

Case Study:



What is Lending Club?

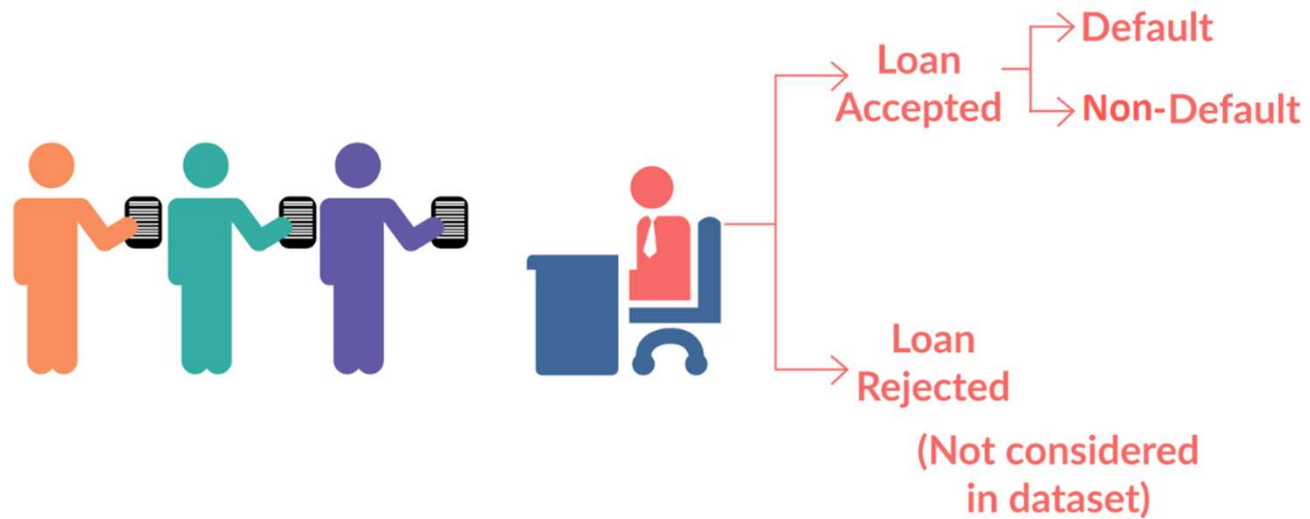
- ▶ Lending Club is the largest online loan marketplace, facilitating personal loans, business loans, and financing of medical procedures.
- ▶ Borrowers can easily access lower interest rate loans through a fast online interface.

Problem Statement



The identification of deriving factors needs to be carried out to utmost accuracy point based on past applicant's data, which should avoid credit loss to lending company and through which decision can be done for the loan approval.

Loan Dataset



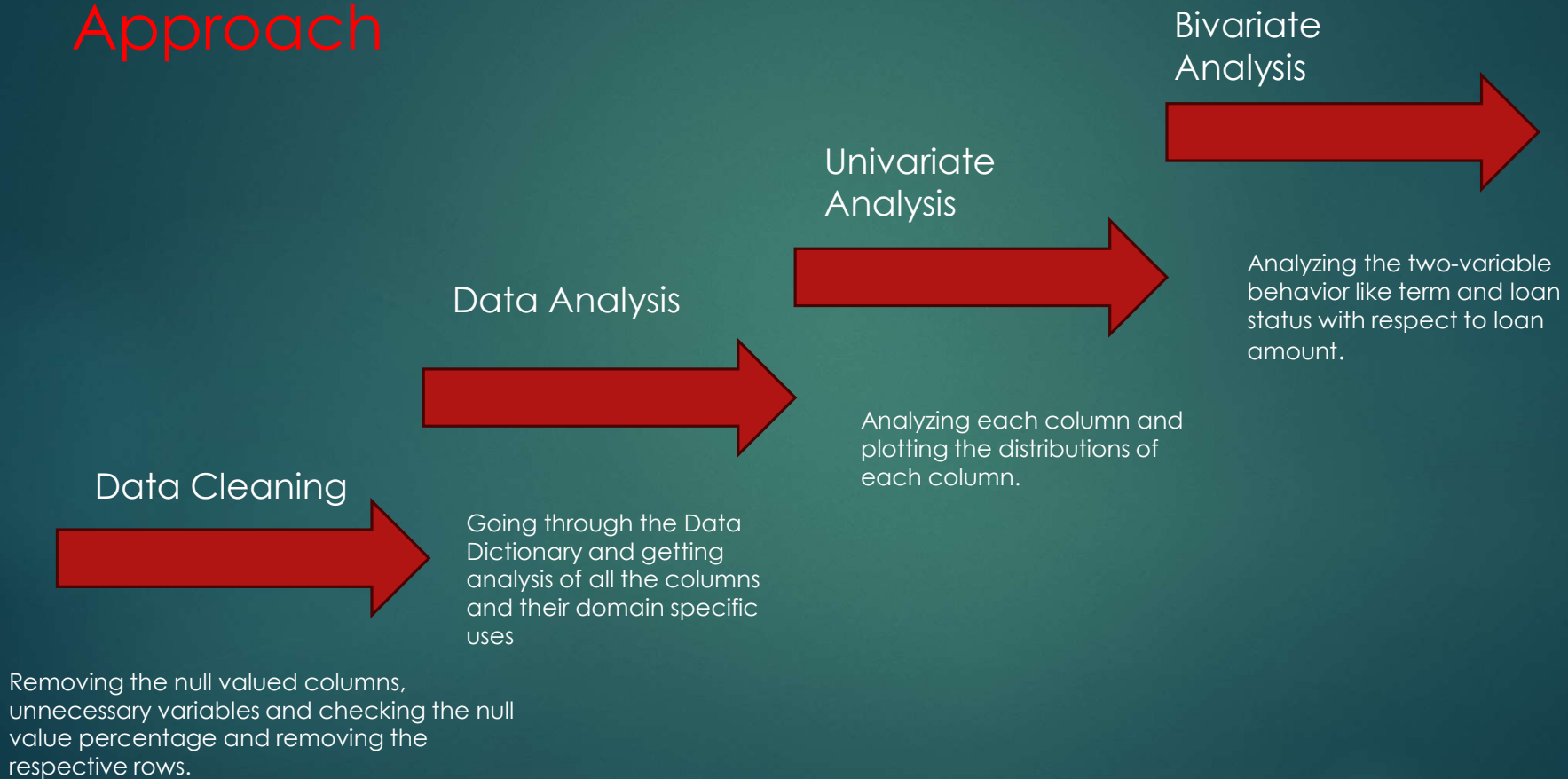
When a person applies for a loan, there are **two types of decisions** that could be taken by the company:

1.Loan accepted: If the company approves the loan, there are 3 possible scenarios described below:

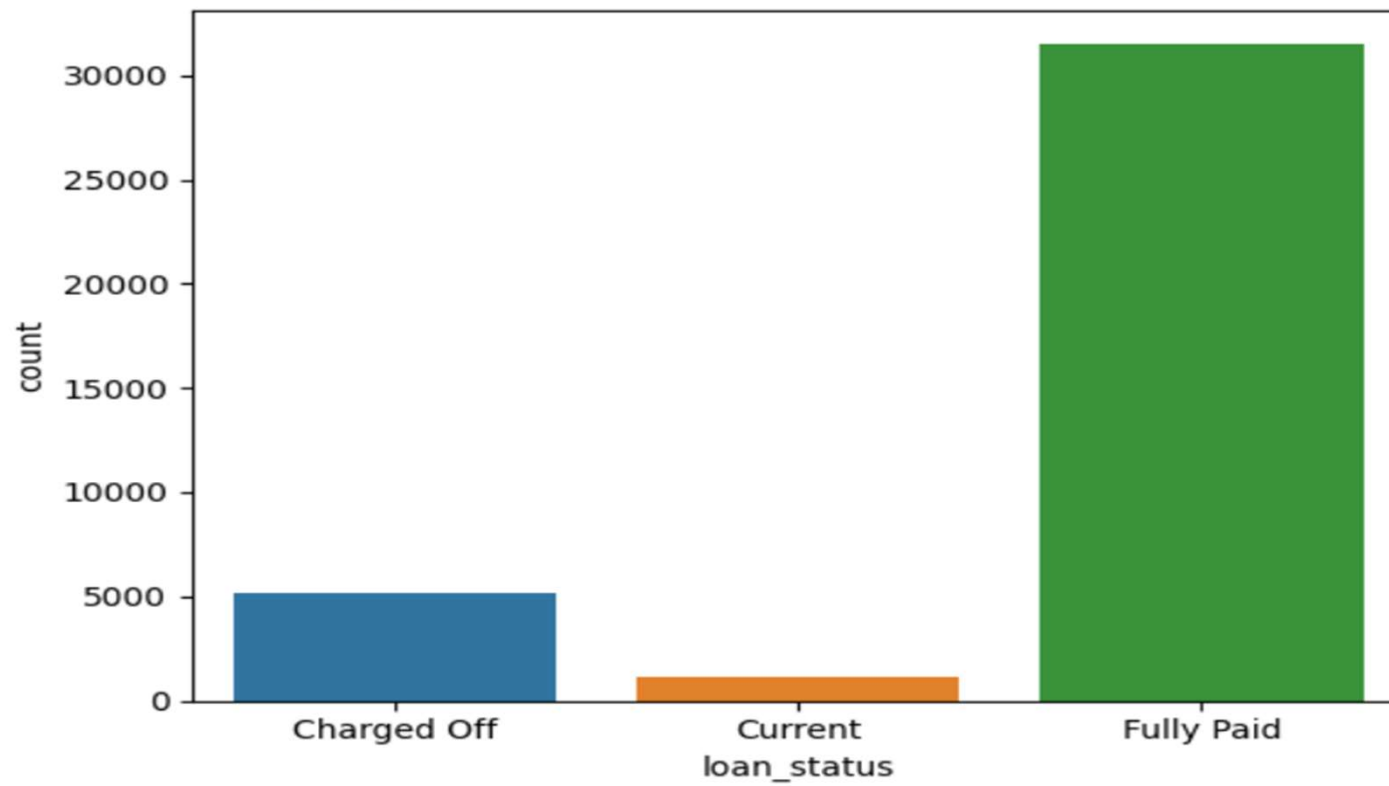
- 1. Fully paid:** Applicant has fully paid the loan (the principal and the interest rate)
- 2. Current:** Applicant is in the process of paying the instalments, i.e. the tenure of the loan is not yet completed. These candidates are not labelled as 'defaulted'.
- 3. Charged-off:** Applicant has not paid the instalments in due time for a long period of time, i.e. he/she has **defaulted** on the loan

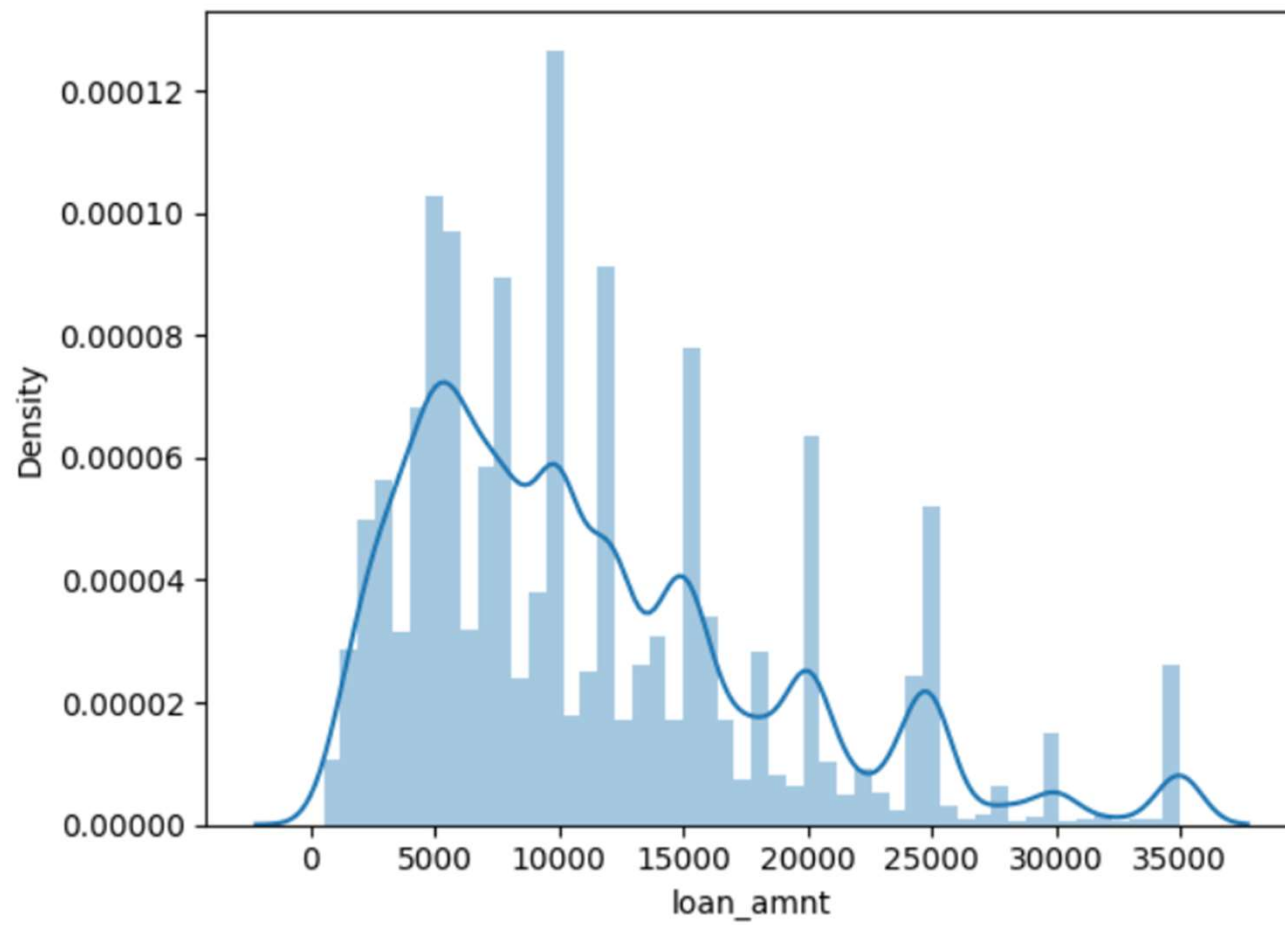
2.Loan rejected: The company had rejected the loan (because the candidate does not meet their requirements etc.). Since the loan was rejected, there is no transactional history of those applicants with the company and so this data is not available with the company (and thus in this dataset)

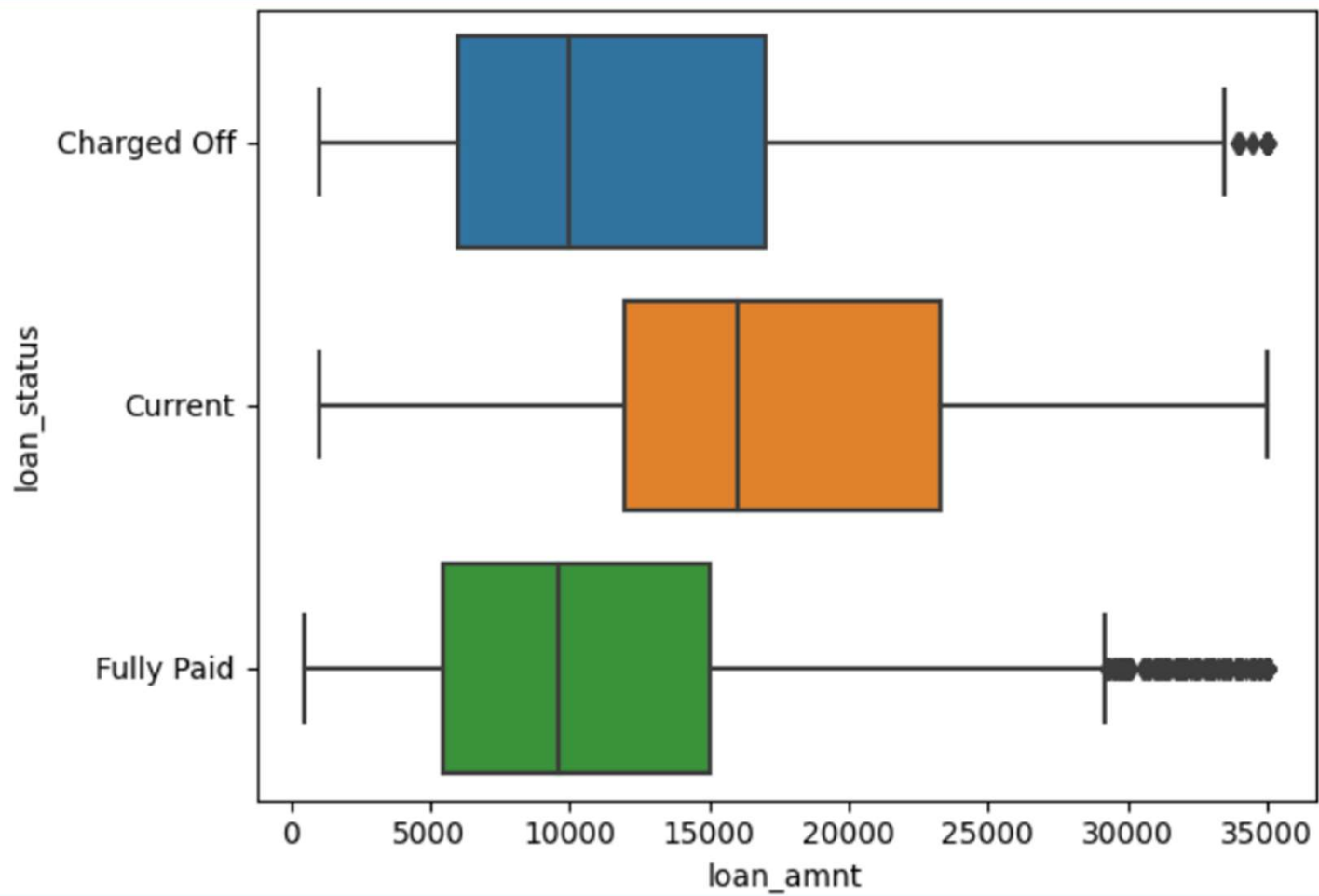
Problem Solving Approach

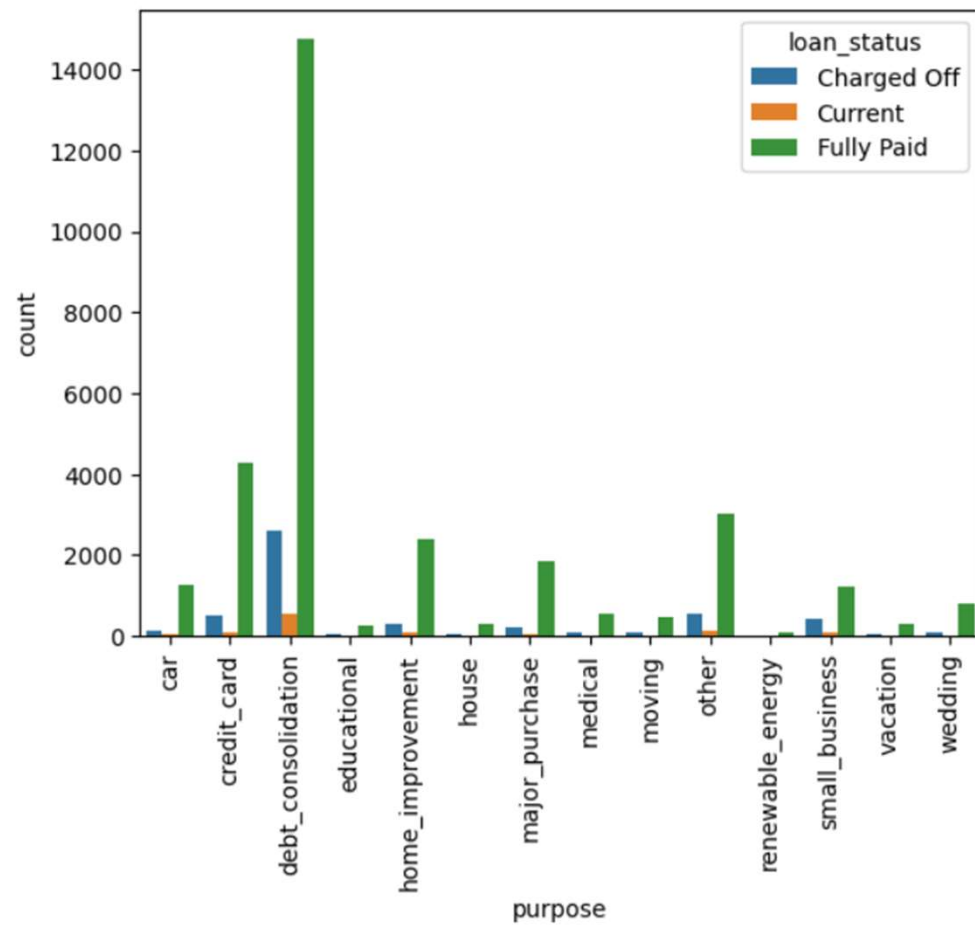


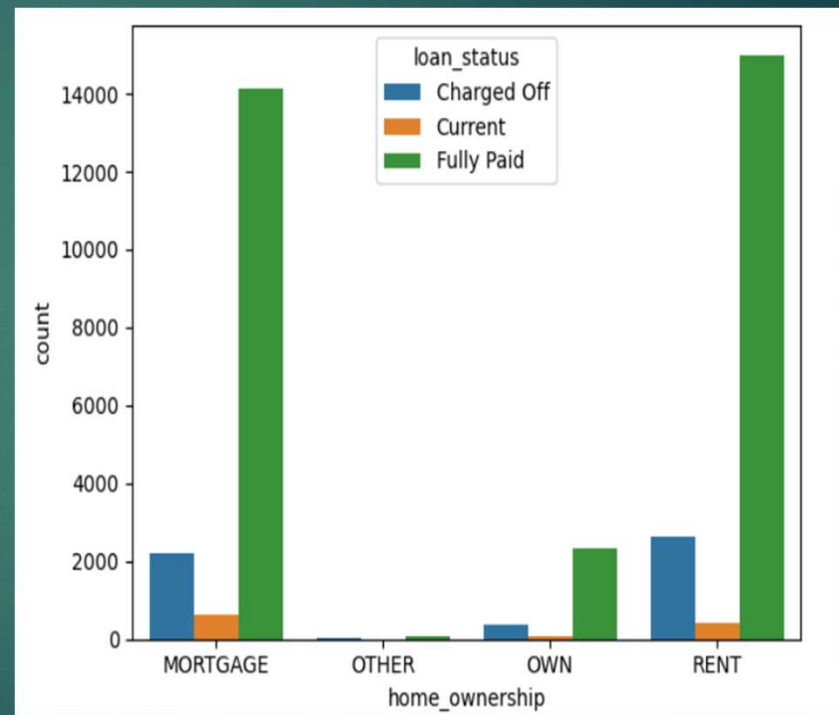
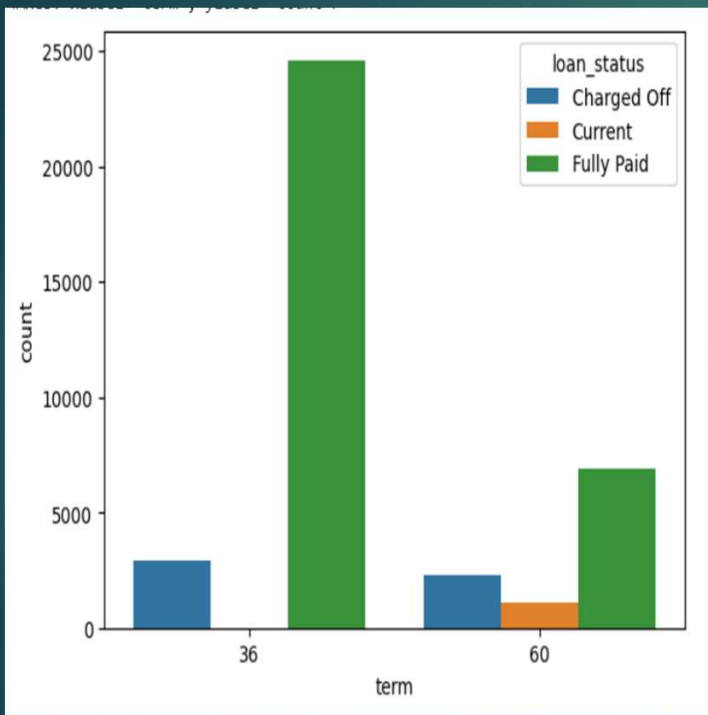
```
Fully Paid      31534  
Charged Off     5203  
Current         1098  
Name: loan_status, dtype: int64
```

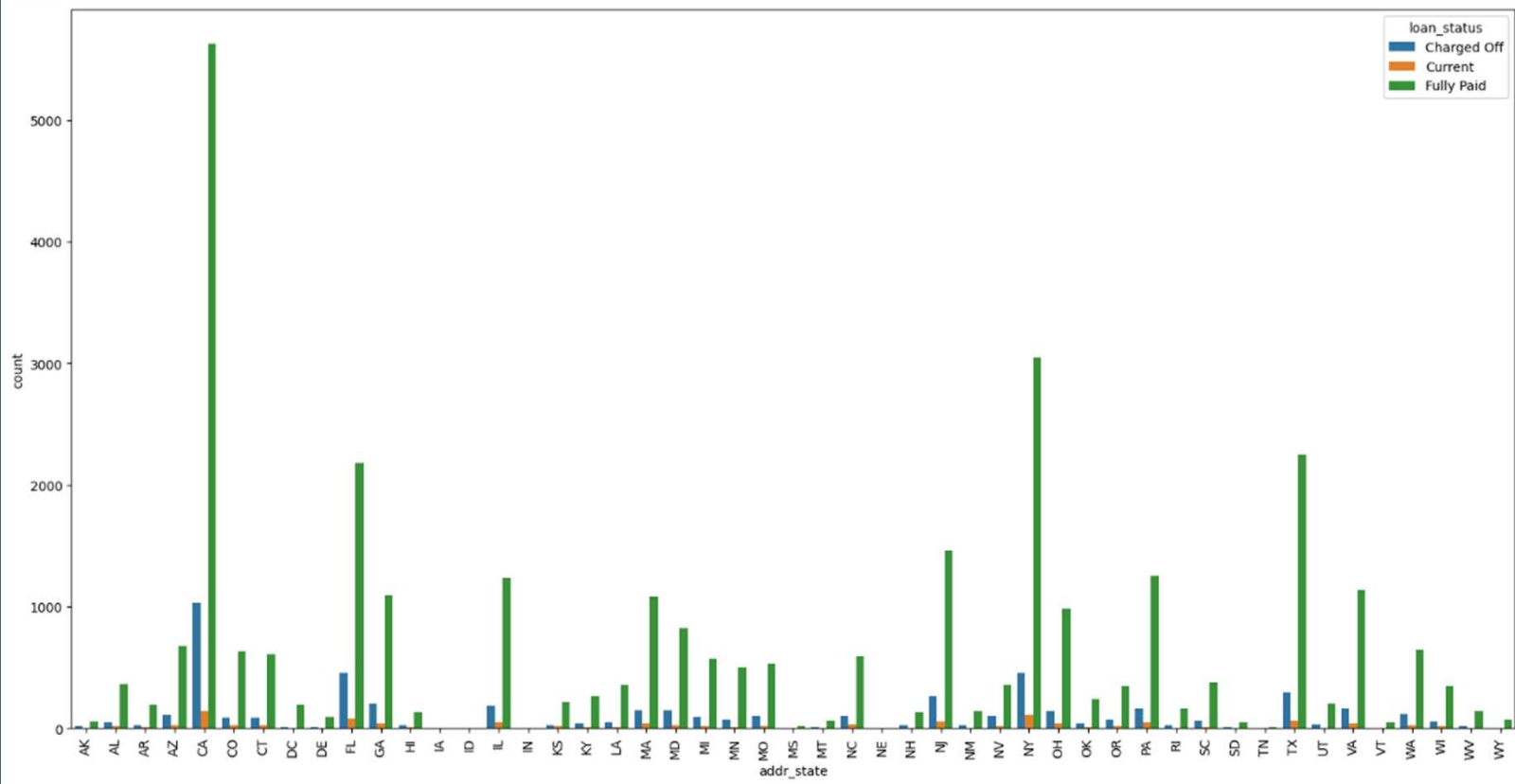


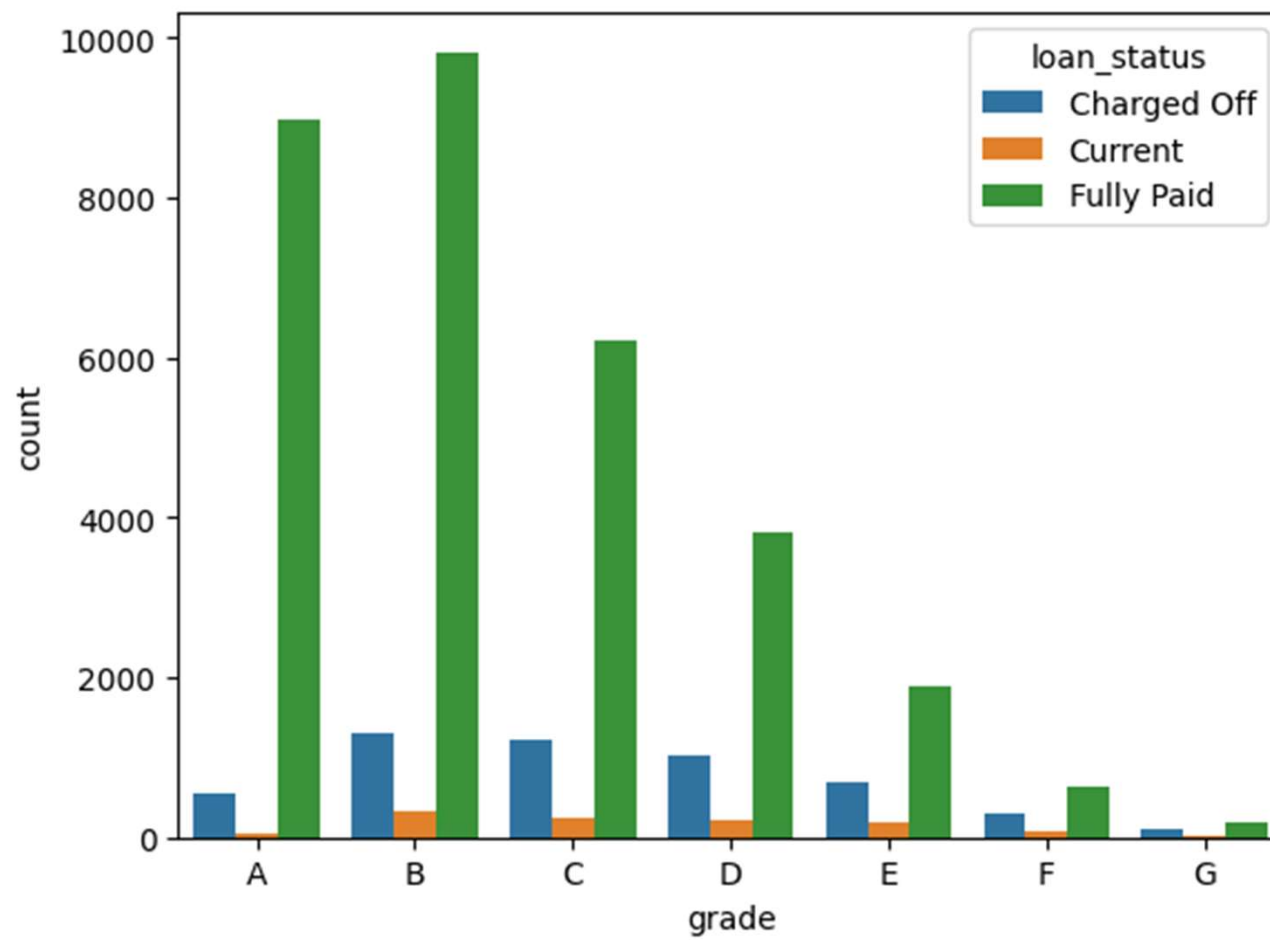












Conclusions

1. Borrowers with mortgage home ownership and Rent are taking higher loans and charged off the approved loans. Lending club should stop giving loans to this category when requested higher amount.
2. Small businesses loans are defaulted in high count. Lending club should reduce issuing the loan to them.
3. Borrowers who are from CA, FL and NY are more prone to loan default. Lending club should follow through credit check before sanctioning the loan.
4. The proportion of charged off loans are more in case of 60 months tenure loans so lending club should reduce the high interest loans for 60 months tenure as they are much prone to default.

GROUP

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Thank You