# Lending Club Case Study

Objective: Analyzing and understanding the factors affecting loan status using data from Lending Club.

General Information

1. This project aims to analyze loan data from Lending Club to understand the factors that influence the status of loans.

2. Background: Lending Club is a peer-to-peer lending company that connects borrowers with investors. The dataset includes information on loans, borrower details, and payment status.

3. Business Problem: The objective is to identify key variables that predict loan default, which can help in making informed lending decisions.

4. Dataset: The dataset used in this study is the 'loan.csv' file from Lending Club, containing information such as loan amount, interest rate, annual income, and loan status.
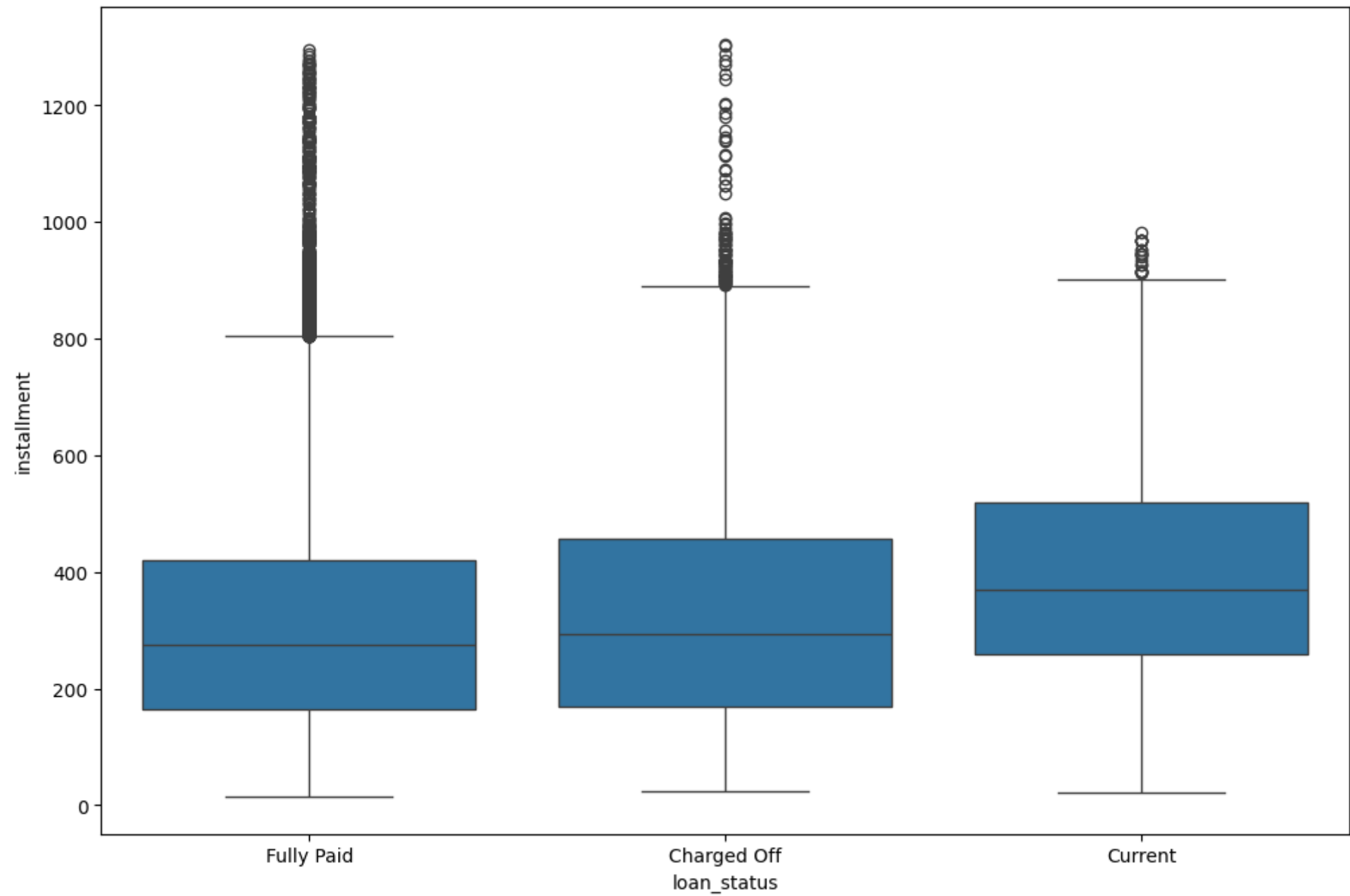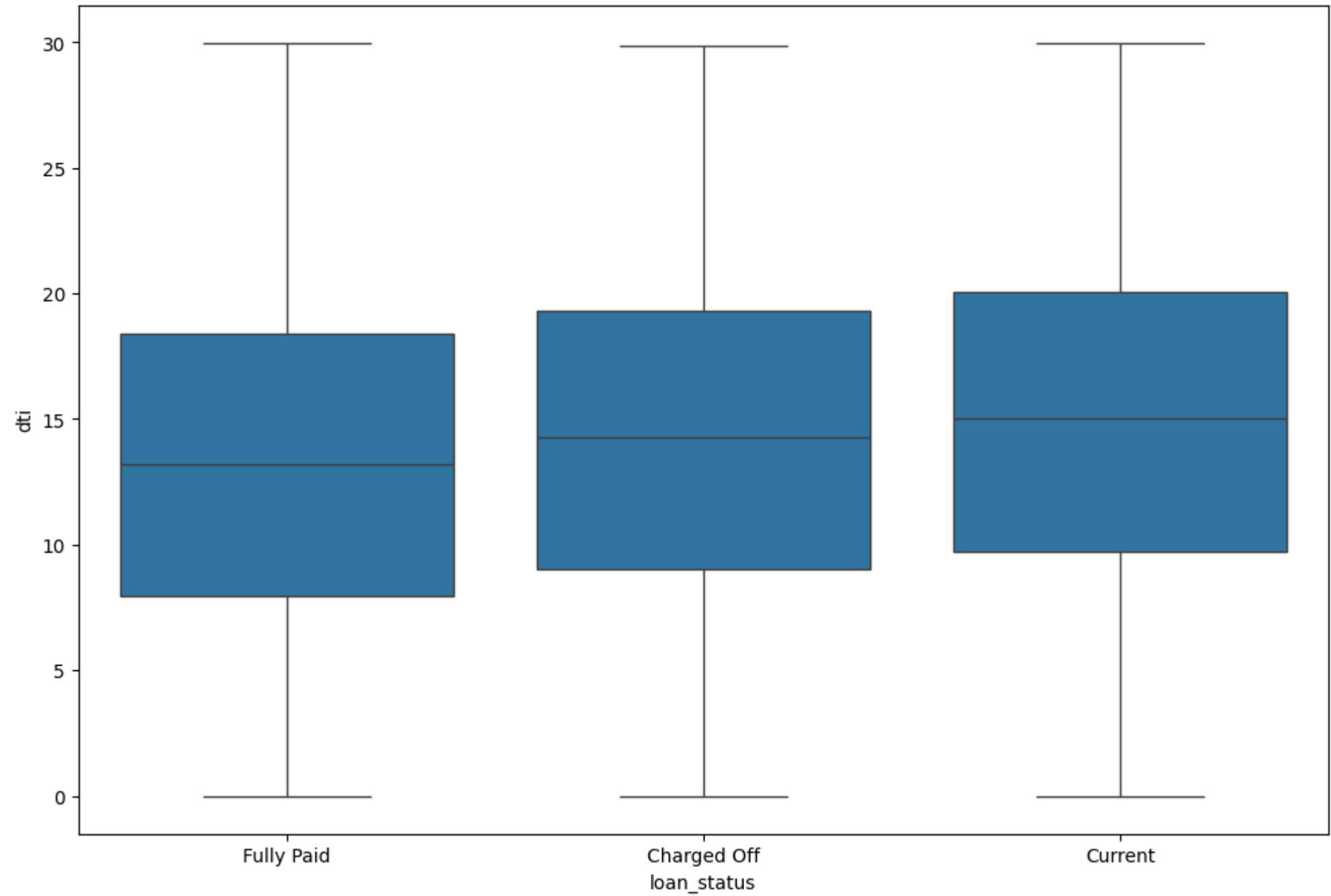
Numerical columns distribution analysis
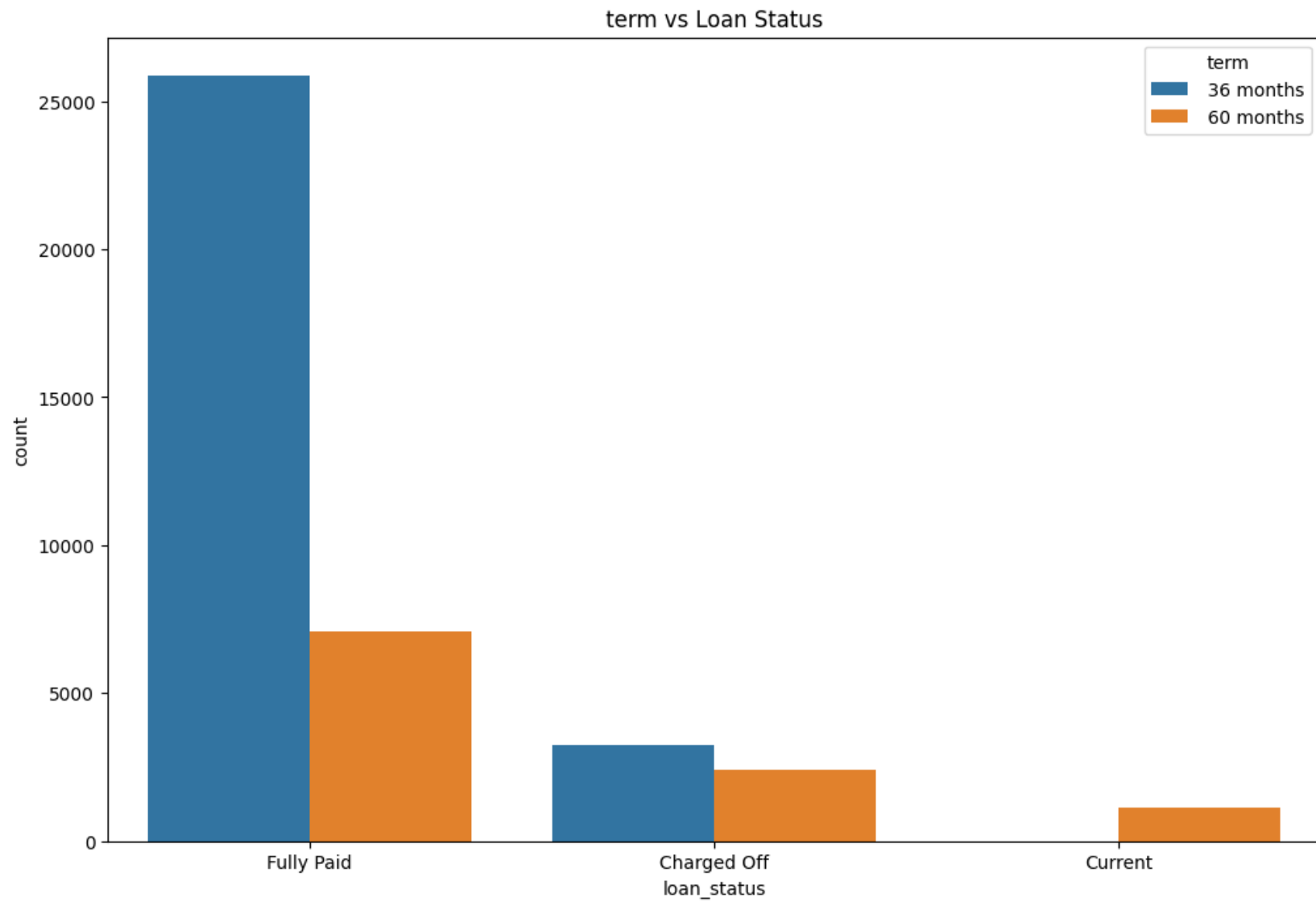

loan_amnt vs Loan Status
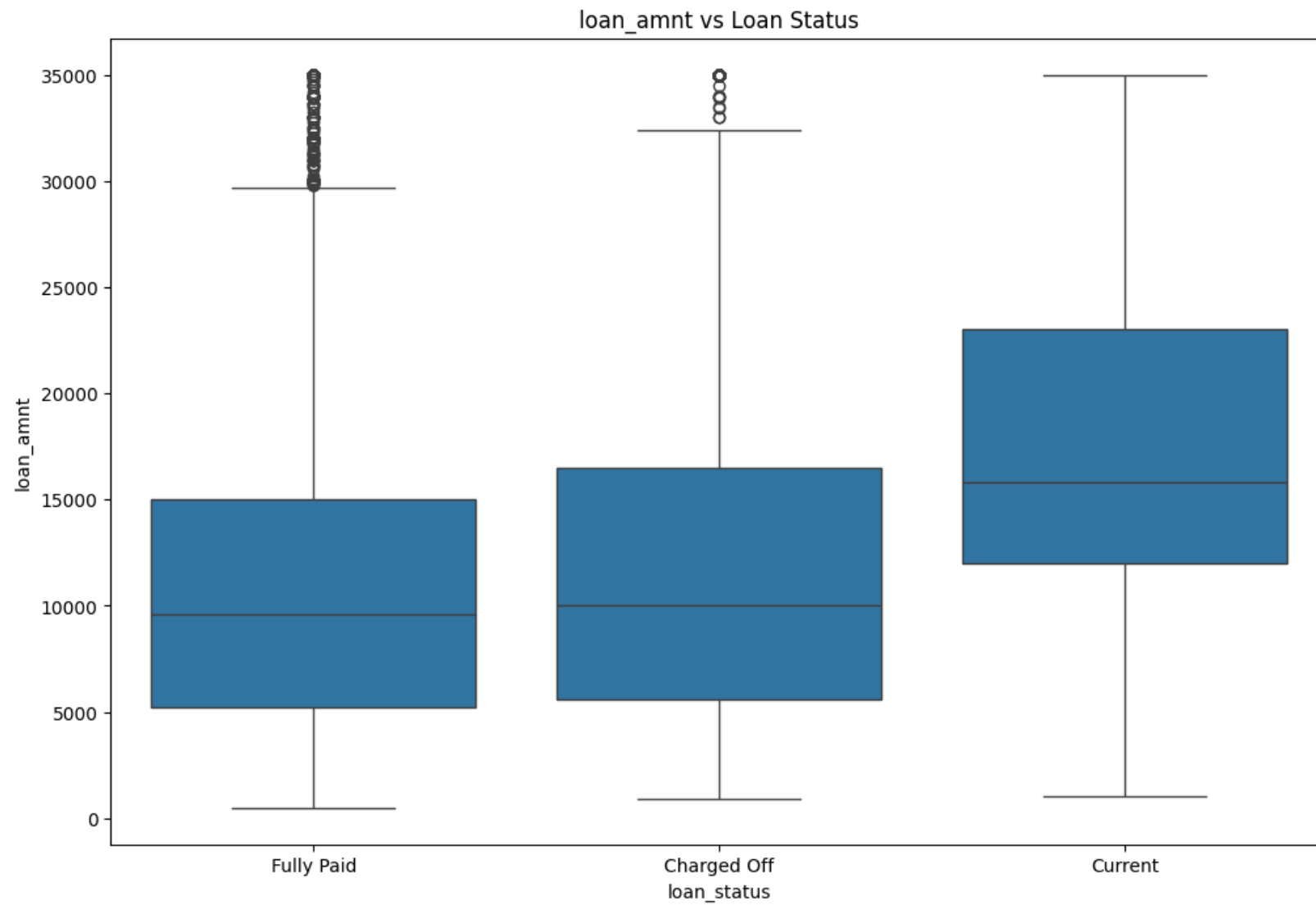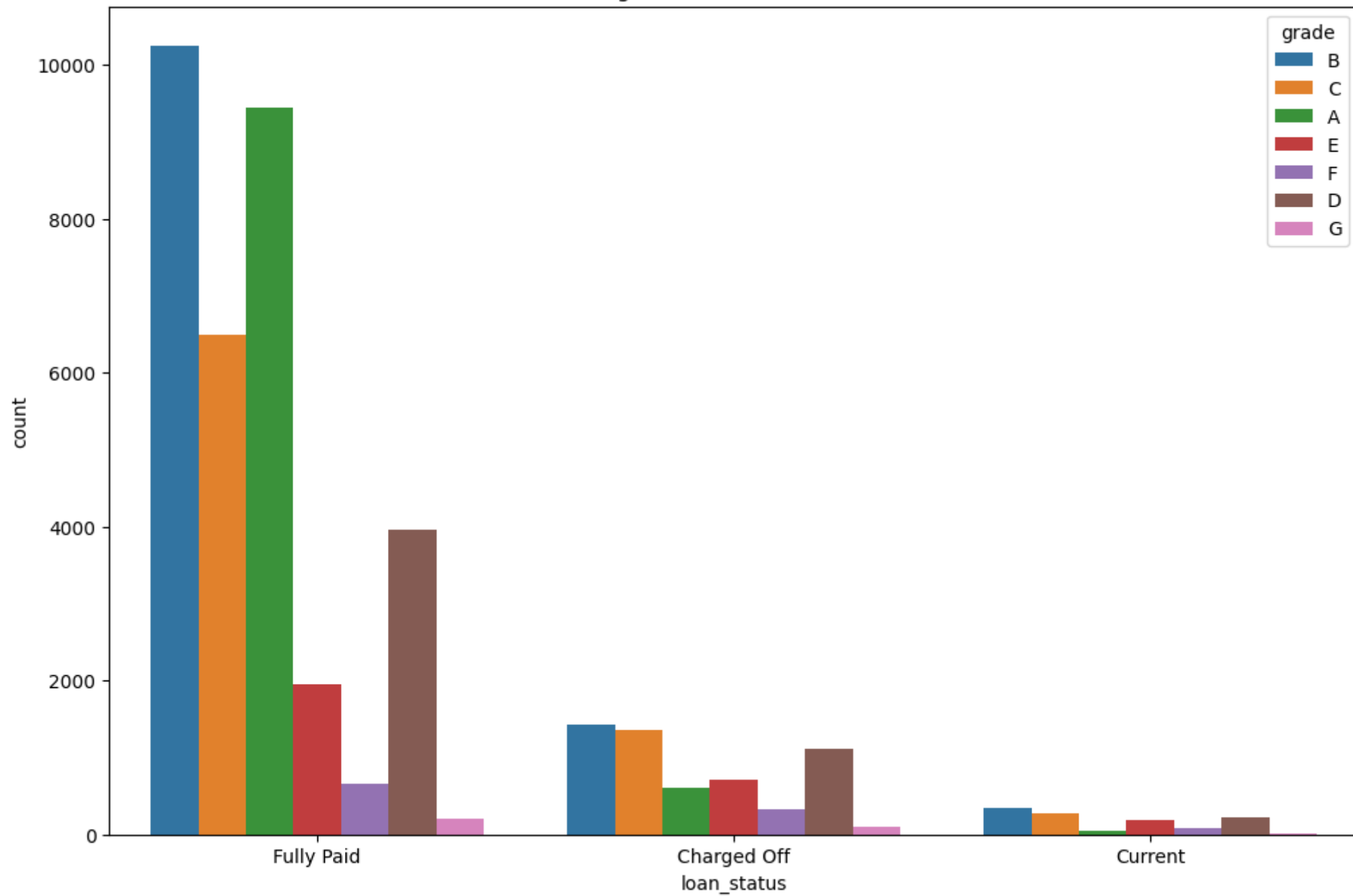
funded_amnt vs Loan Status
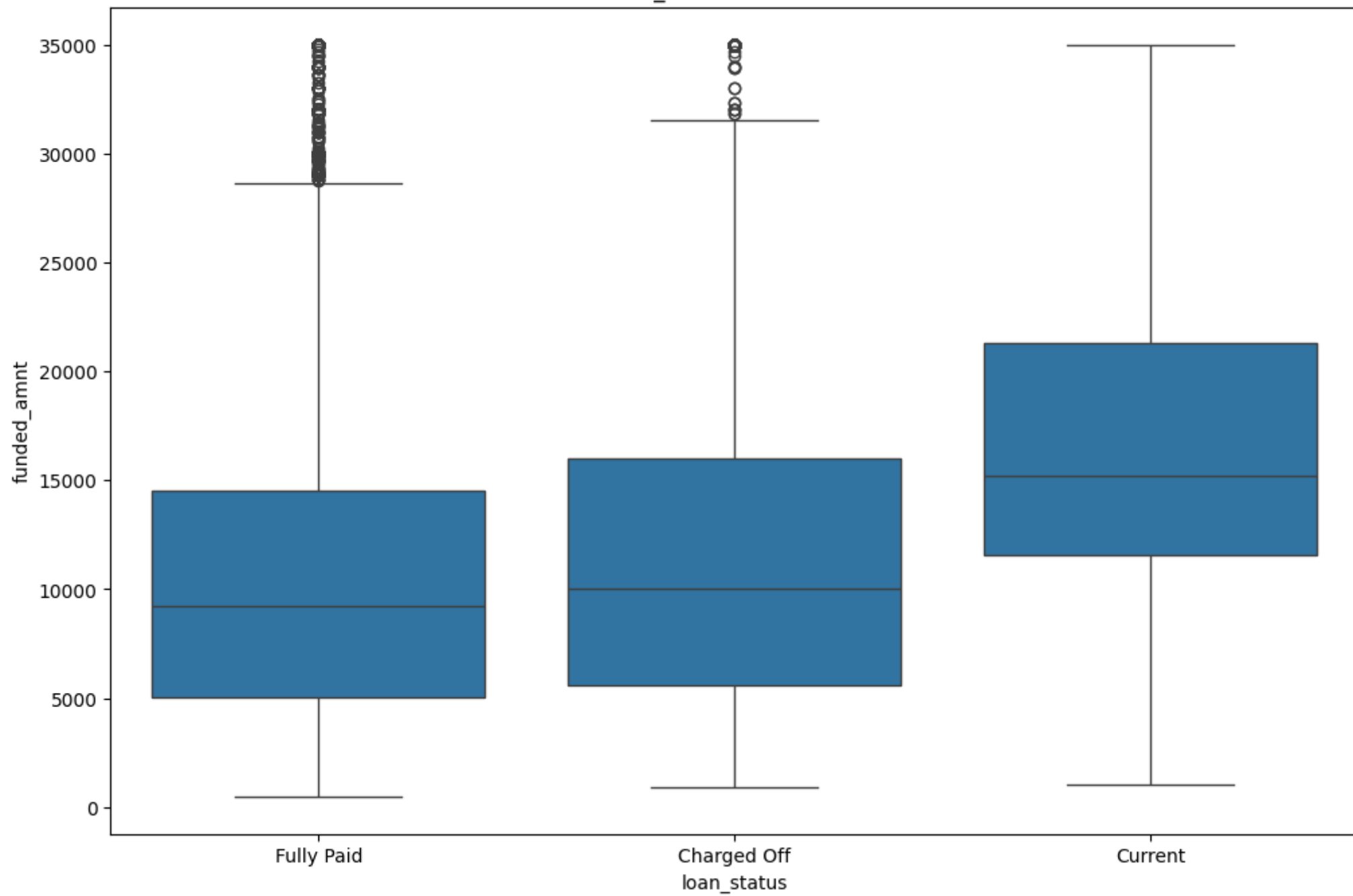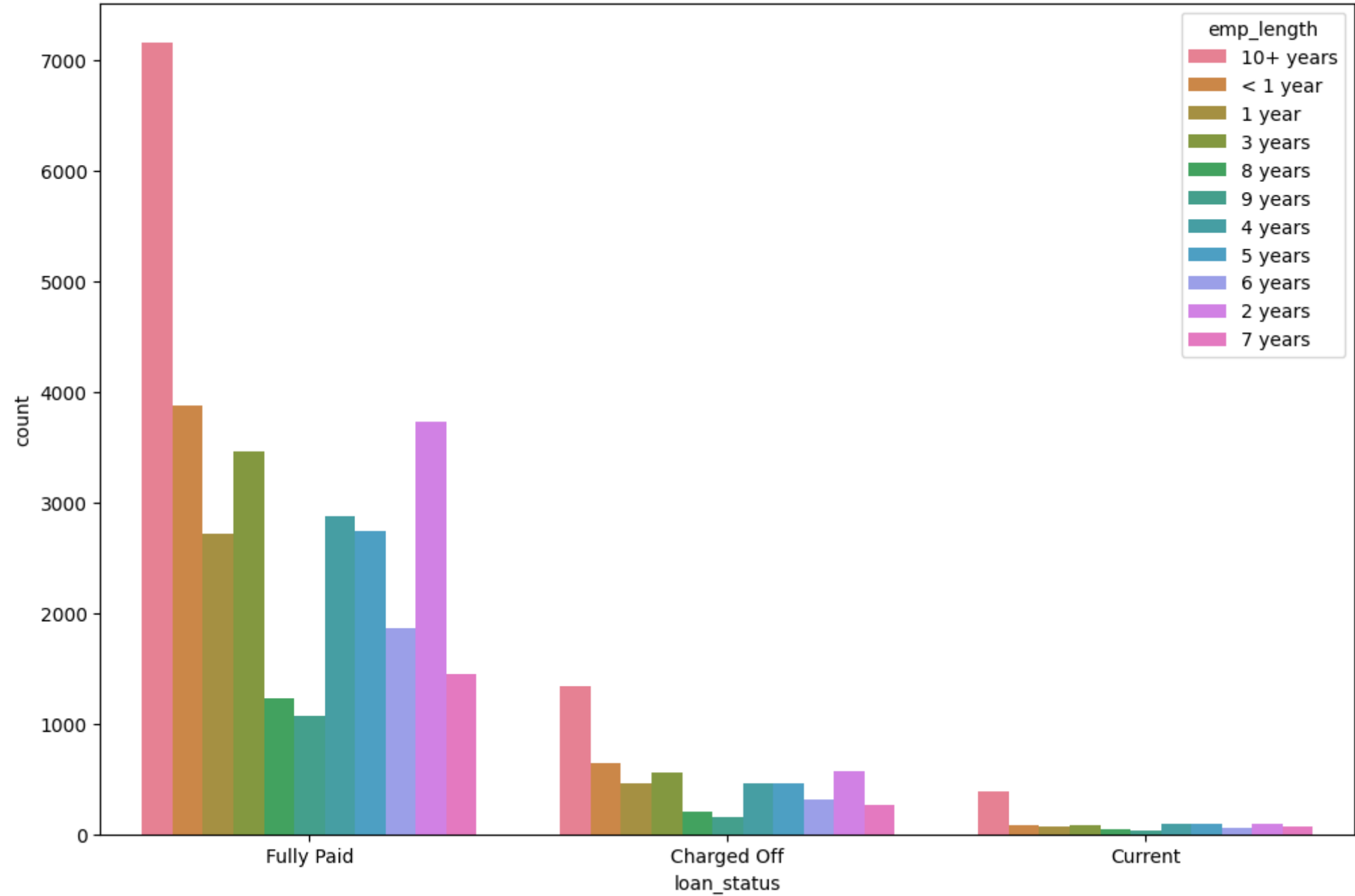
installment vs Loan Status

dti vs Loan Status
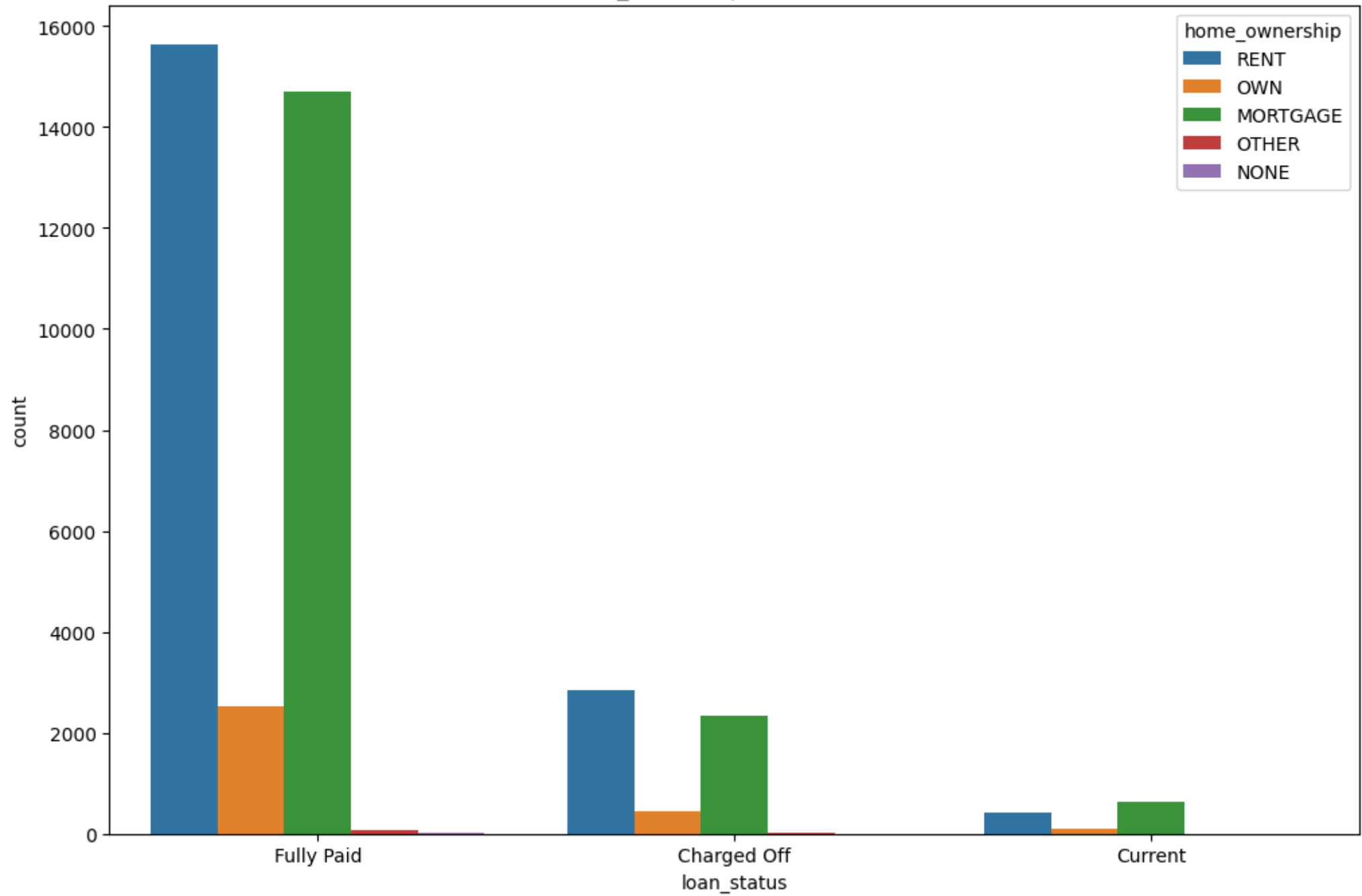
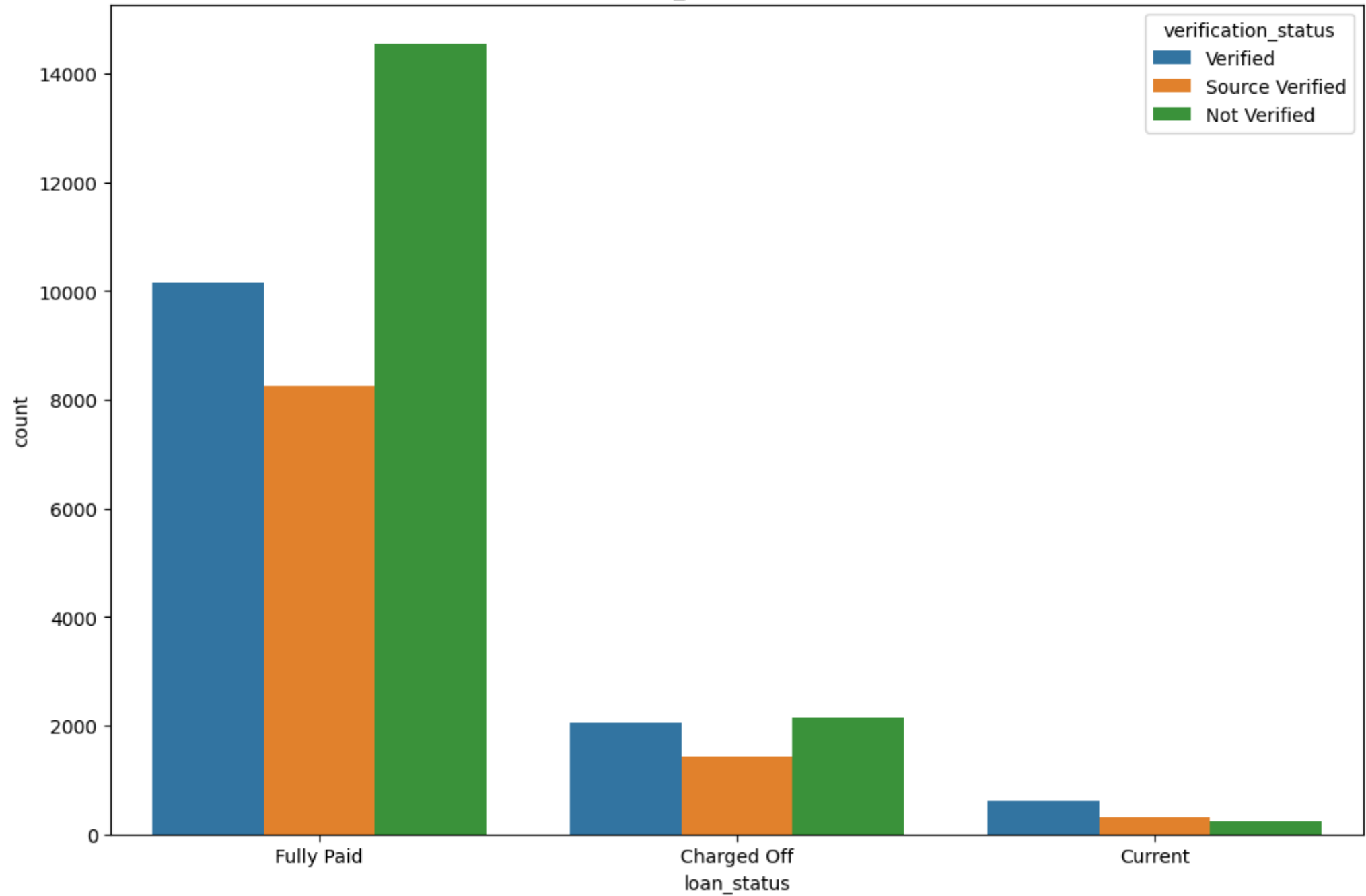# Categorical columns distribution analysis
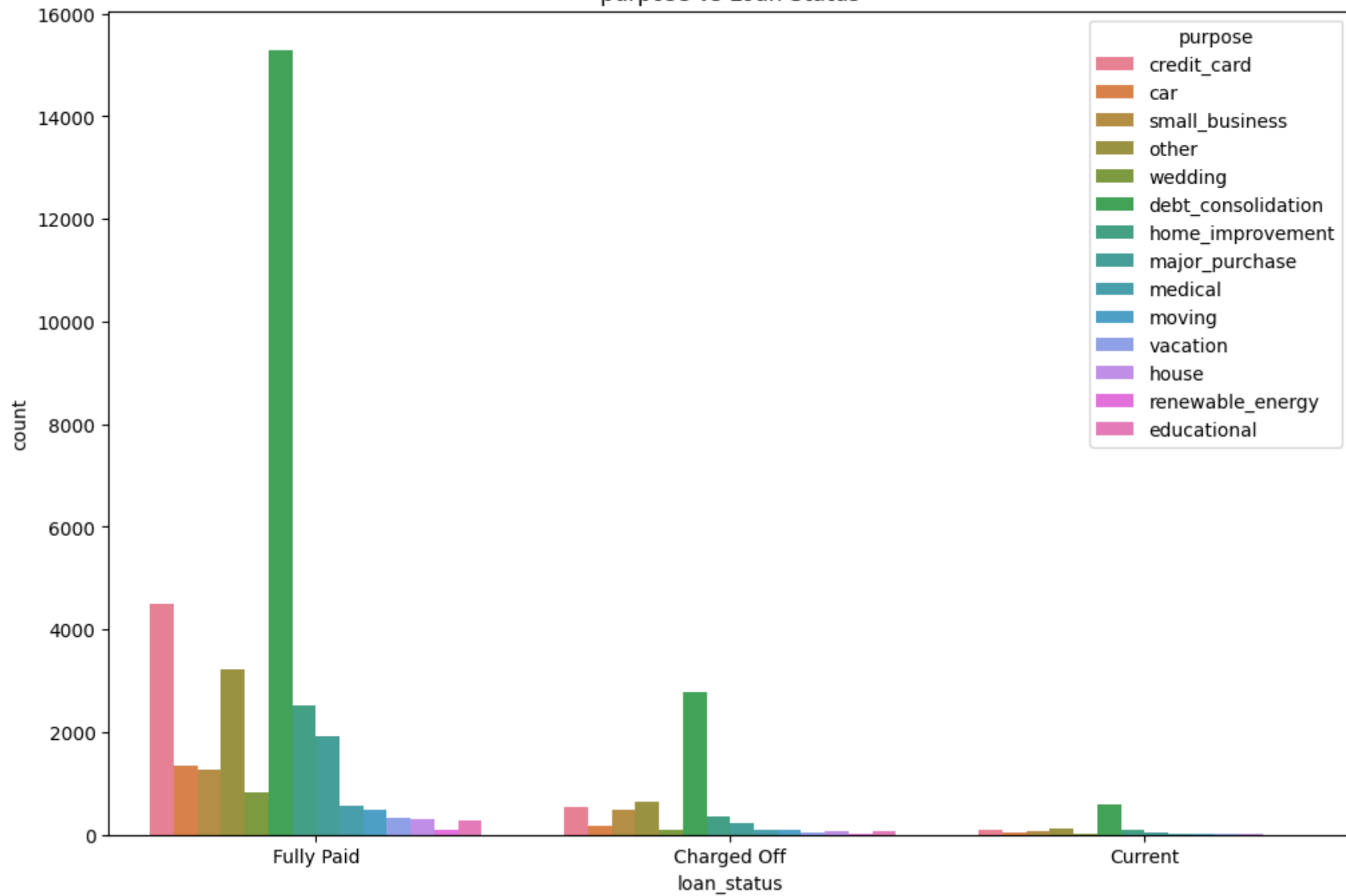
grade vs Loan Status

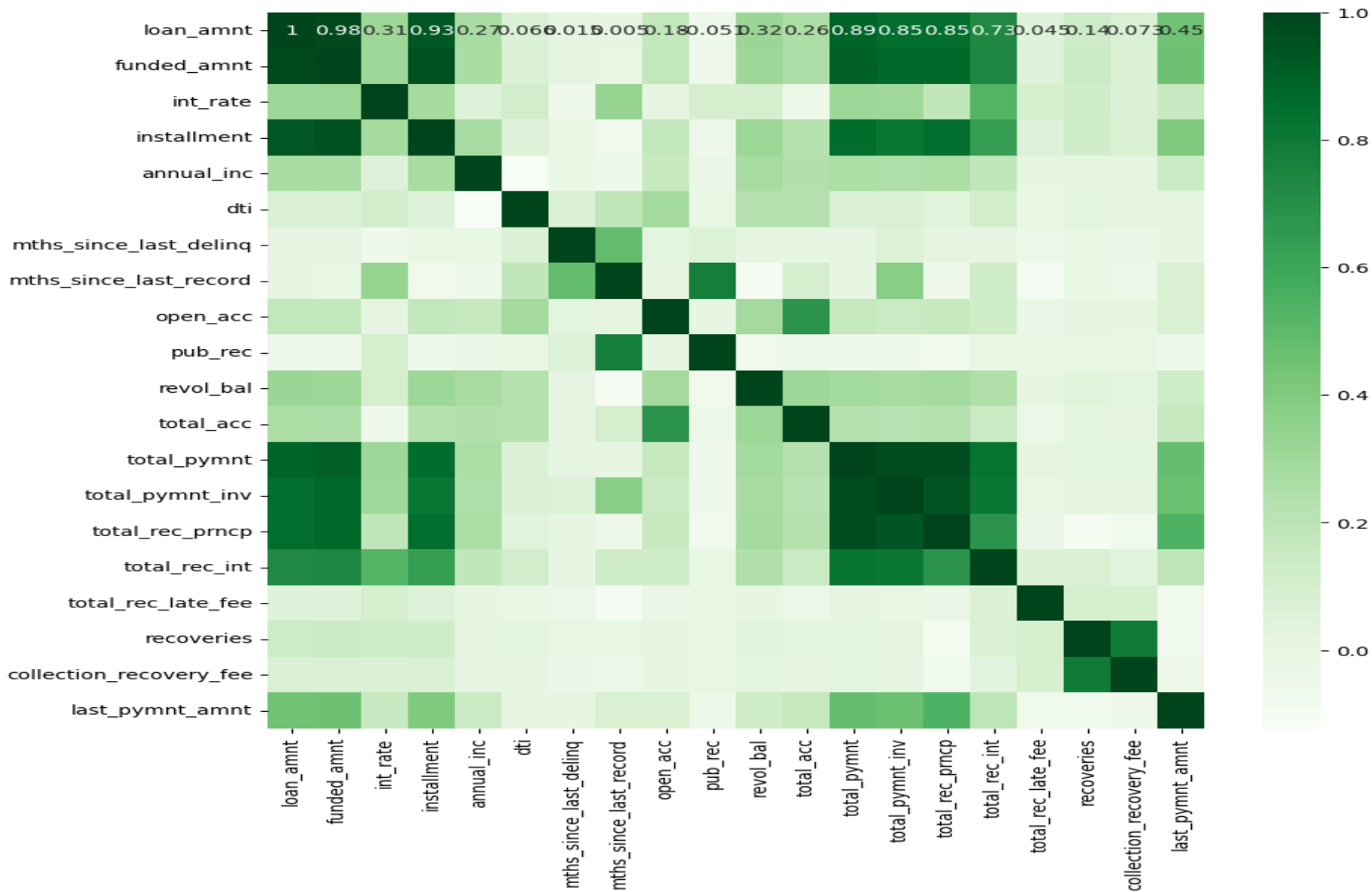emp_length vs Loan Status

home_ownership vs Loan Status

verification_status vs Loan Status

purpose vs Loan Status

Multivariate Analysis

Conclusions

1. *Applicants with shorter Loan Term are more likely to default*
2. *Applicants with Annual income of less than 120,000 are more likely to default*
3. *Applicants with DTI ratio more than 10% have struggled to replay the loan most*
4. *Verification Status has no impact on Defaulter rate, as verified applicants are the most who defaulted on repayment*
5. *Interest Rate has positive correlation with loan defaults. Applicants are more likely to default with higher interest rate.*
6. *Grades have positive correlation with defaulter percentage. Applicants with lower grades are more likely to default.*
7. *Applicants with Rented home are slightly more likely to default than applicants with Mortgaged or Own homes.*