

Lending Club Loan Defaulter Analysis

A part of Assignment for PGP(AIML) under Upgrad and IIITB

Presented by :

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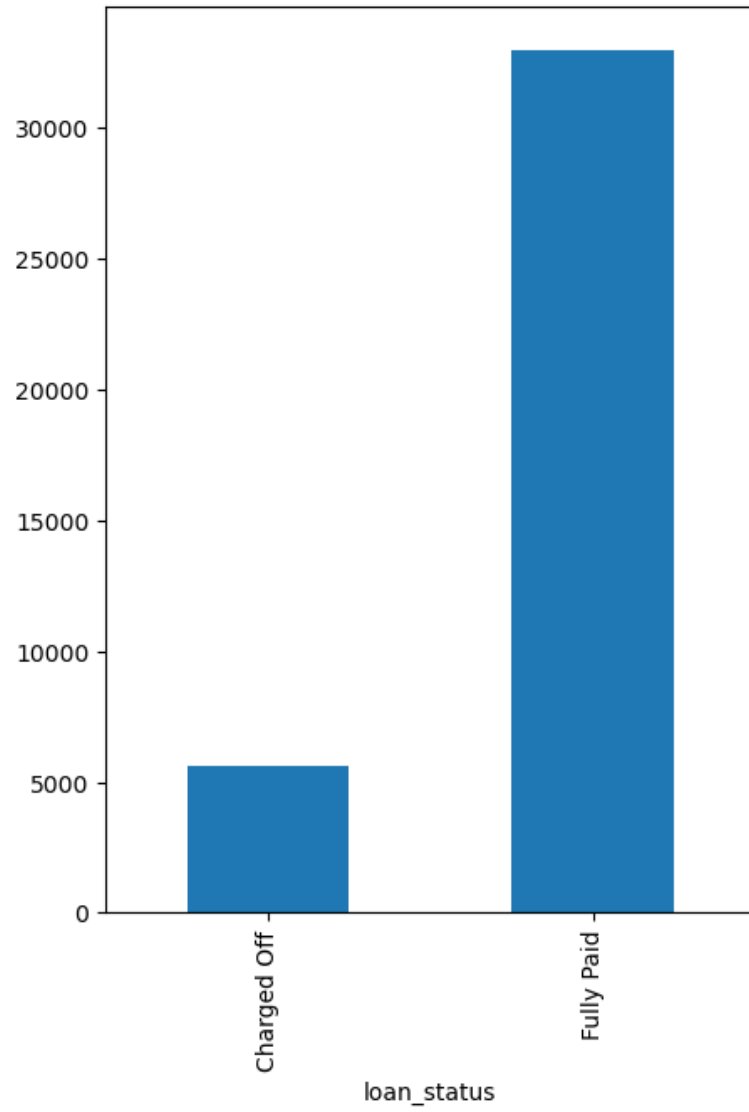
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The Problem Statement

- Lendingclub is a **consumer finance company** which specialises in lending various types of loans to urban customers. When the company receives a loan application, the company has to make a decision for loan approval based on the applicant's profile. Two **types of risks** are associated with the bank's decision:
- If the applicant is **likely to repay the loan**, then not approving the loan results in a **loss of business** to the company
- If the applicant is **not likely to repay the loan**, i.e. he/she is likely to default, then approving the loan may lead to a **financial loss** for the company



Overall Loan Status

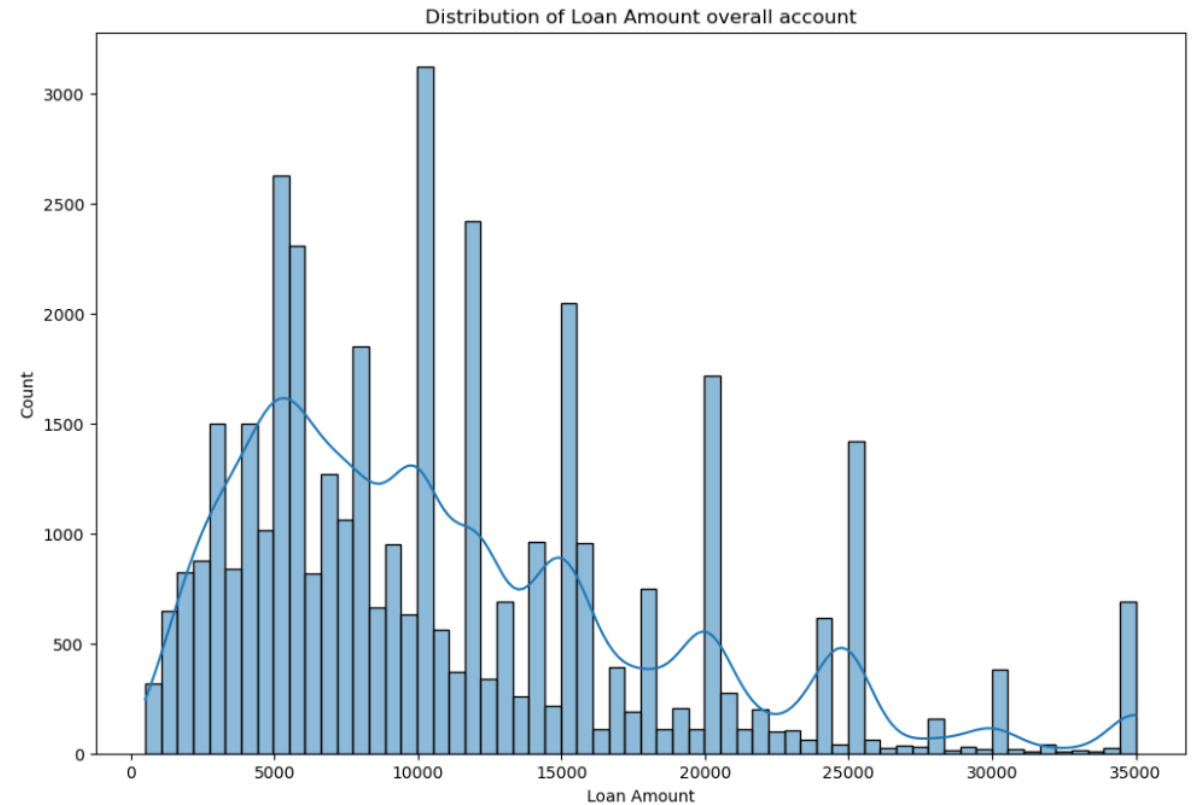
Approximately 14% of loans are defaulted whereas 83% full paid

The Analysis

What we were trying to analyse here is how does defaulters detail differs with the fully paid loans. So that it can help business to get a detailed information why the loan are getting defaulted.

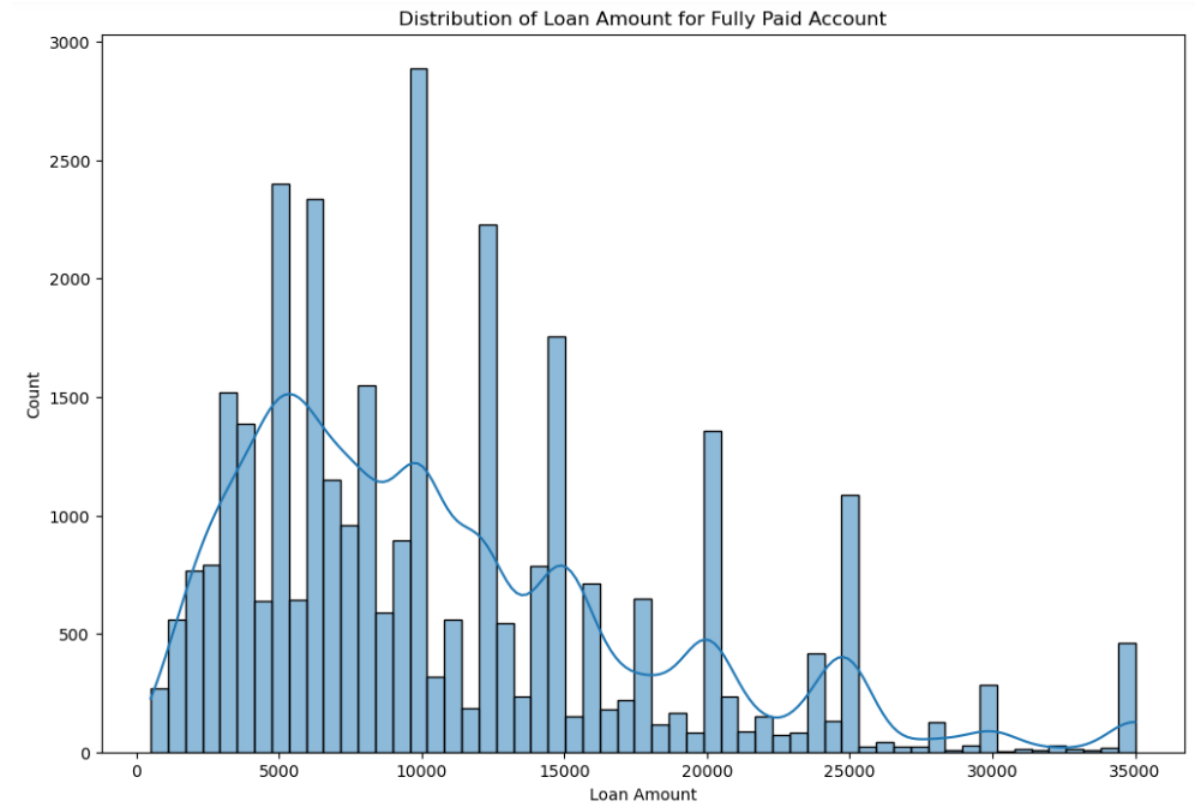
Distribution of Loan Amount overall account

- count 39717.00
- mean 11219.44
- std 7456.67
- min 500.00
- 25% 5500.00
- 50% 10000.00
- 75% 15000.00
- max 35000.00



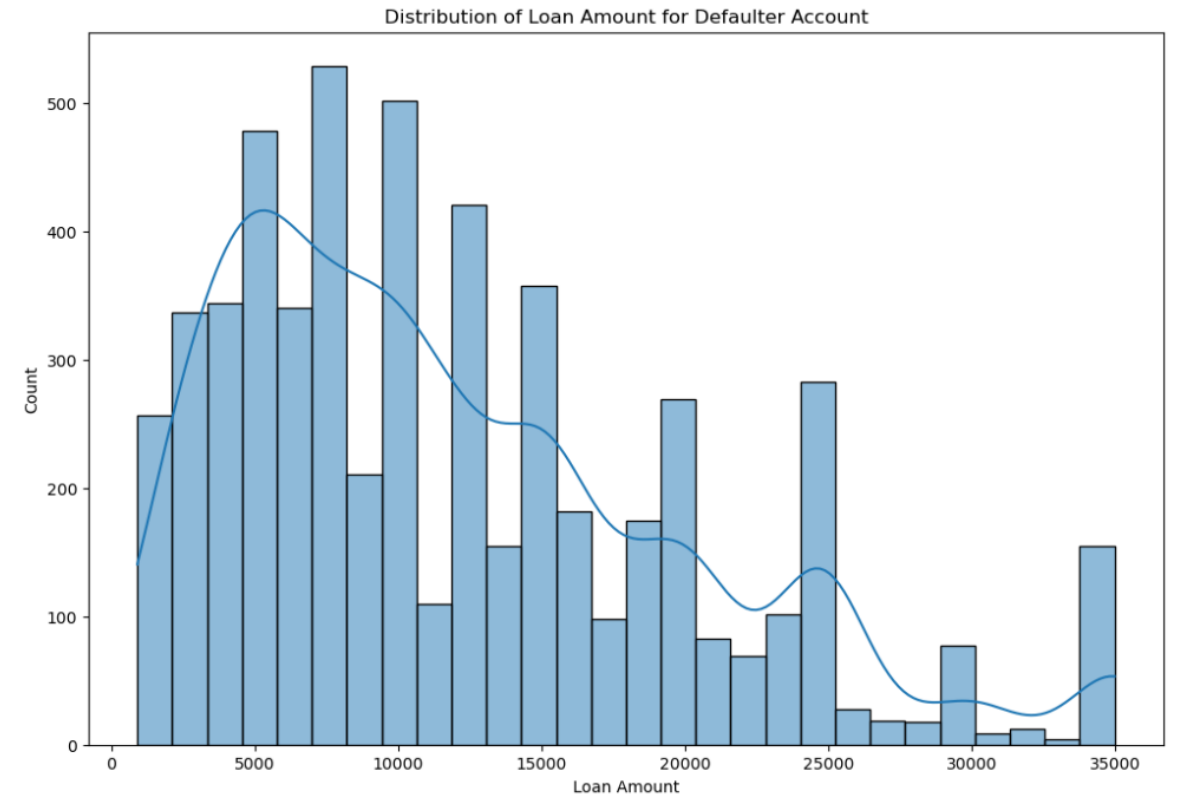
Distribution of Loan Amount for Fully Paid Account

```
count 32950.00  
mean 10866.46  
std 7199.63  
min 500.00  
25% 5200.00  
50% 9600.00  
75% 15000.00  
max 35000.00
```



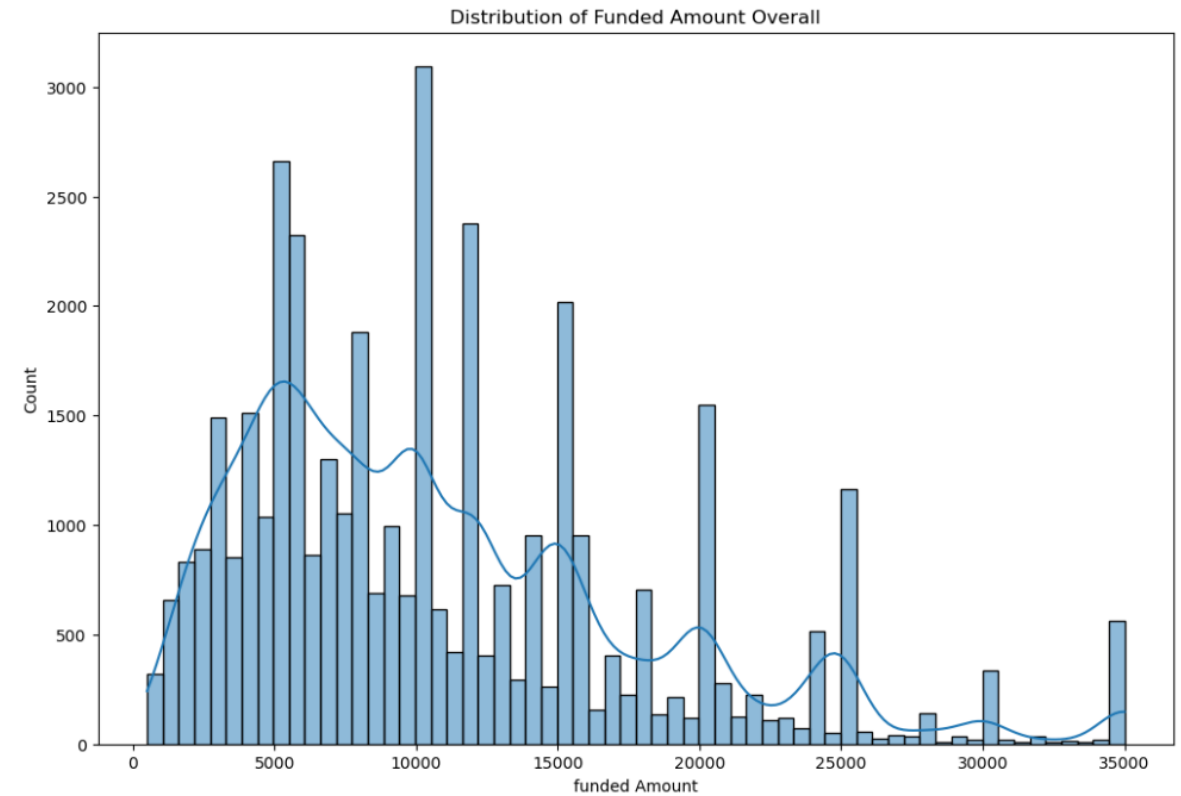
Distribution of Loan Amount for Defaulter Account

- count 5627.00
- mean 12104.39
- std 8085.73
- min 900.00
- 25% 5600.00
- 50% 10000.00
- 75% 16500.00
- max 35000.00



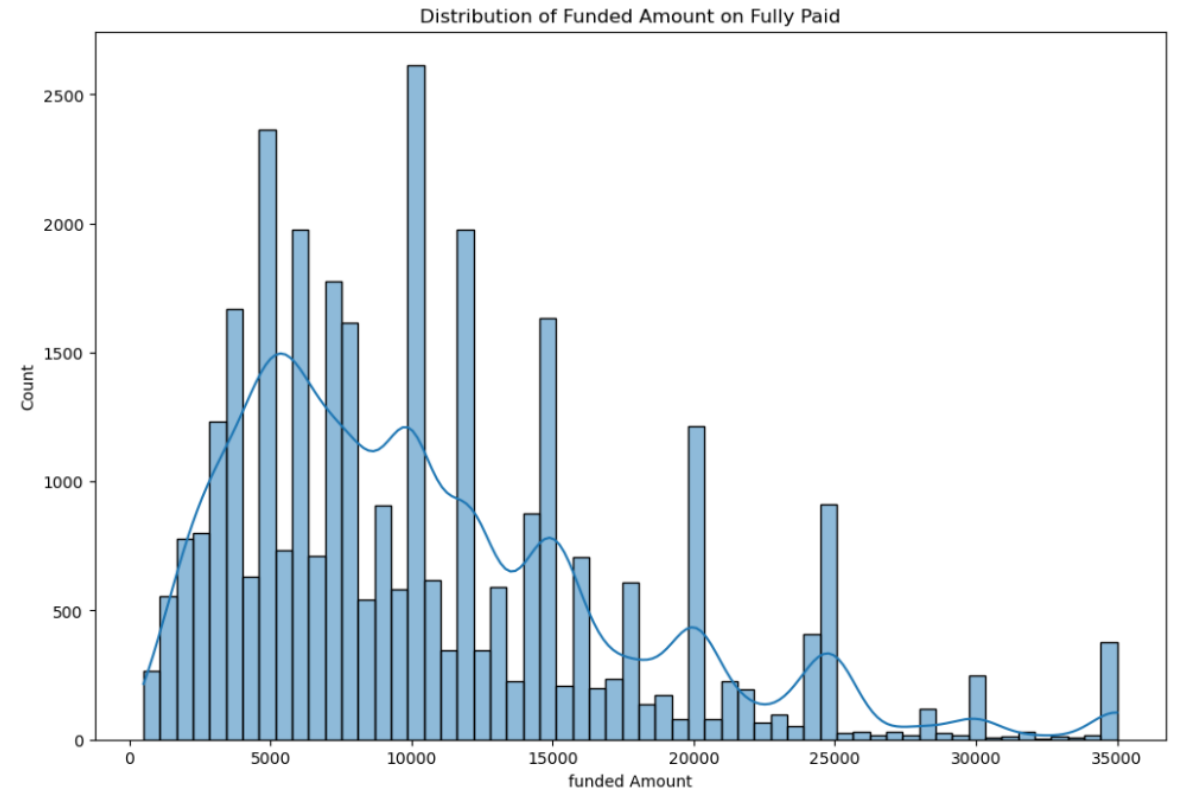
Distribution of Funded Amount Overall

```
count 39717.00  
mean 10947.71  
std 7187.24  
min 500.00  
25% 5400.00  
50% 9600.00  
75% 15000.00  
max 35000.00
```



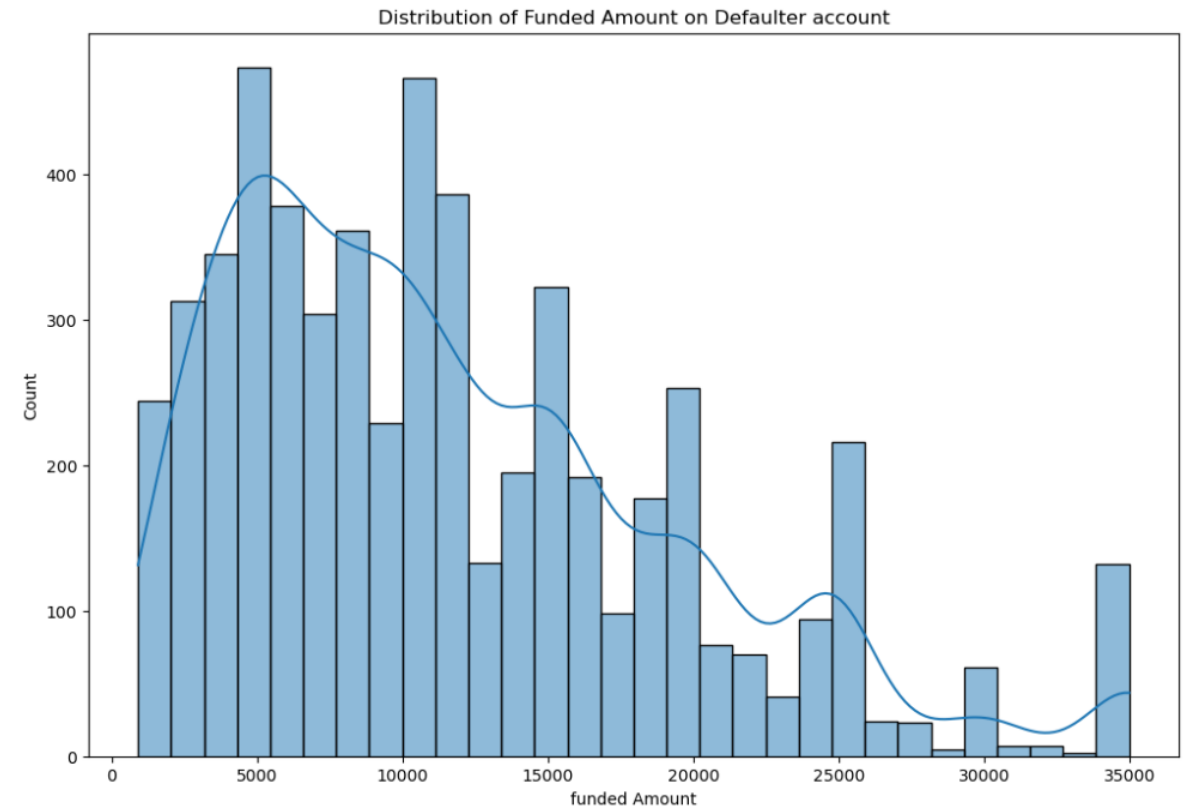
Distribution of Funded Amount on Fully Paid

```
count 32950.00  
mean 10618.52  
std 6956.05  
min 500.00  
25% 5050.00  
50% 9200.00  
75% 14500.00  
max 35000.00
```

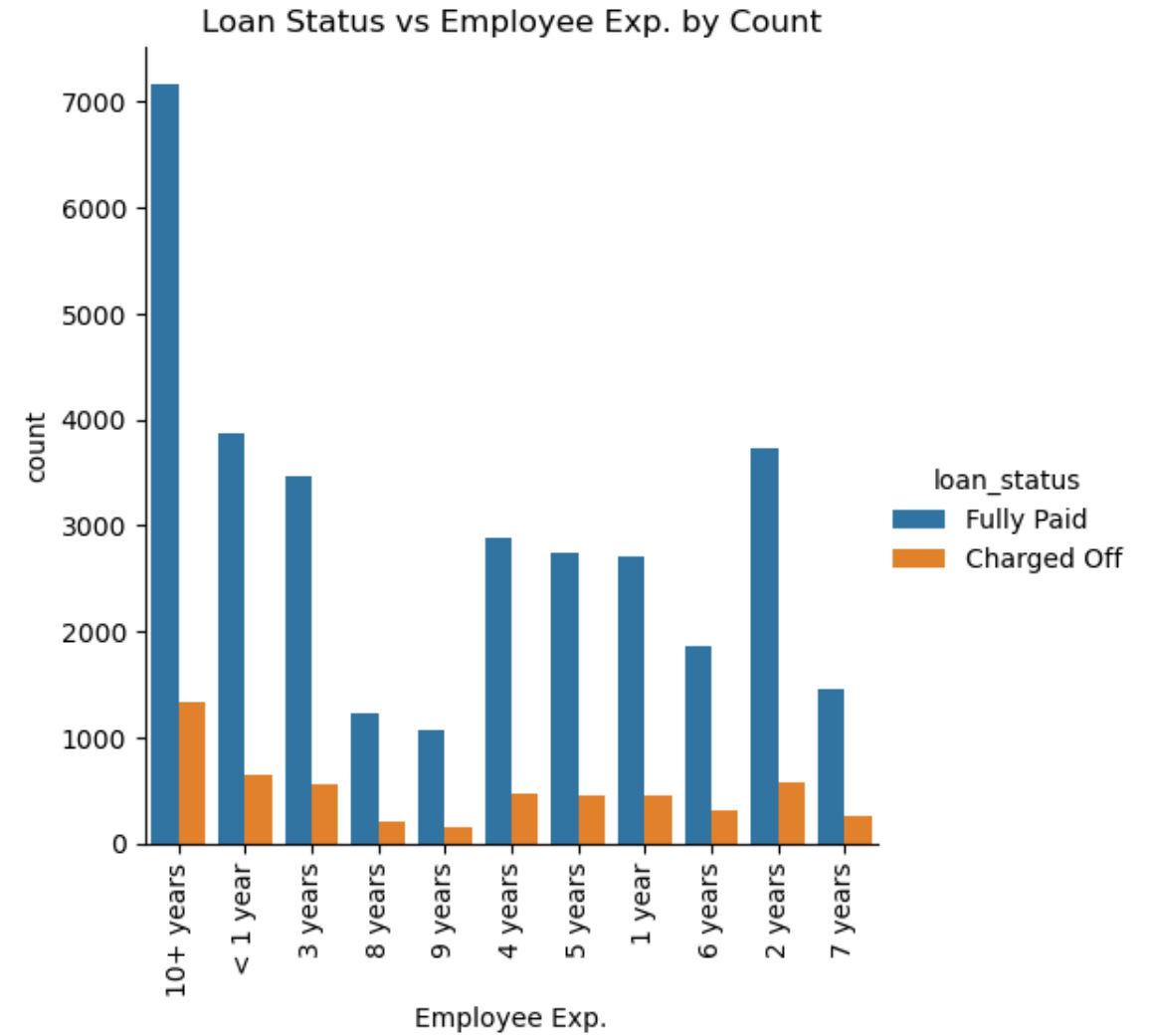


Distribution of Funded Amount on Defaulter account

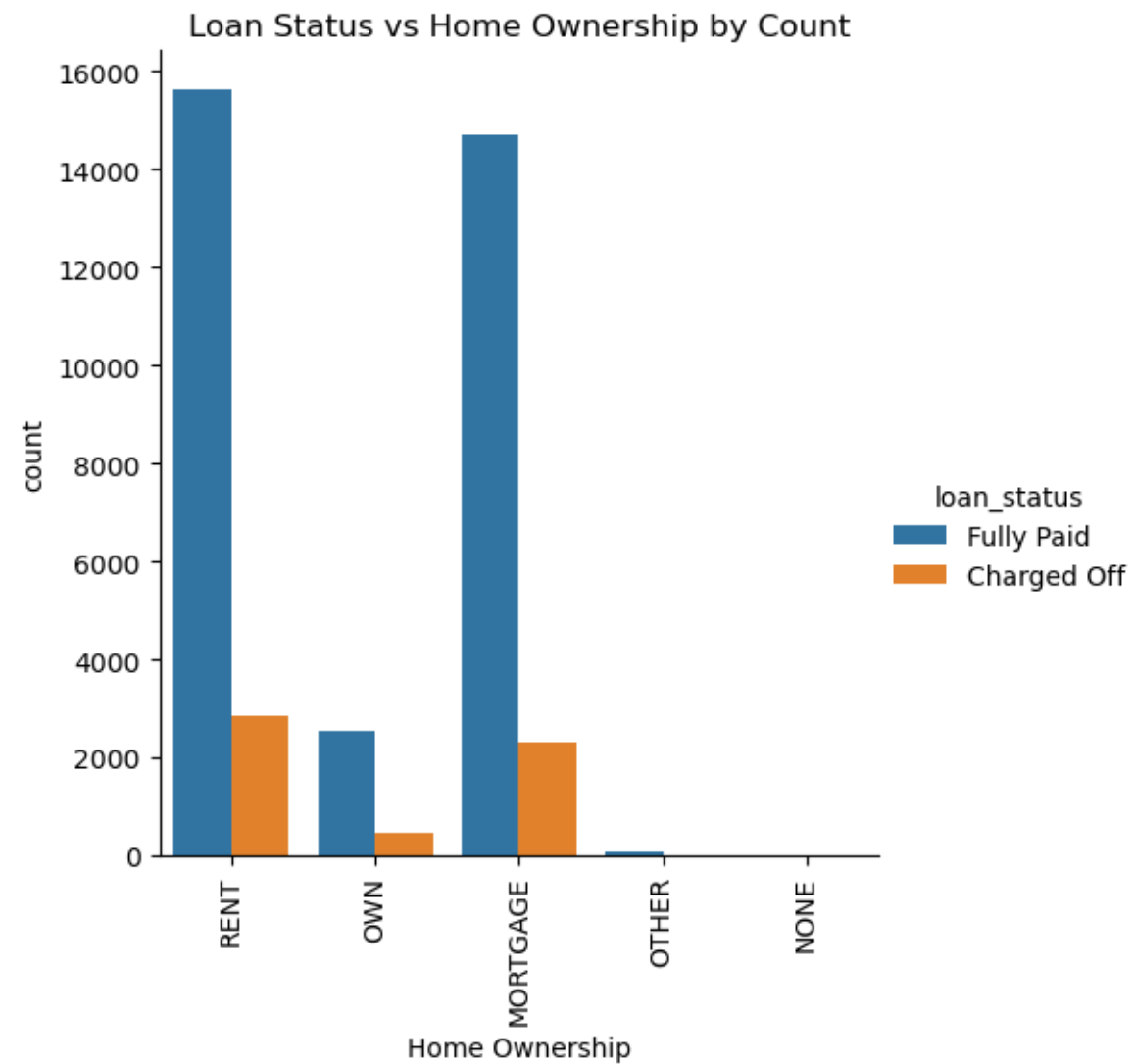
count 5627.00
mean 11753.40
std 7760.52
min 900.00
25% 5575.00
50% 10000.00
75% 16000.00
max 35000.00



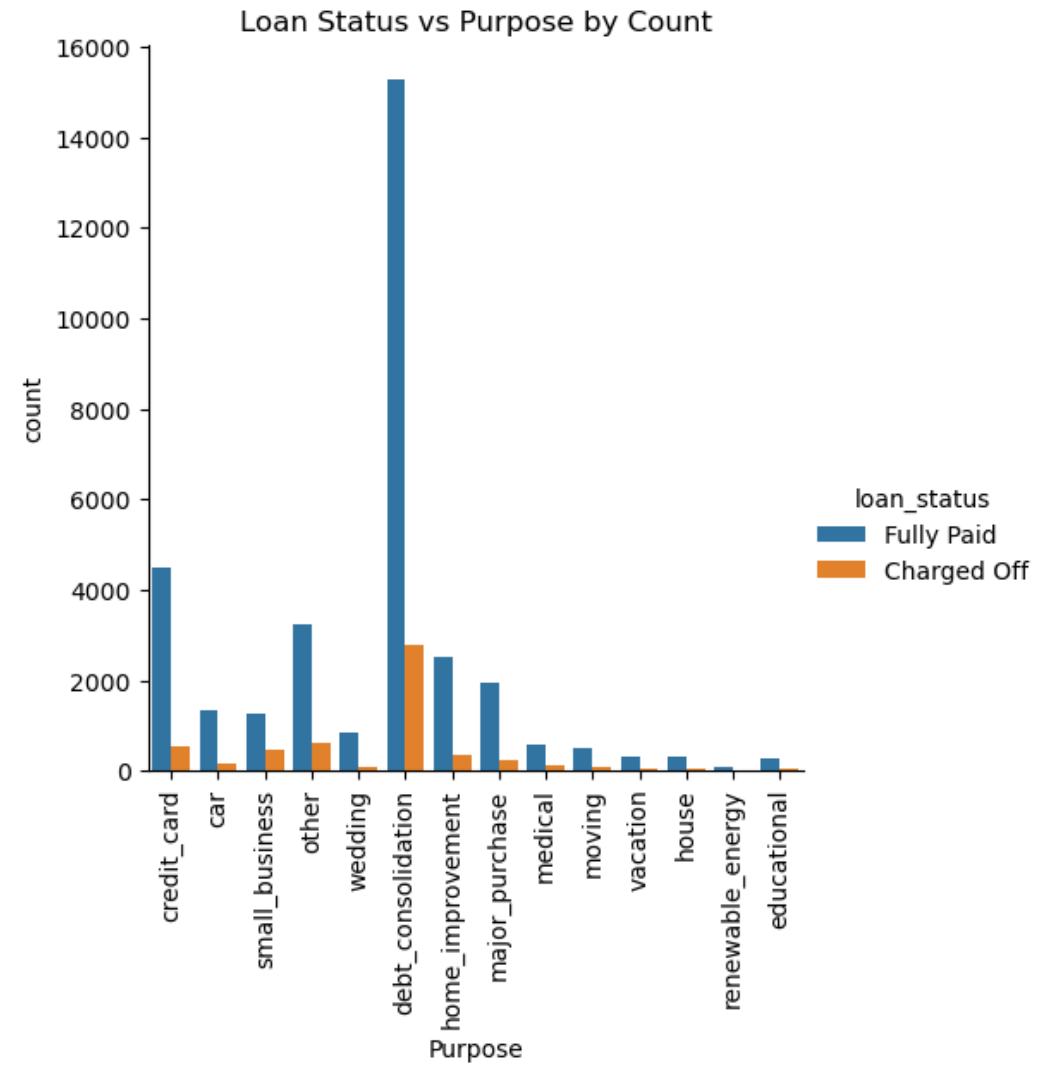
Loan Status vs Employee Exp



Loan Status vs Home Ownership



Loan Status vs Purpose by Count





Few Insights from Ratio Analysis and graphs

10+ years are more likely to default
Not Verified are more likely to default
Enquiry in Last 6 months are more likely to default
Debt Consolidation are more likely to default