Lending Club Case Study

Exploratory Data Analysis

Team:

Geetha Jakka.
Mohit Shinde.

Contents:
- About Lending Club Case Study.
- Approach followed .
- Analysis details.
- Insights.

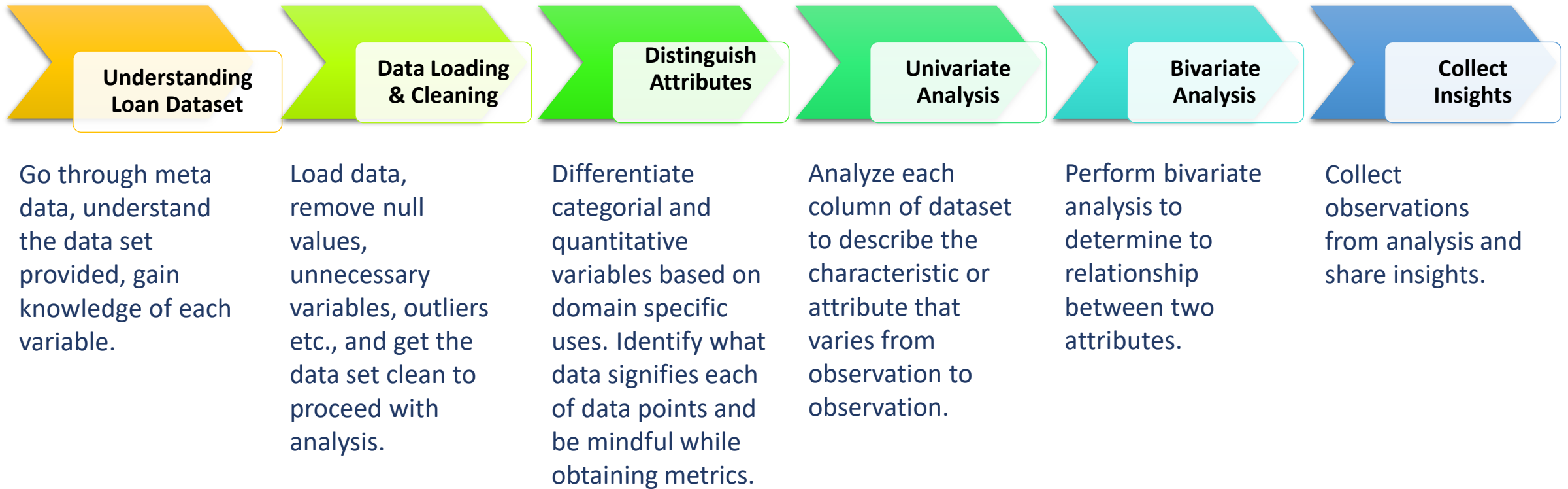# About Lending Club Case Study:

Problem Statement:

Consumer finance company which specializes in lending various types of loans to urban customers. This company is the largest online loan marketplace, facilitating personal loans, business loans, and financing of medical procedures. Borrowers can easily access lower interest rate loans through a fast online interface.

Lending loans to 'risky' applicants is the largest source of financial loss (called credit loss). The company wants to understand the **driving factors (or driver variables)** behind loan default, i.e. the variables which are strong indicators of default so company can utilize this knowledge for its portfolio and risk assessment.
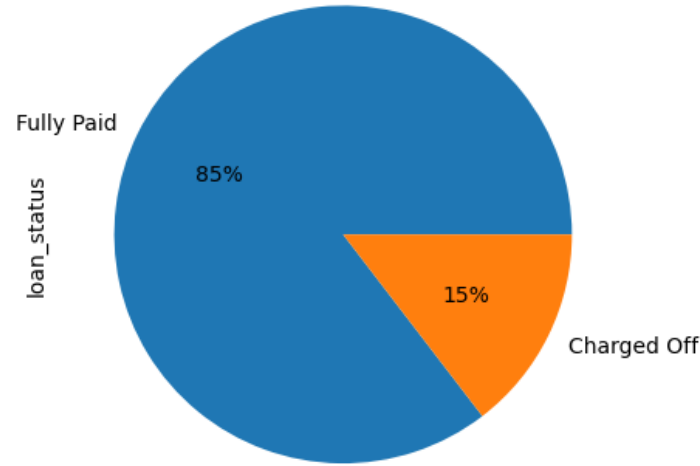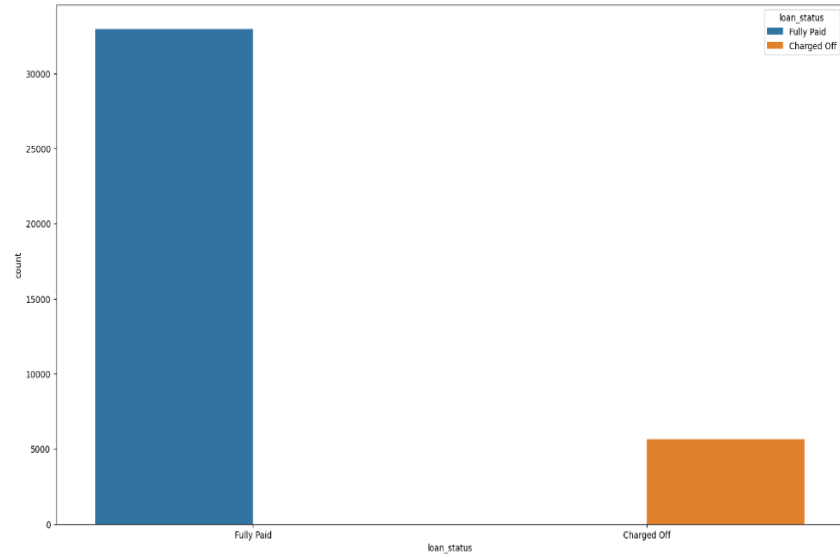
Objective:
Perform Exploratory Data Analysis to analyze loan dataset of the company and identify variables which are strong indicators of defaulting loan.

Approach followed:

Understanding Loan Dataset	Data Loading & Cleaning	Distinguish Attributes	Univariate Analysis	Bivariate Analysis	Collect Insights
Go through meta data, understand the data set provided, gain knowledge of each variable.	Load data, remove null values, unnecessary variables, outliers etc., and get the data set clean to proceed with analysis.	Differentiate categorial and quantitative variables based on domain specific uses. Identify what data signifies each of data points and be mindful while obtaining metrics.	Analyze each column of dataset to describe the characteristic or attribute that varies from observation to observation.	Perform bivariate analysis to determine to relationship between two attributes.	Collect observations from analysis and share insights.

Analysis details:
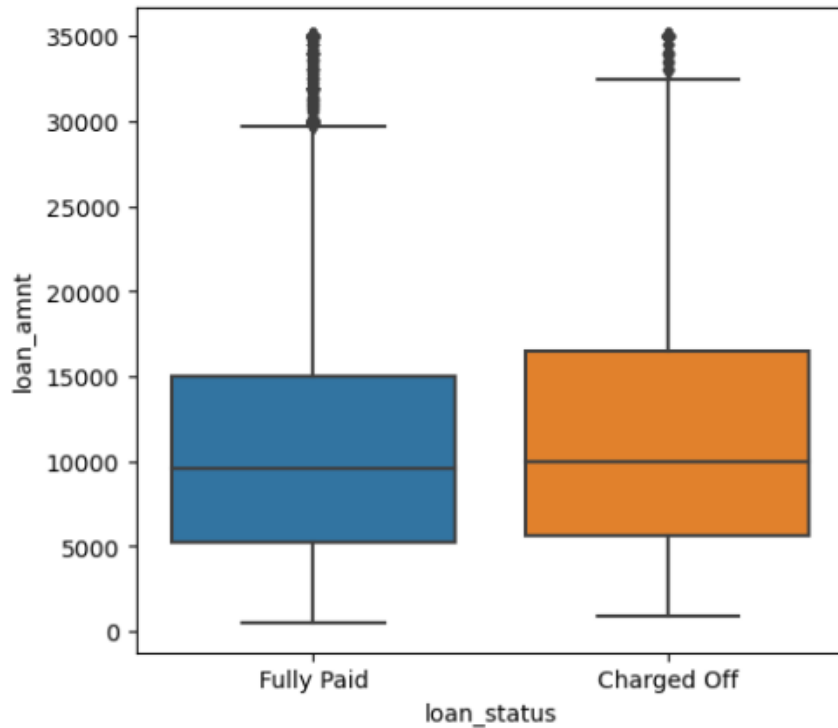

Observation:

- 15% of loan applications are Charged off.
- More loans have short term.
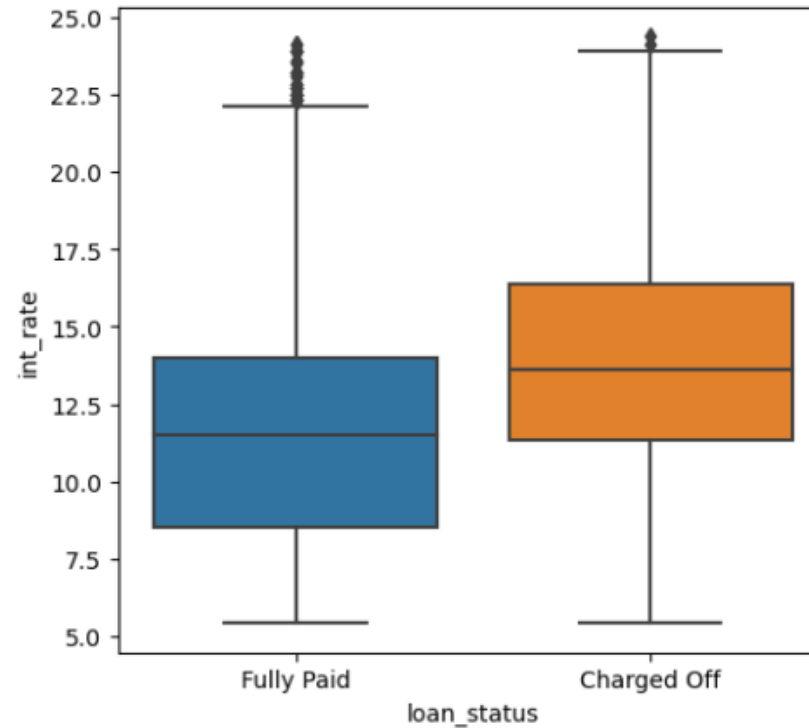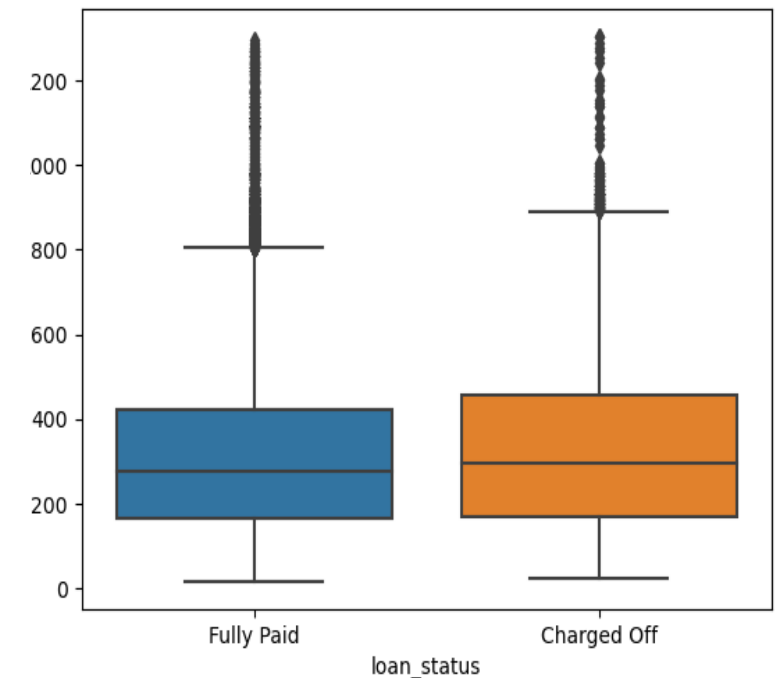- Most of loan applications are below 15K.
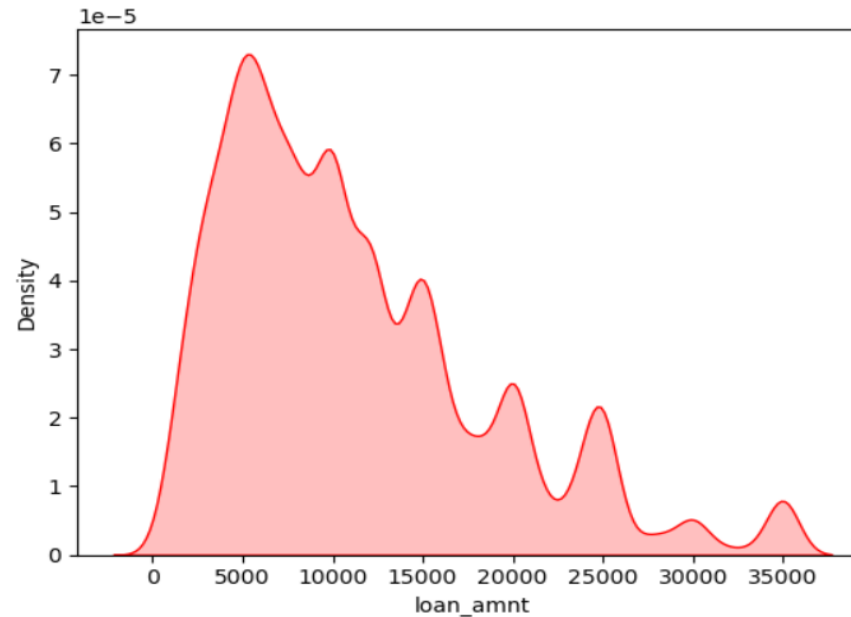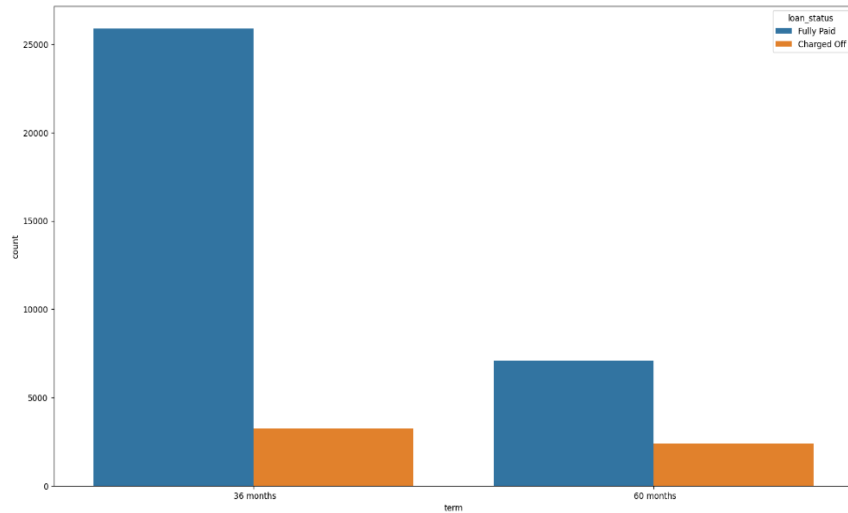
Analysis details:

Loan Status vs Loan Amount — Loan Status vs Interest Rate — Loan Status vs Installment

Observation:

- For same range loan amounts there are different interest rates. Loan amounts which has high interest rates have high chances for charged off.
- In case of Charged off loan applications, installment is little higher could because of high interest rate.
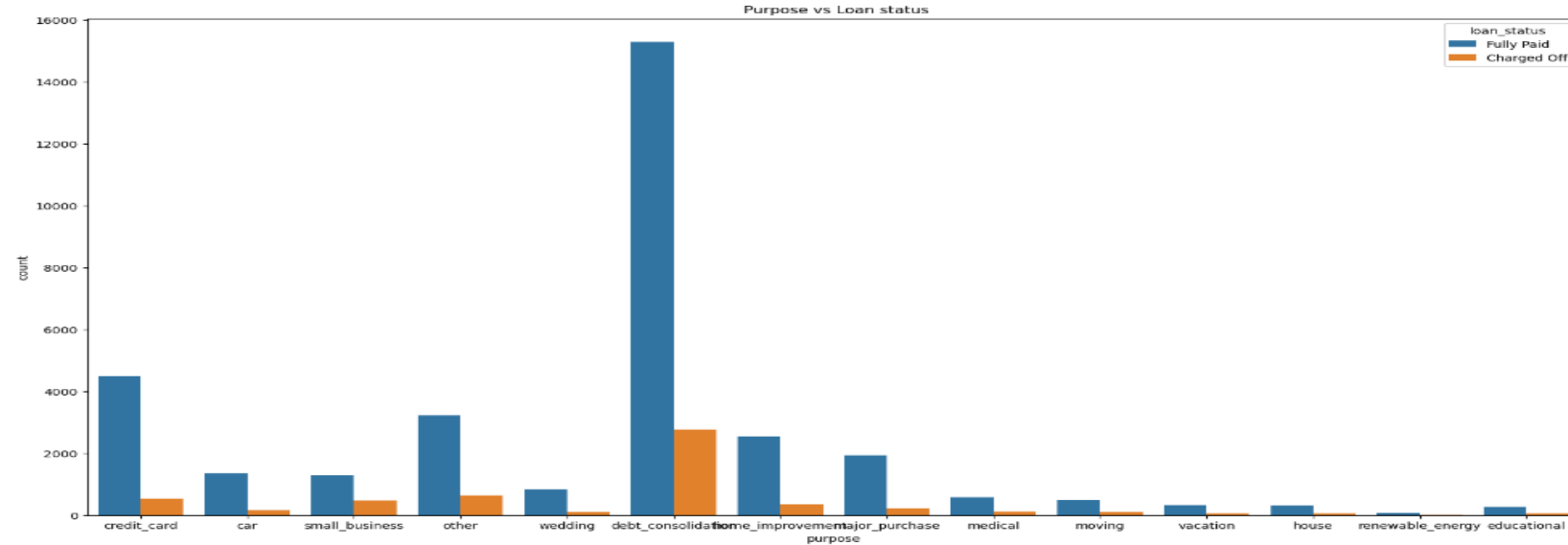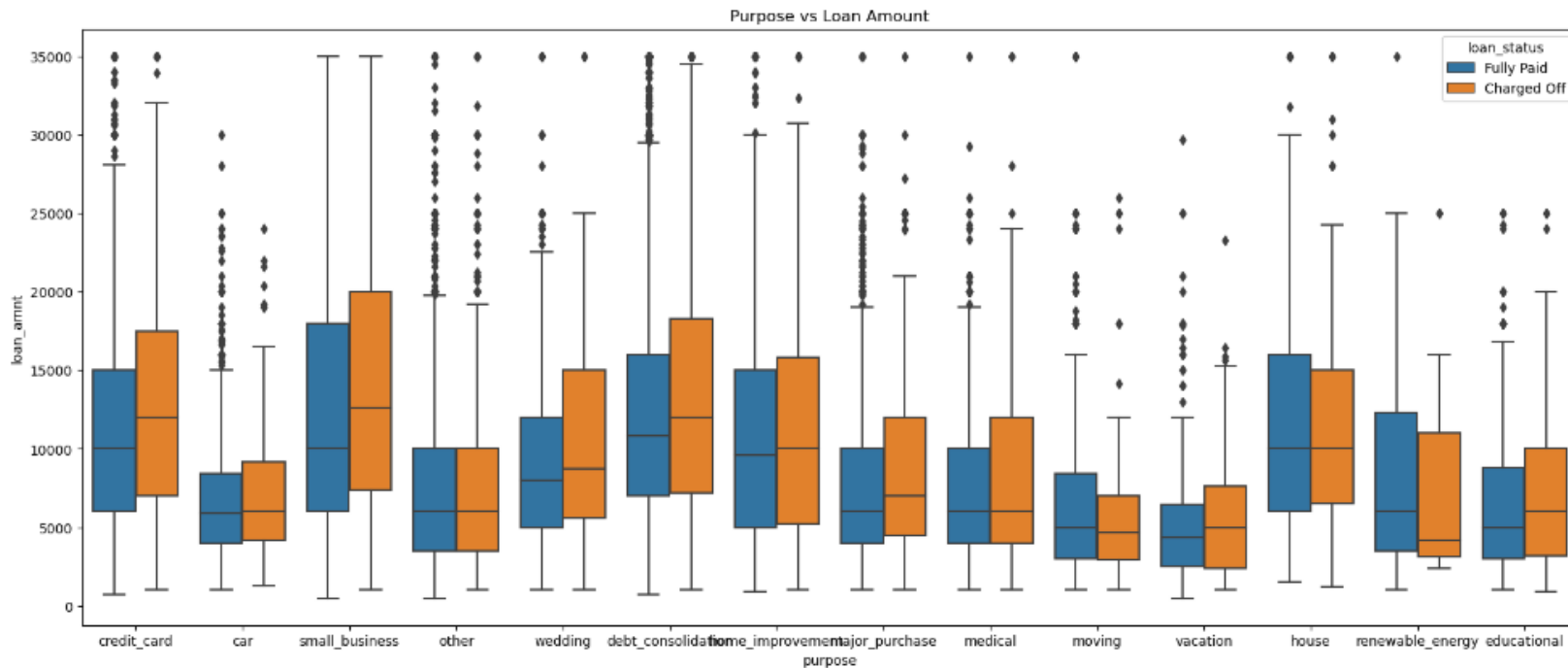
Analysis details:
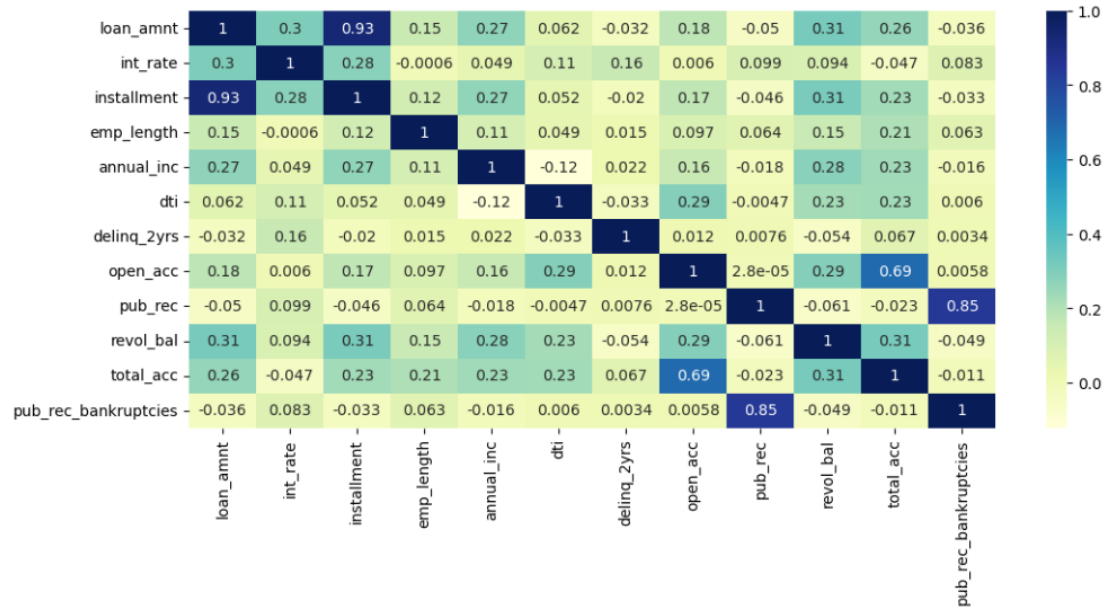
Observation:

- Loan amount, Installment share strong correlation.

Analysis details:

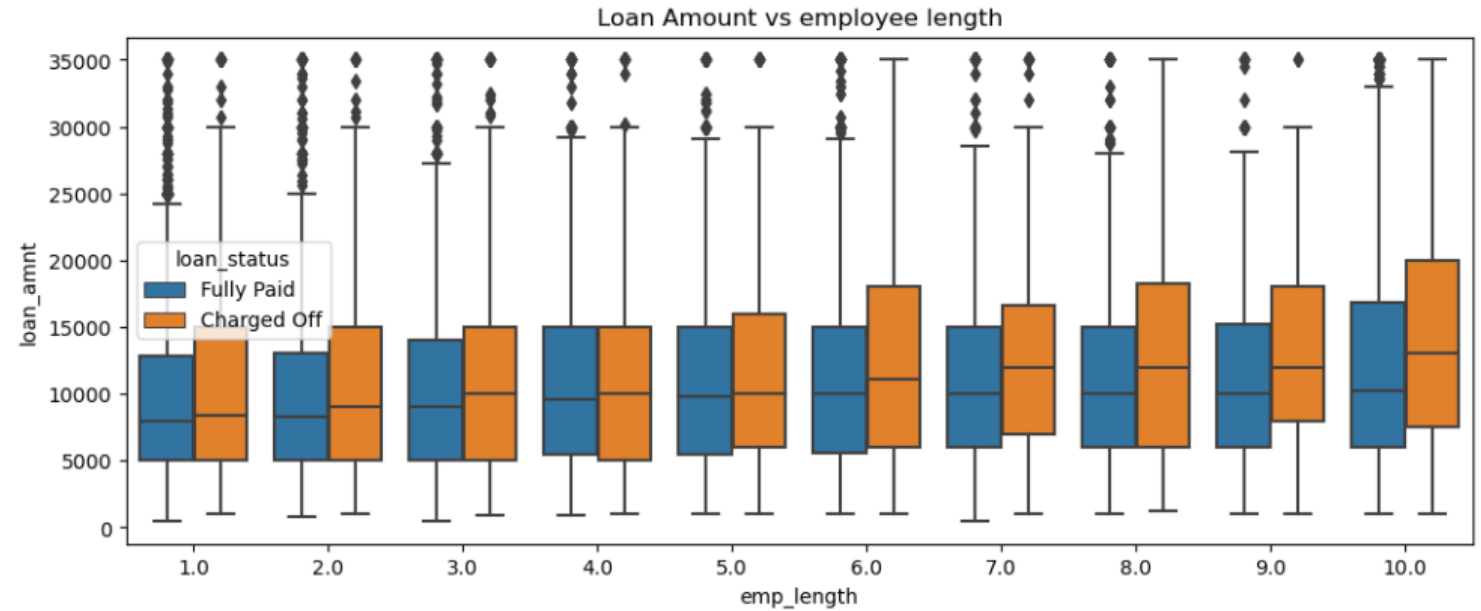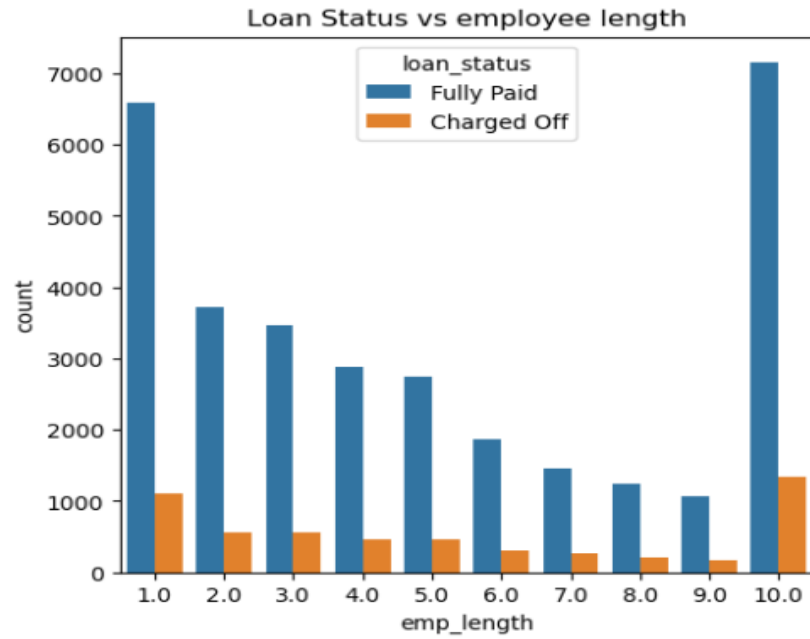
Purpose vs Loan status
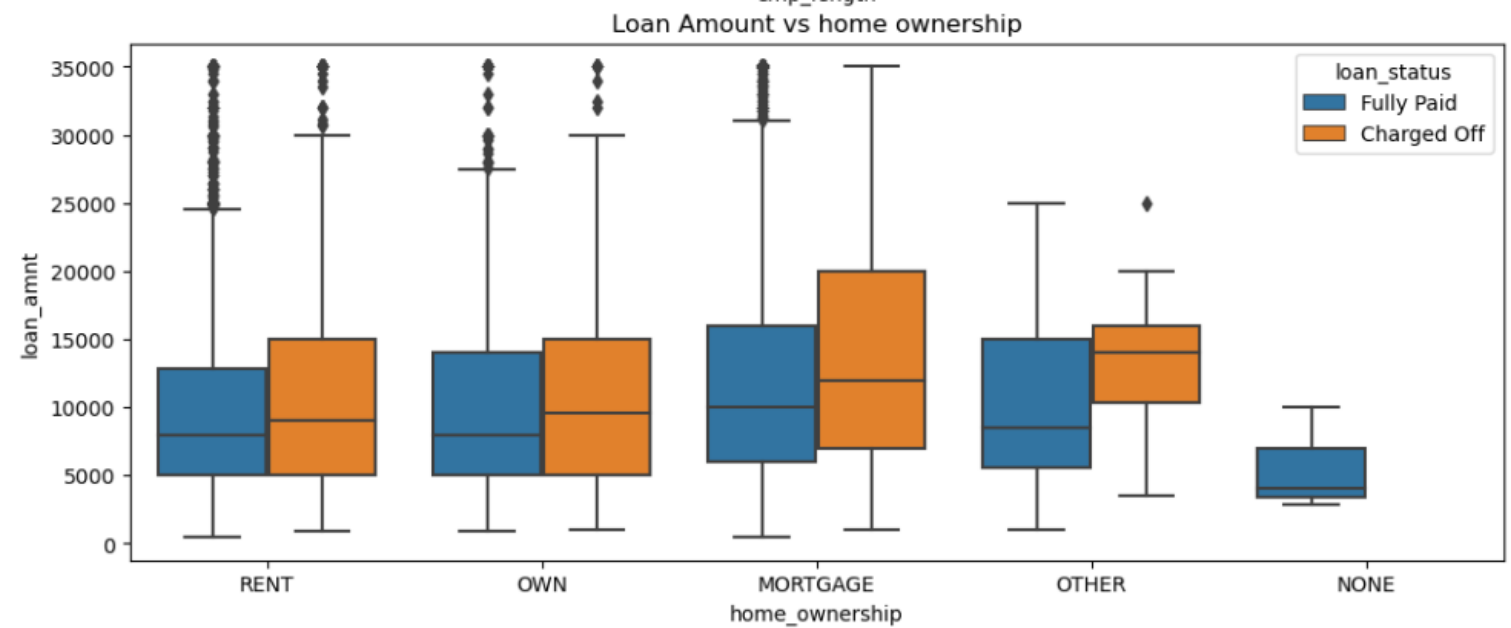

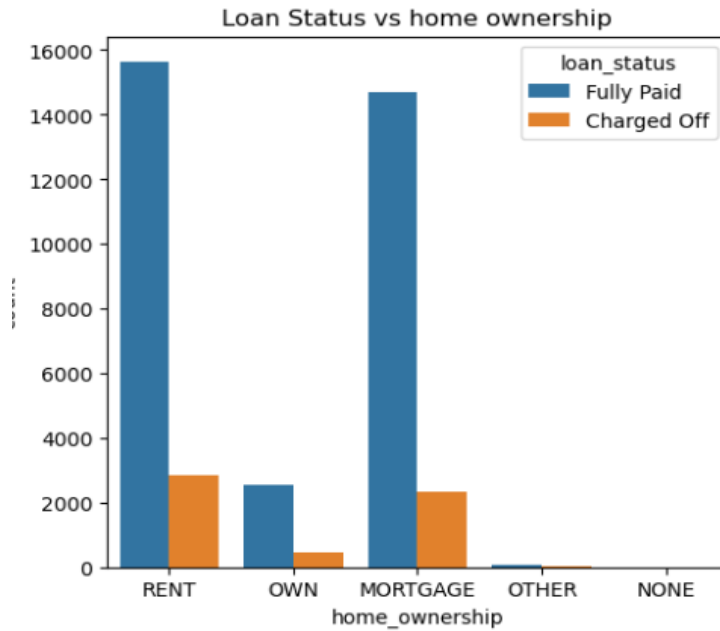Purpose vs Loan Amount

Observation:

- Debt consolidations loans contribute to major loan applications.

- Charged off loan amounts are higher in small business, credit card. Higher amounts are prone to charged off.
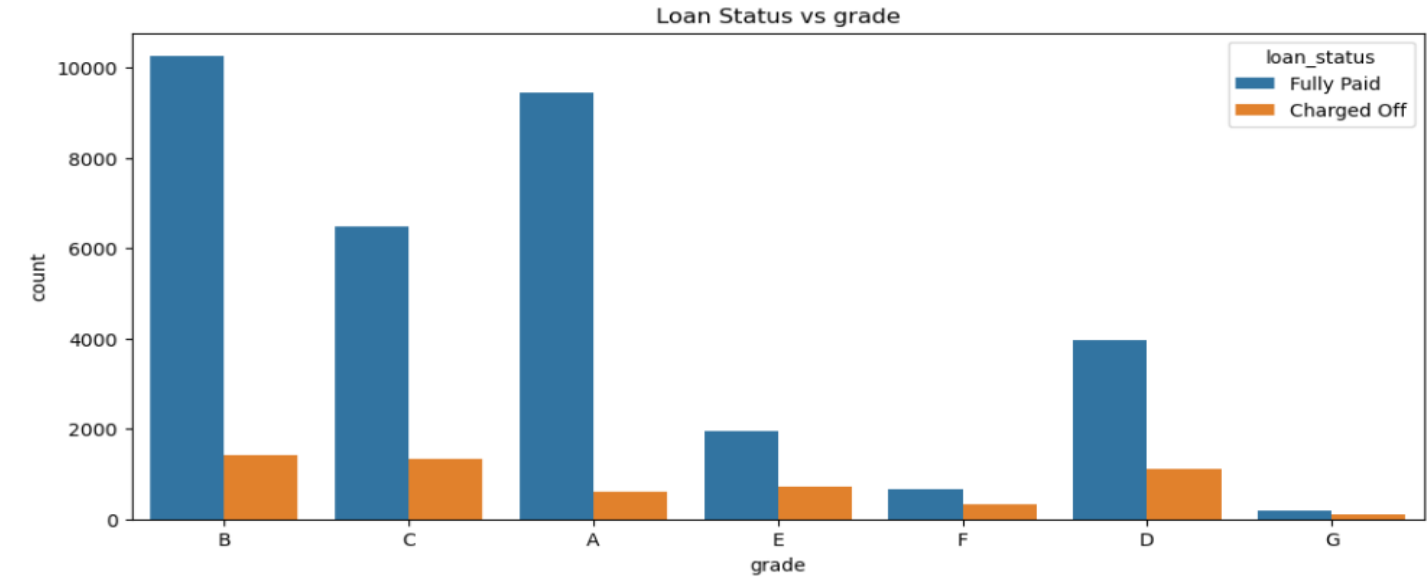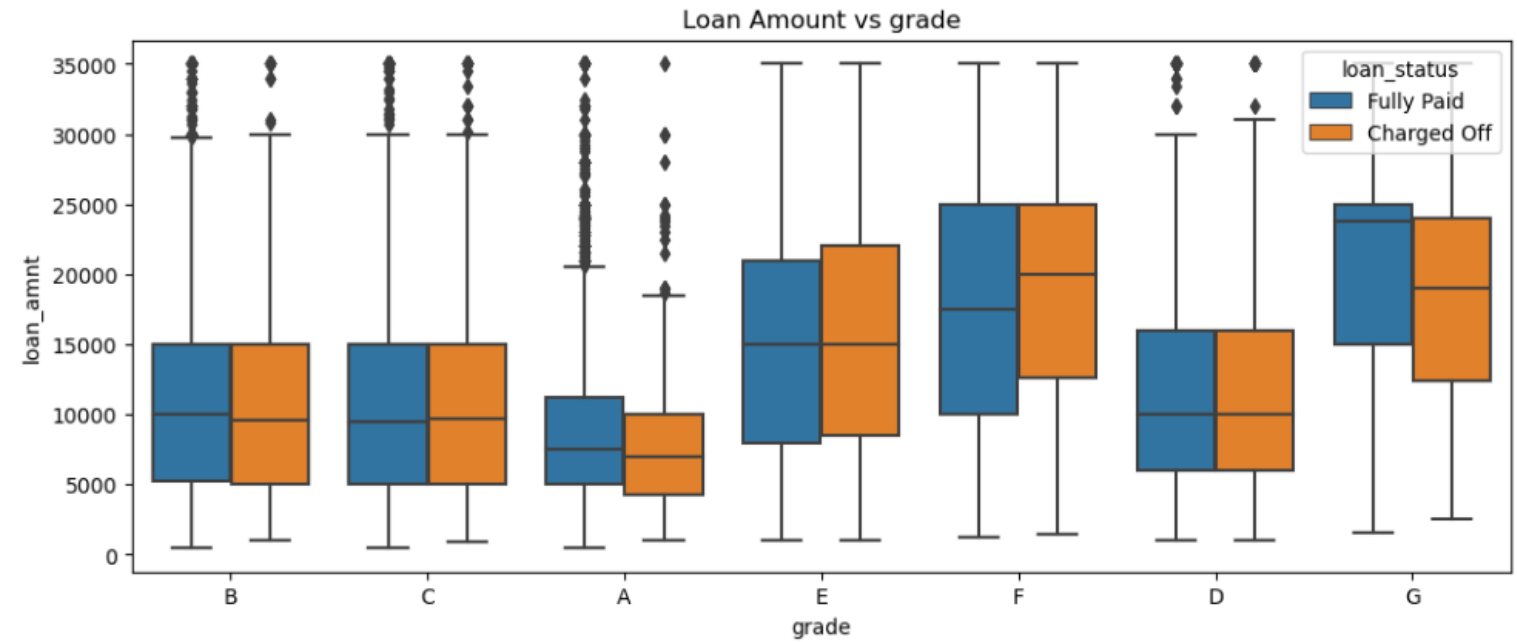
Analysis details:

Analysis details:

Loan Status vs home ownership

Loan Amount vs home ownership

Observation:

- Loan amount, Installment share strong correlation.

Analysis details:

Loan Status vs grade

Loan Amount vs grade

Observation:

- Loan amount, Installment share strong correlation.

Insights: