Leading Club Case Study

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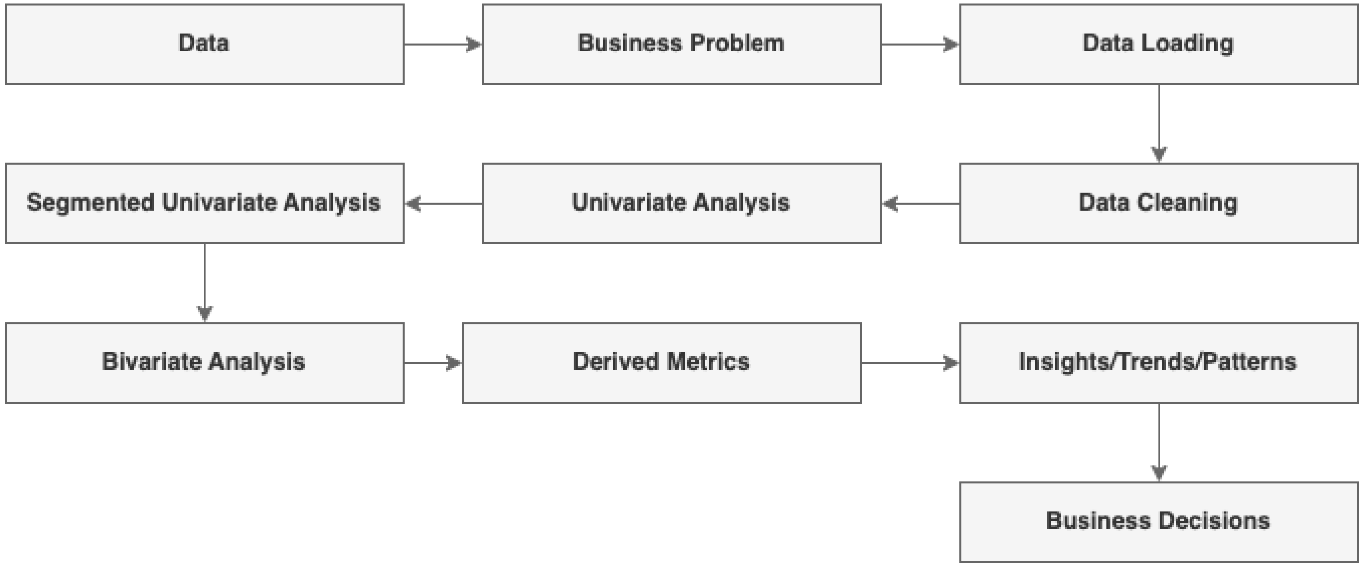
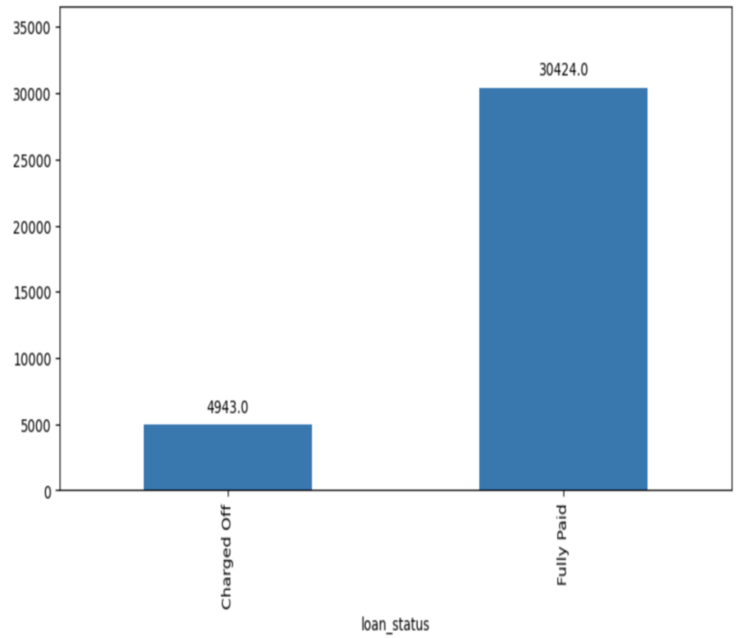
Problem Statement

- This project aims to develop a comprehensive understanding of factors influencing loan default rates within a consumer finance company. By employing exploratory data analysis (EDA) techniques, we will analyse historical loan data to identify key attributes that correlate with loan repayment behaviour. The insights derived from this analysis will enable the company to construct a robust credit risk model, aiding in the assessment of loan applicants and mitigating financial losses due to defaults. Ultimately, this project seeks to optimize lending decisions and enhance overall portfolio performance.

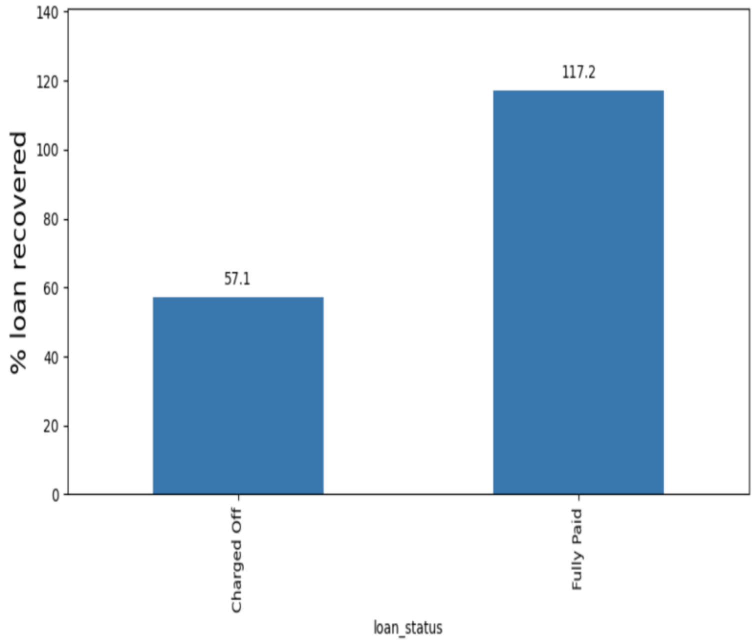
Steps for Analysis



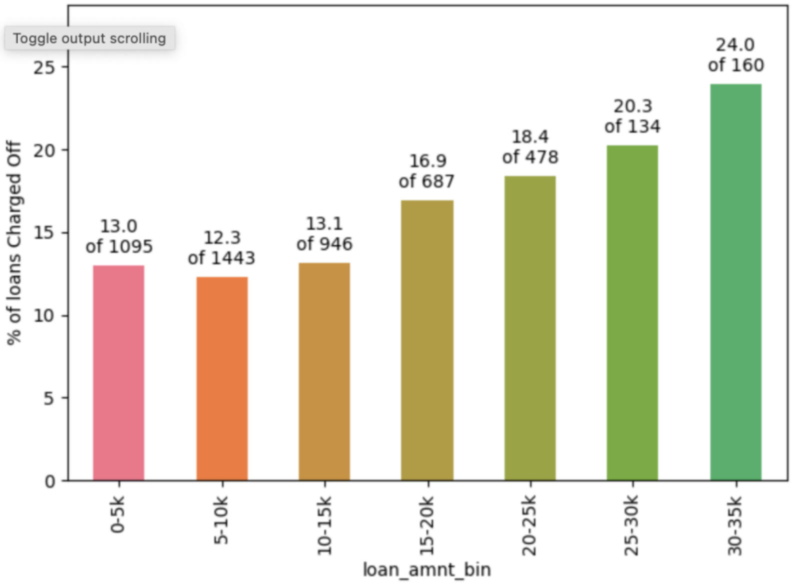
Overall status of loans allotted



Approx 14% of loans in the datasets are defaulted.

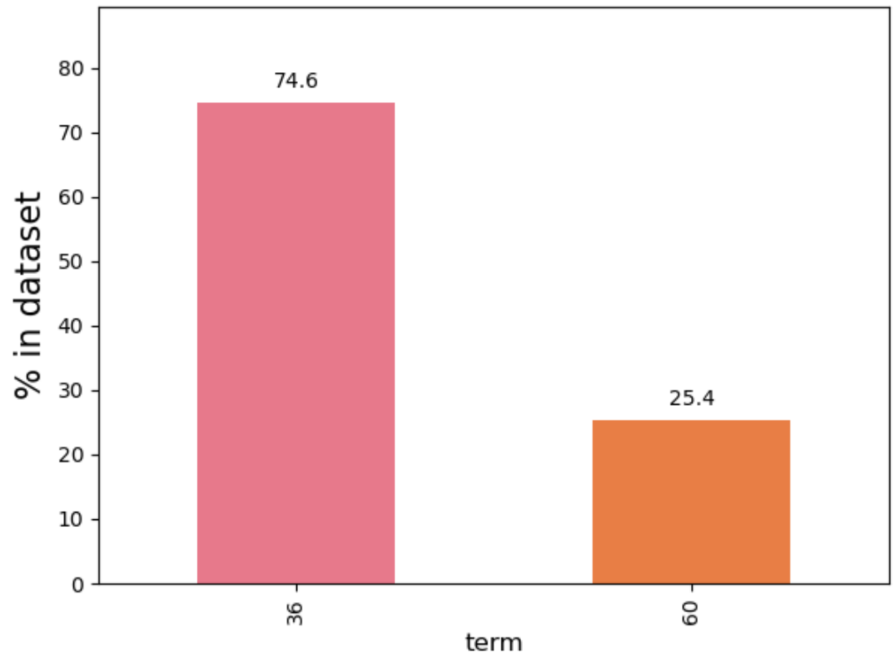


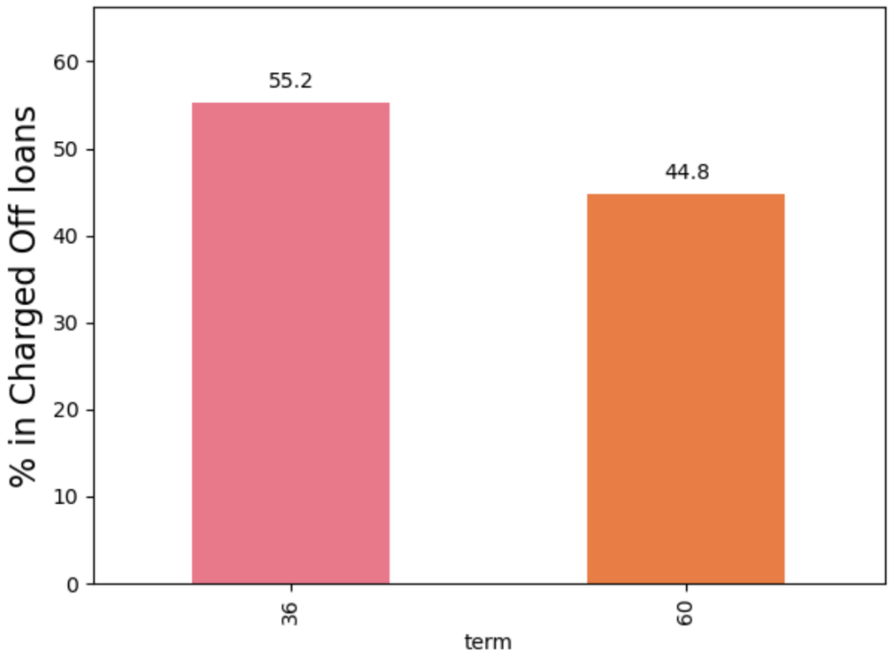
57% of the amount is recovered from defaulted/charged off loan, while 17% profit is made on Fully Paid loans.



As the loan amount increases , the % of charged off loan also increases. Hence, higher the loans, the risk of defaulters increases.

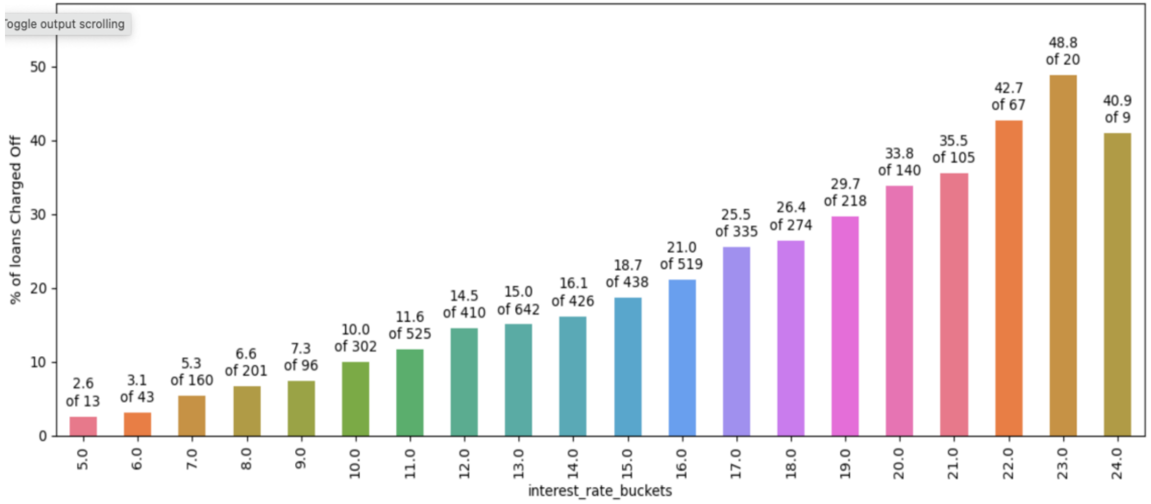
Loan term analysis

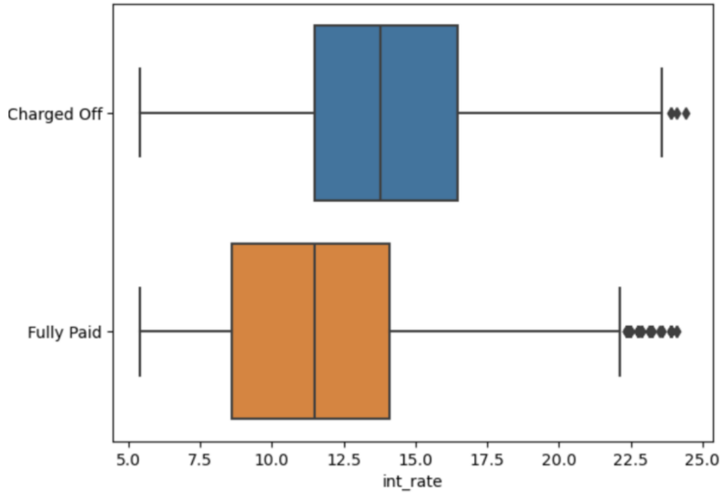




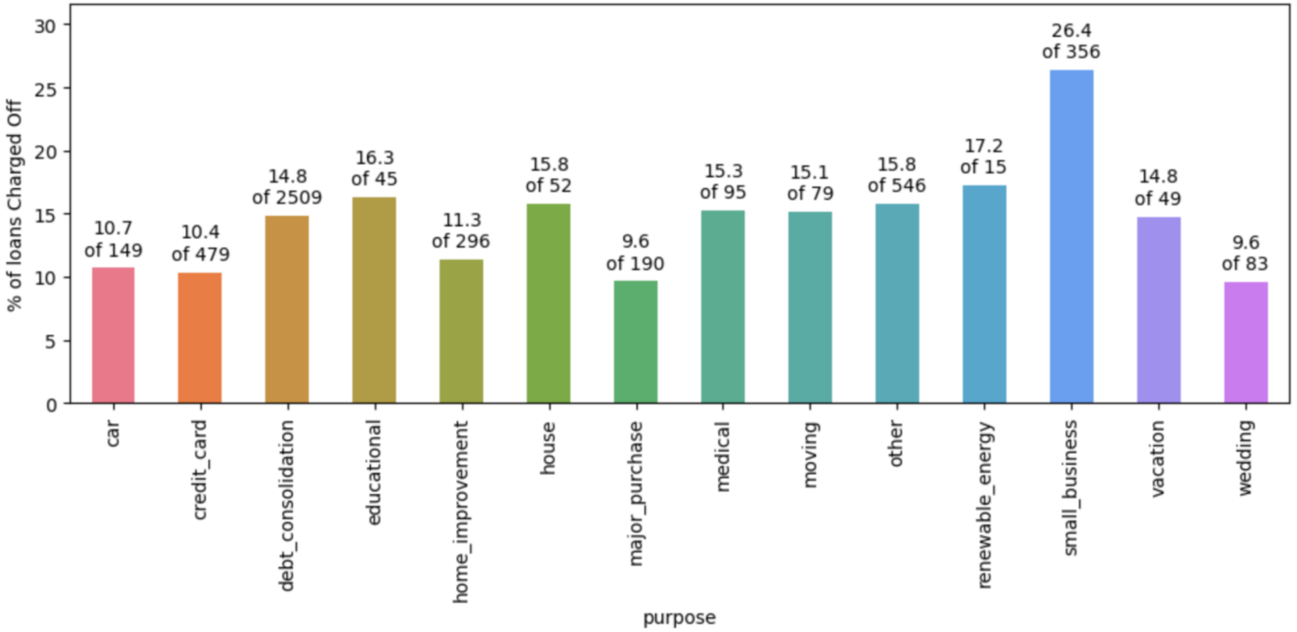
1.Around 75% of the total loans are given for duration of 3 years. while just 25% of the loans are those given for 5 years.
2.Among Charged Off loans, percentage of term 60 months rises to 45%. The higher term loans have a higher chance of default.

The interest rate for Charged Off loans appear to be higher than for Fully paid. This is naturally expected. As, the risk increases the rate of interest imposed on the loan also increases

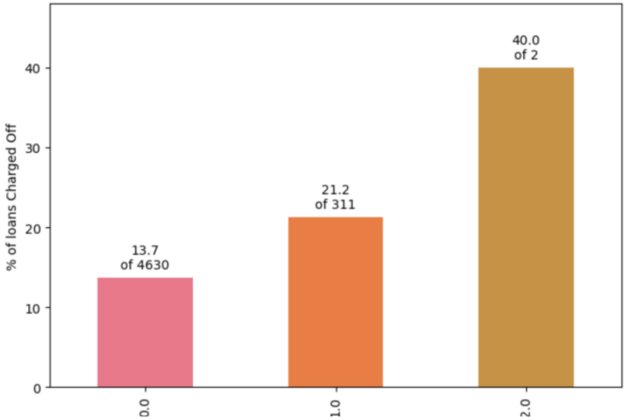




Overall, the interest rate varies from 5.42% to 24.4% with average interest rate of 11.8%.



26% of loans for small business are Charged Off. Making them the riskiest purpose.



The percentage of Charged Off loans is markedly higher when the borrower has a prior record of bankruptcy.

Loan Grade Analysis

- Grade A and B loans are safe. The percentages in full dataset are much higher than percentages in Charged Off loans.

- Grade D, E, F, G loans are less safe. We should plot grade by percentage Charged Off by category

- Lending Clubs grading system is working well.