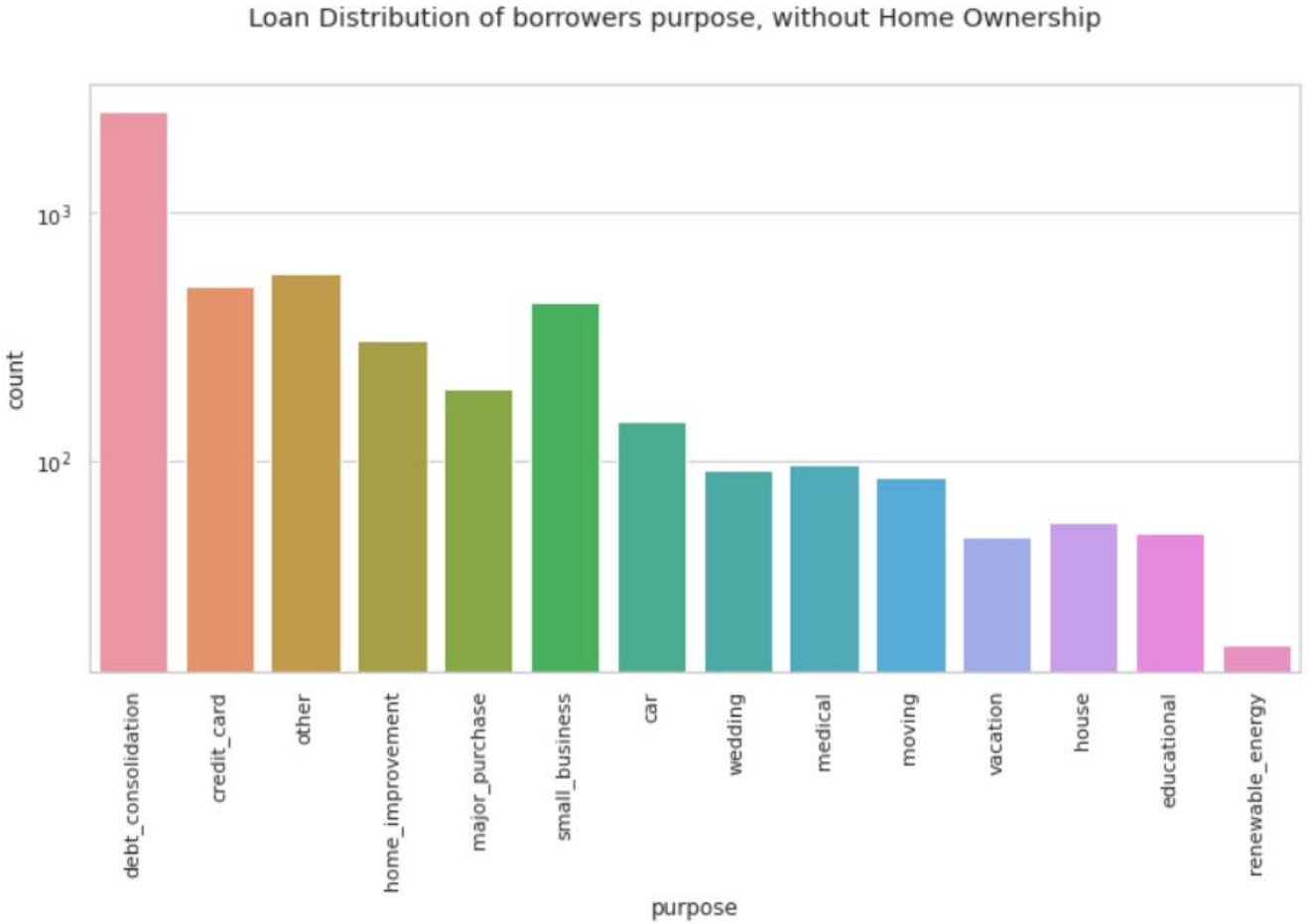

Observations

- 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

Conclusion

- ✓ 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 check thoroughly as it has high tendency to default