UPGRAD - IIIT Bangalore

LENDING CLUB CASE STUDY

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Overview

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Abstract

The primary goal of credit risk analysis is to determine the likelihood of borrowers defaulting on their debt obligations. For a loan lending institution, comprehending and effectively mitigating credit risk is vital for sustaining financial health and attaining organizational goals.

Problem Statement

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01

Lenders often face challenges in finding a right balance between granting credit and mitigating risks for default. What could be possible ways with which optimize credit risk and lending companies can safeguard themselves from potential losses.

02

Running a background check is itself a pretty complex task and relying on gut feeling or traditional credit scoring methods might leave a void. which could help lenders in making informed decisions.

03

Pinpointing certain behaviors from customers data which could help "Lending Club" in assess the level of risks before giving credit.

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Importance of Risk Management

01
Fraud Detection :
Thorough analysis helps in detecting potential fraud or misrepresentation.

02
Risk Assessment :
Understanding customer details is crucial for accurate risk assessment.

03
Personalized Loaning Schemes :
Analysis enables personalized loan offerings based on customer profiles.

04
Prevention from defaults :
Insight into customer details aids in minimizing the risk of defaults.

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Steps Taken

Data Cleaning
Treating null values, transforming data into right format

Univariate Analysis
Examining a single variable's distribution, central tendency etc.

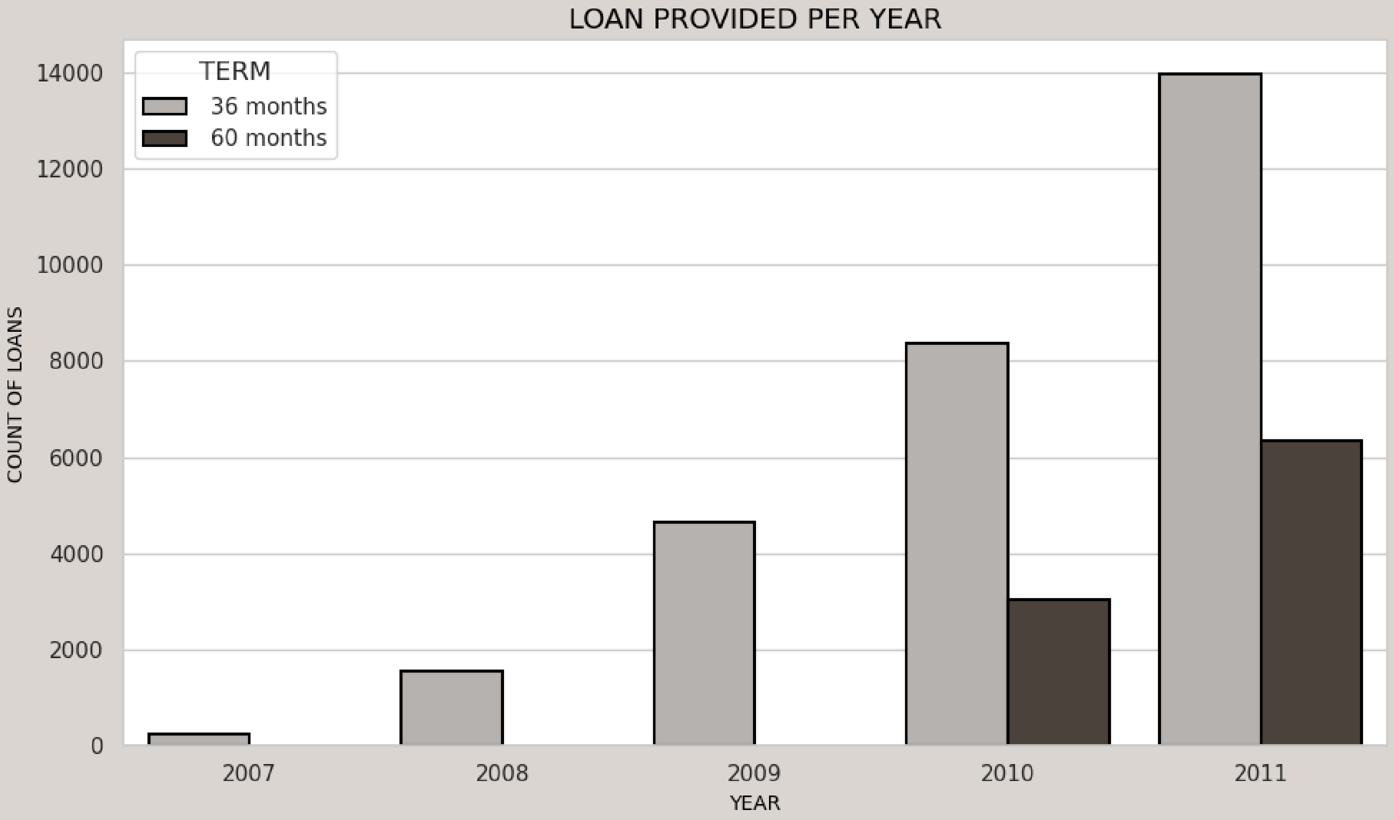
Bivariate Analysis
Investigating the relationship between two variables

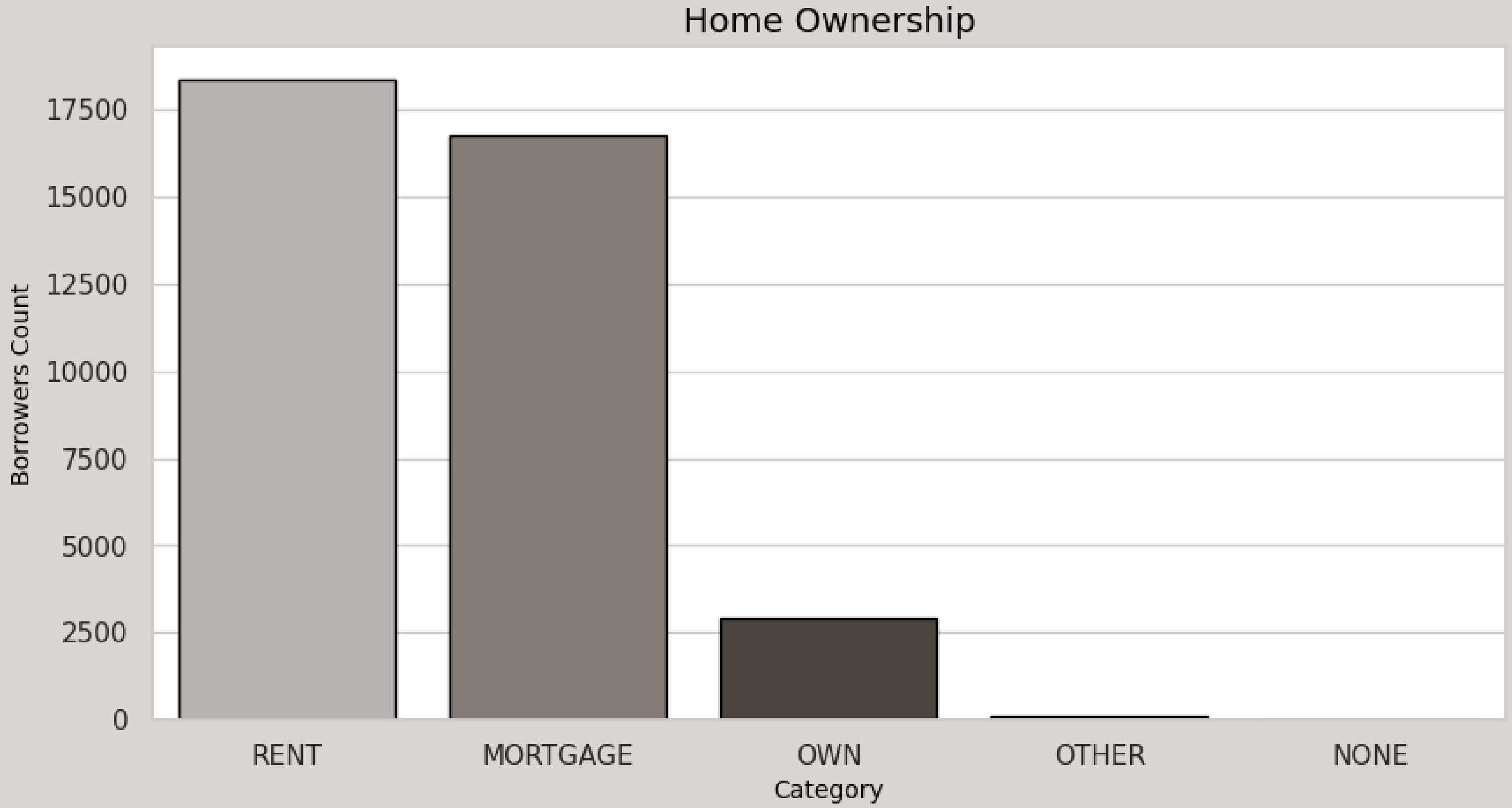
Multi-variate Analysis
Analyzing multiple variables simultaneously

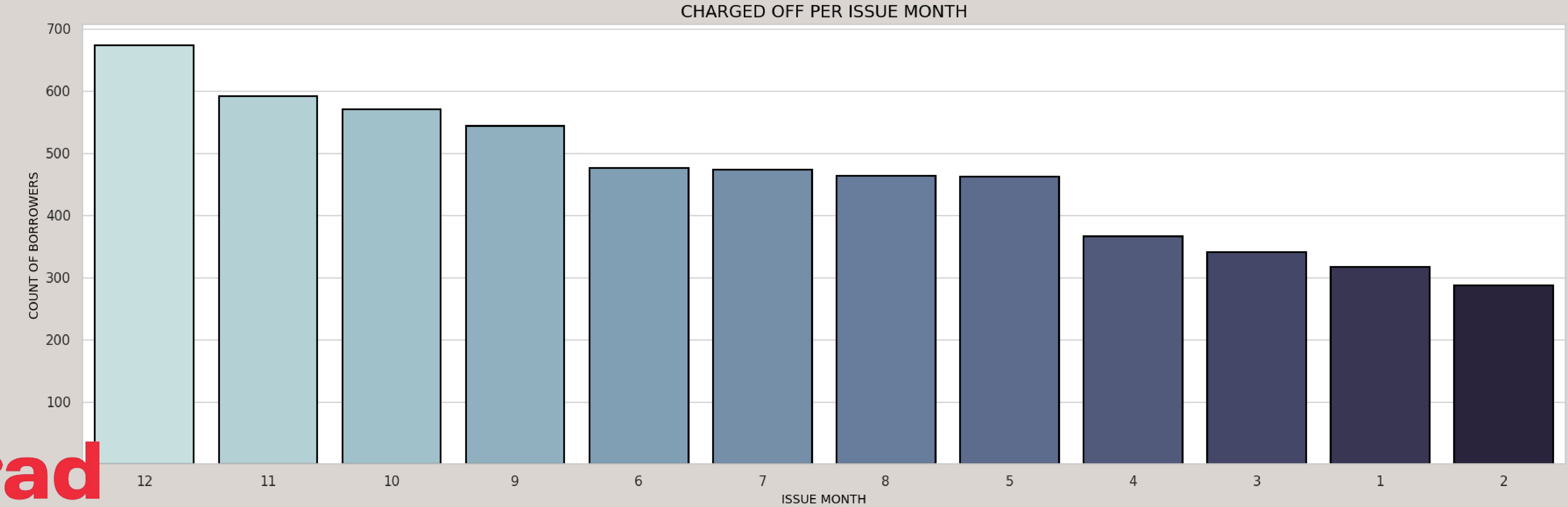
Conclusion
Listing some of my overall findings through graphs

Univariate Analysis

Observation







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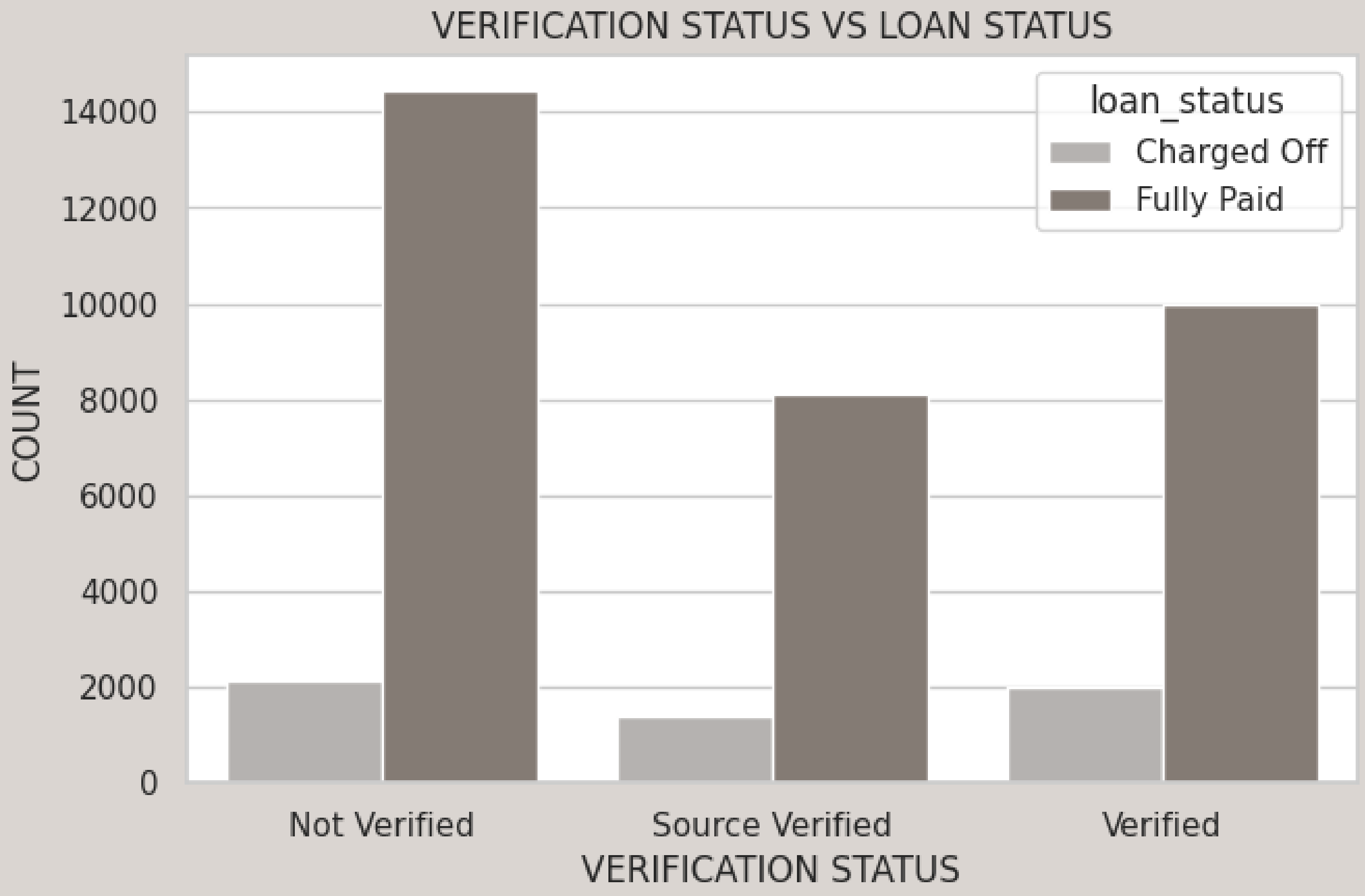
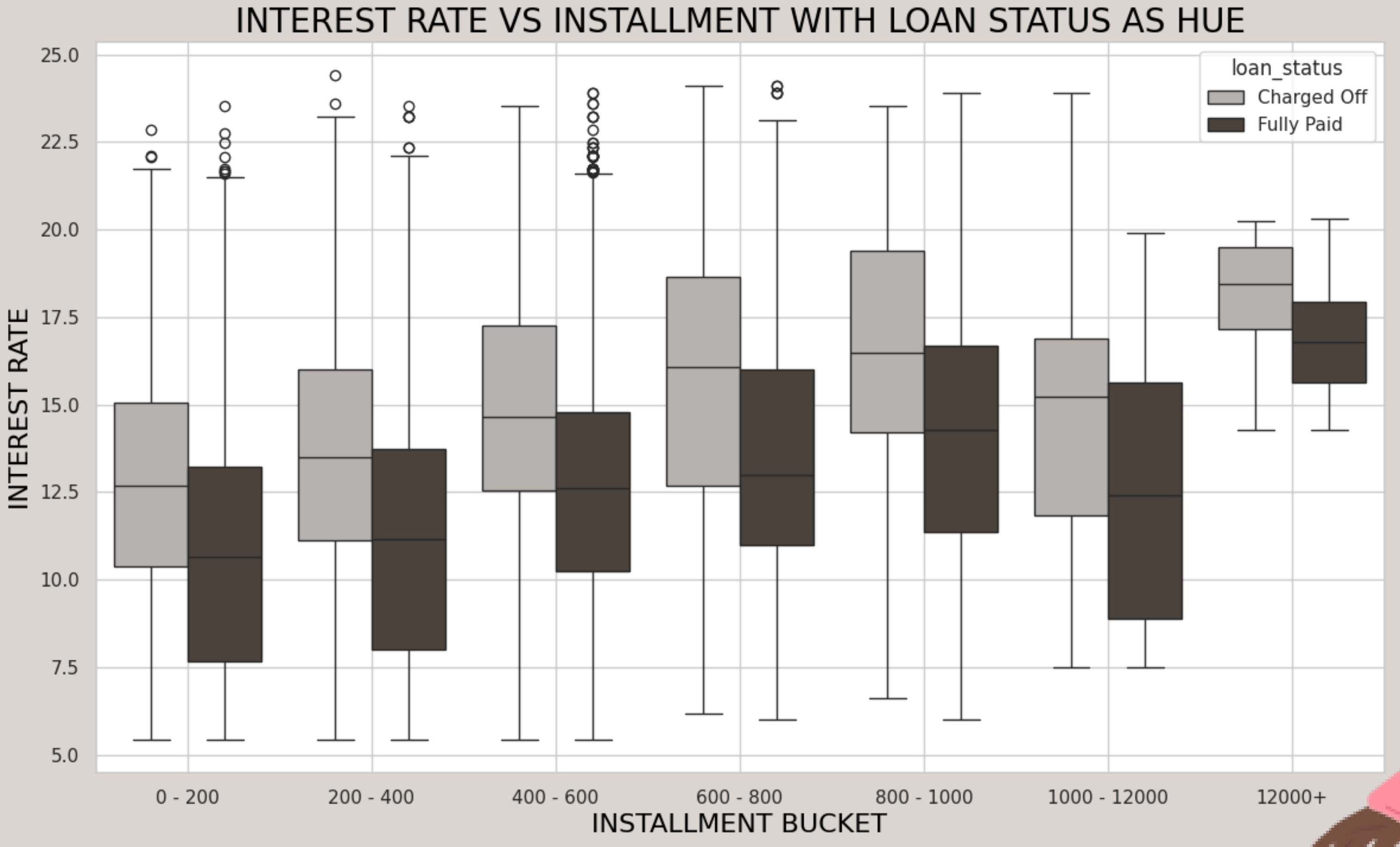
Bivariate Analysis

Observation





- Based on the nature of loan status most of the borrowers don't undergo extensive verification.
- Borrowers face high interest rates who tend to choose longer installments plans.
- One thing to note the variation or spread in interest rate widens as the number of installments increases. This relates that lenders are adjust interests based on perceived risk associated with longer credit lines.

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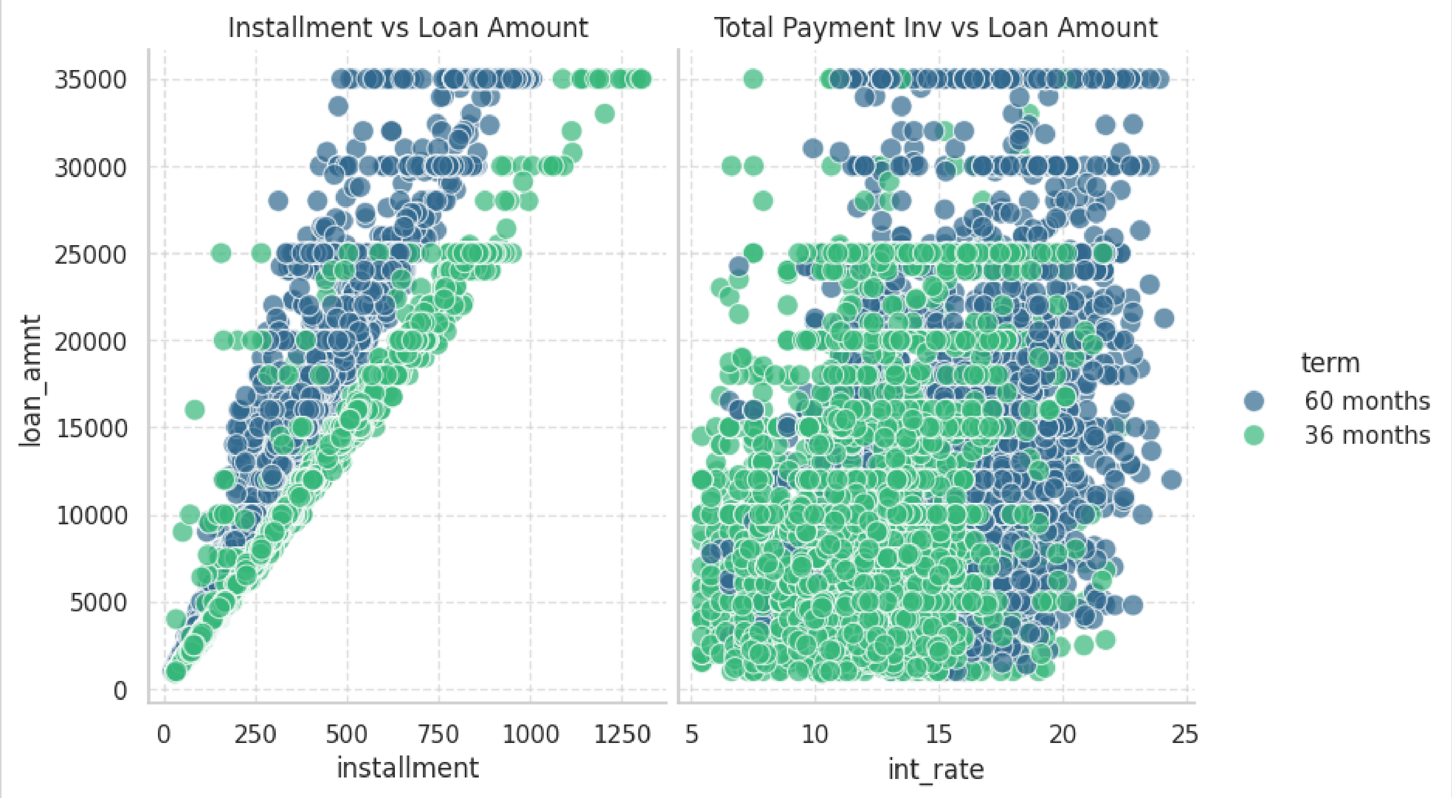
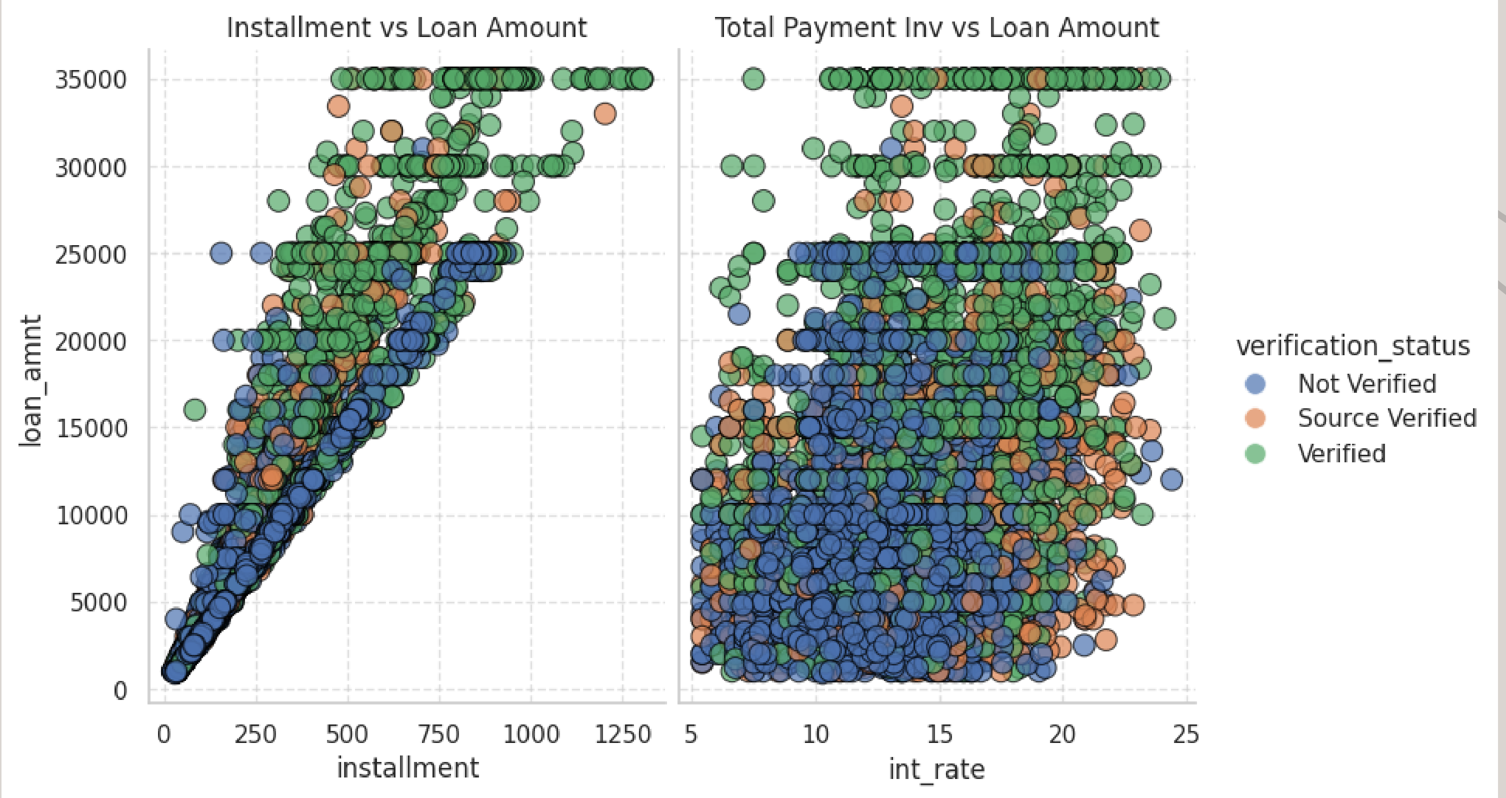
Multi-variate Analysis

Observation





- The general trend in both of these graphs are increasing. However in the case of interest rate VS loan amount is not strictly linear.
- Interest rate Vs loan amount graph further solidifies our previous hypotheses of mostly borrows not verified.
- the variation in interest rates for similar loan amounts indicates the influence of other variables like the type of credit line, borrowers with different risk profiles or a higher perceived risk.

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Conclusion

Conclusion

- Borrowers with an employment length of more than 10 years are more likely to default on their loans.
- Borrowers who have a mortgage and a loan amount greater than $12,000 are more likely to default.
- Loan provided for house, debt consolidation, small business with highest interest rate are more likely to charge off.
- Longer tenure has the higher interest rate and people in this term with interest rate between 15-20% is more likely to charge off.
- Shorter tenure has the lower interest rate and people in this term with interest rate between 10-15% is more likely to charge off.

Thank You