Lending Club Case study

Risk analysis to minimise the lose of money while lending to customers
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INTRODUCTION

Our primary focus is to identify potential risks, develop insights to mitigate them, and ultimately safeguard the financial stability of the company. We'll examine the lending landscape, assess inherent risks, and propose proactive measures to minimize the loss of money.

1. We have identified the risk of the real world problem loan defaulters for a lending company using the exploratory data analysis

2. In this case study, we have applied the techniques of EDA, and developed a basic understanding of risk analytics in banking and financial services and understand how data is used to minimize the risk of losing money while lending to customers.

3. We have analyzed the loan data of the customers who fully paid and charged off and compared the statistics

Objective

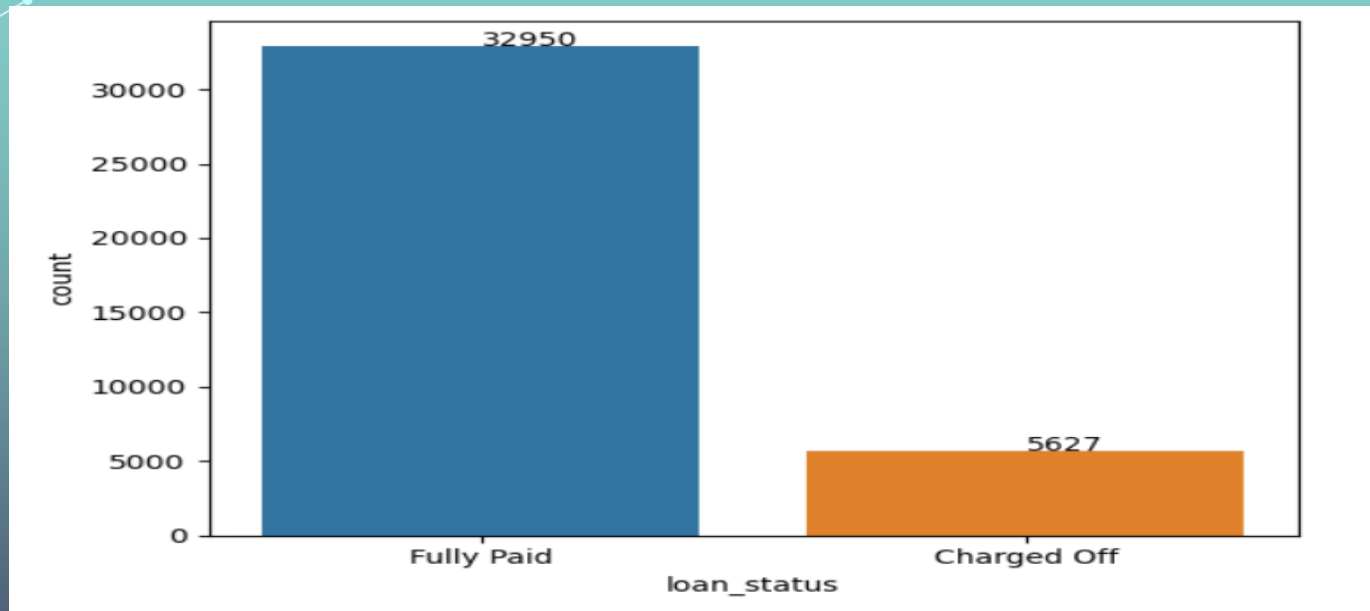1. Use EDA to solving the real life business problems using exploratory data analysis

2. Risk analytics in banking and financial services.

3. Minimize loss of money while lending it to clients.

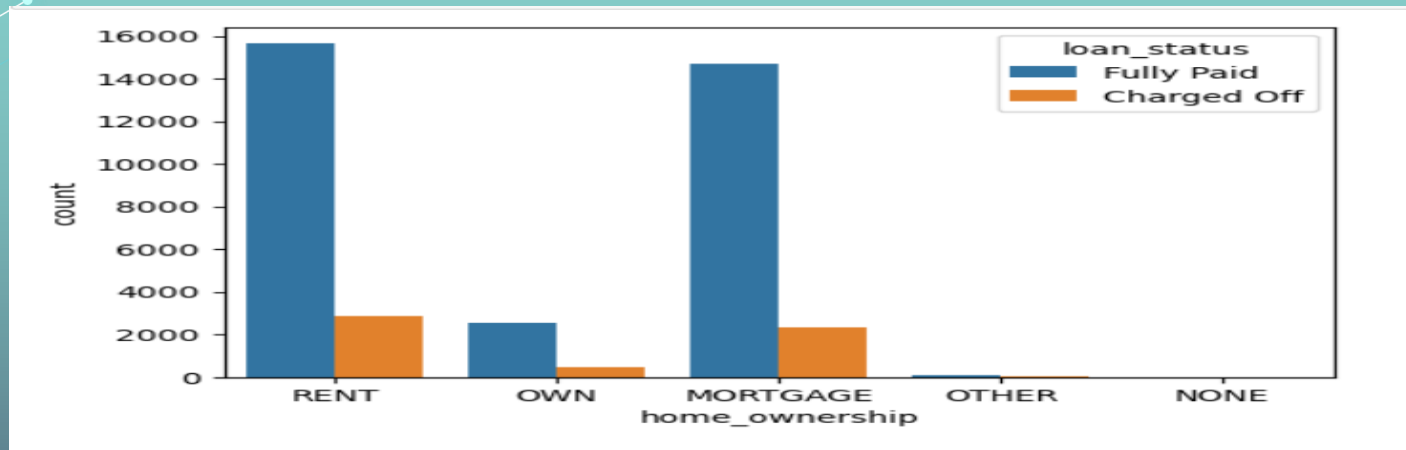4. Provide visualizations of data analysis for Client's better understanding

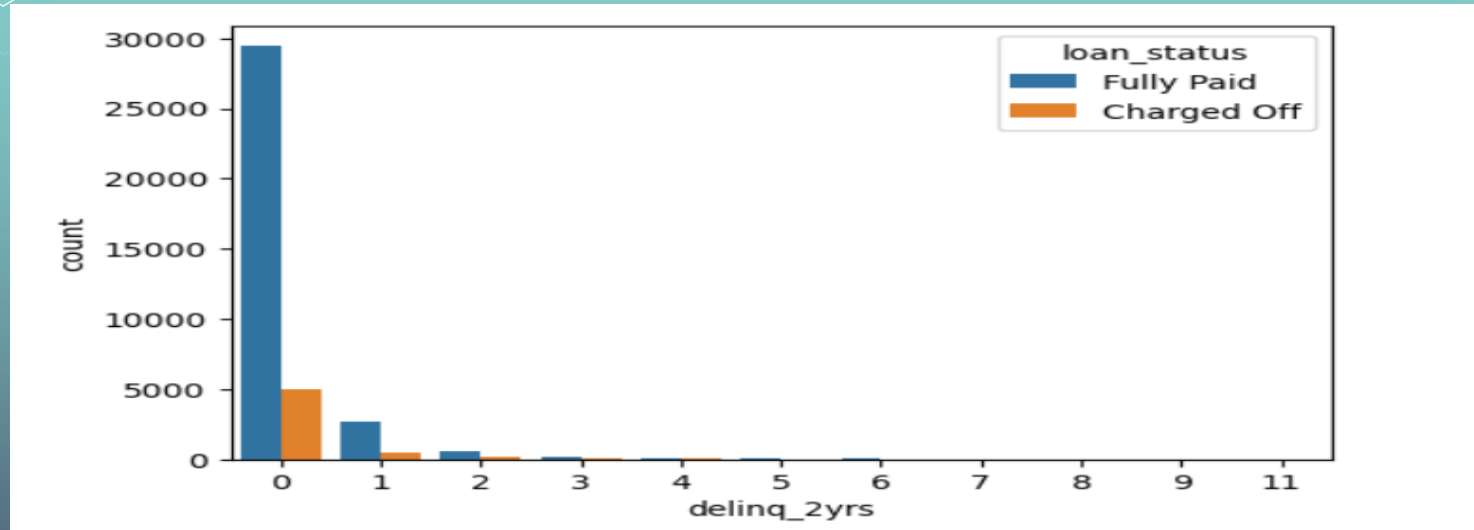# Key findings

Loan status of barrowers
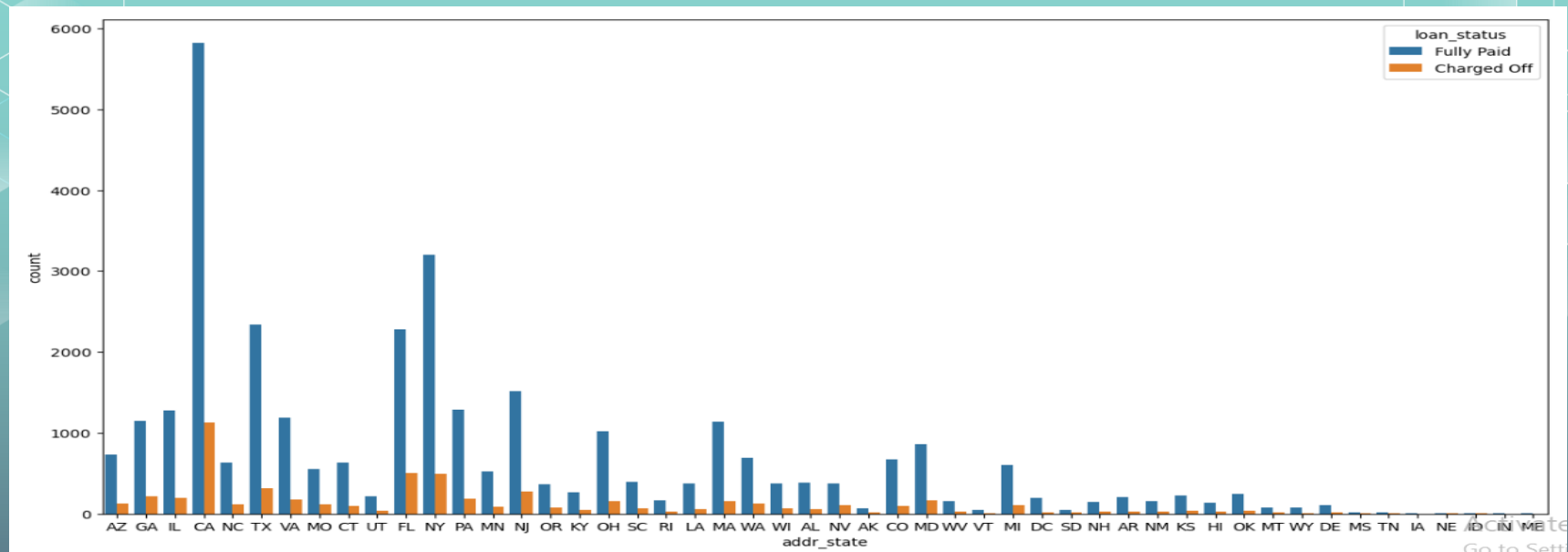We can see that the loan defaulters are less compared to Fully paid customers

Home ownership
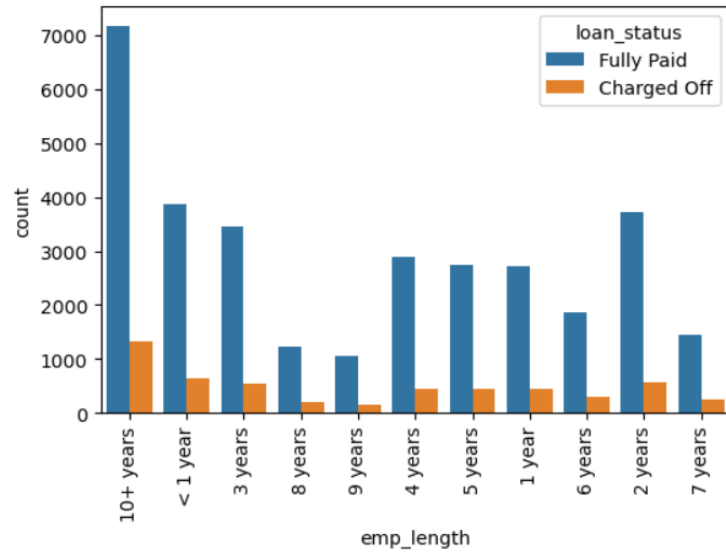We can observe here that most of the Charged off members are having home ownership as RENT, MORTAGAGE

Delinquency in 2 years of barrowers
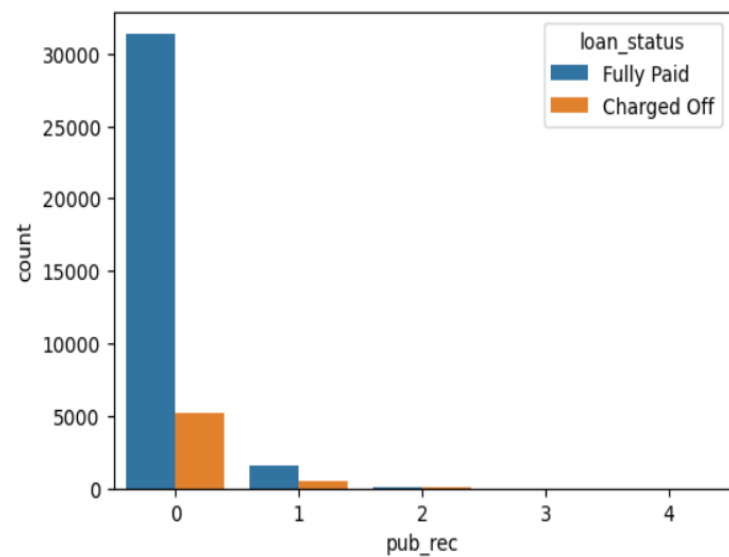We can observe here that most of the Charged off people's delinquency in 2 years is almost 0

State of barrowers
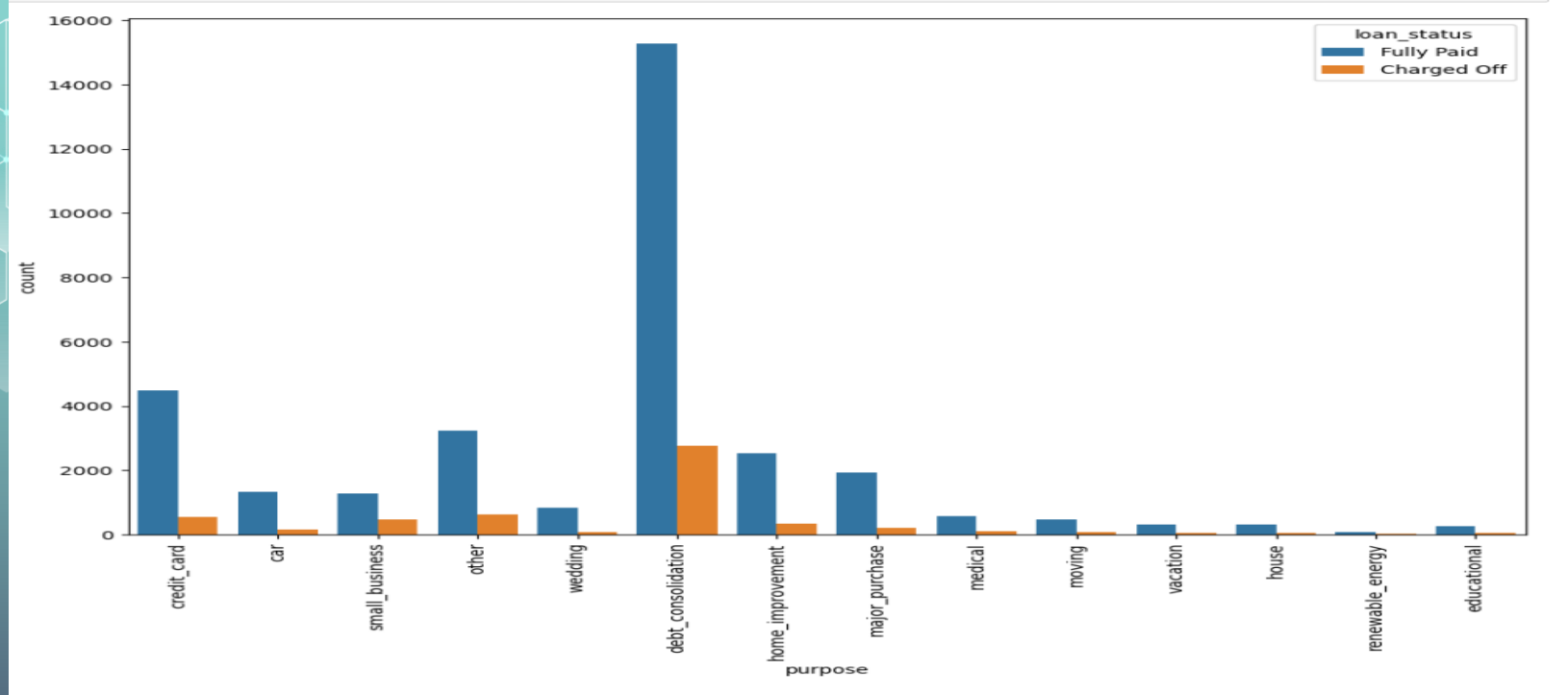We can observe that the most of the defaulters from CA, FL, NY

Employee length(years of work experience)
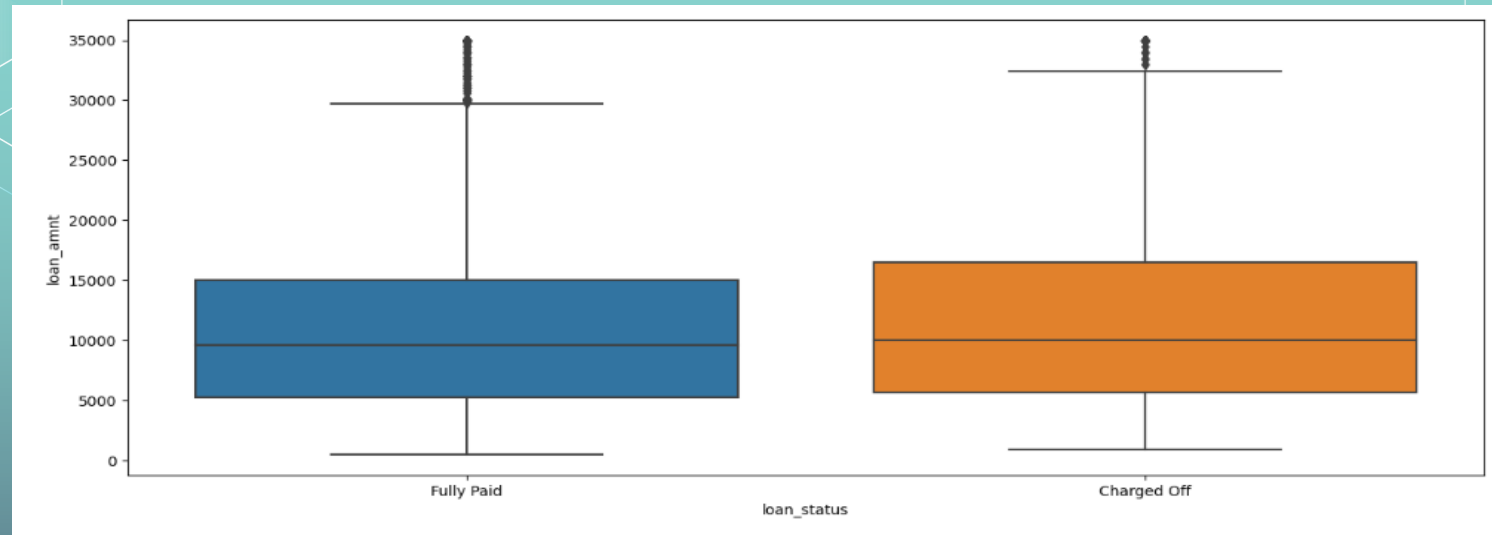We can observe here that most of the Charged off people's employee length is 10+ years

Pubic records of barrowers
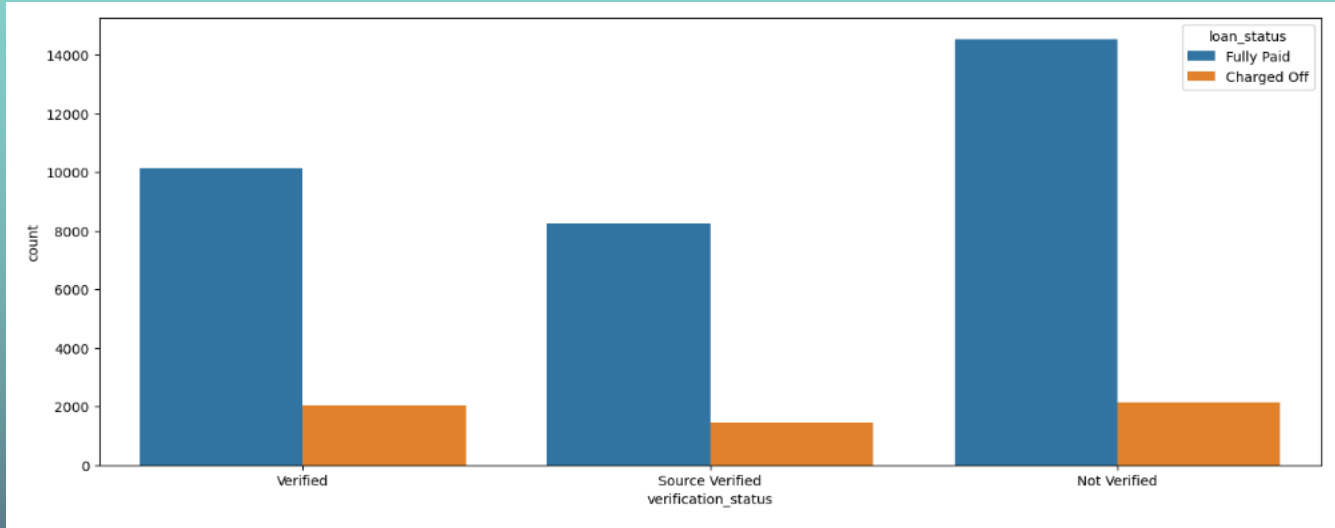We can observe here that most of the Charged off people's public record is almost 0

Purpose of loan
We can see that most of the people taken loan to clear other debts and most of the charged off members also from same category
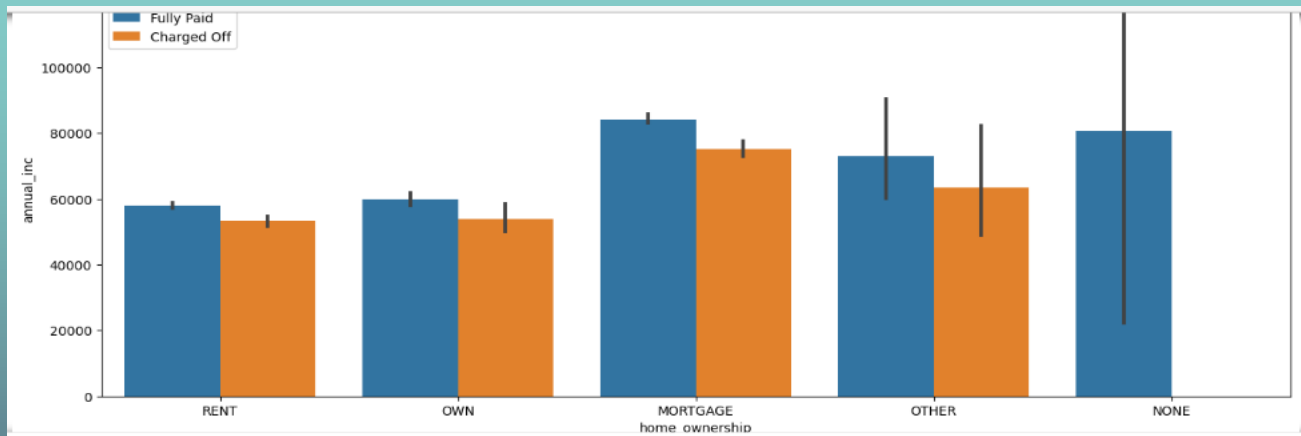
Loan status vs Loan amount
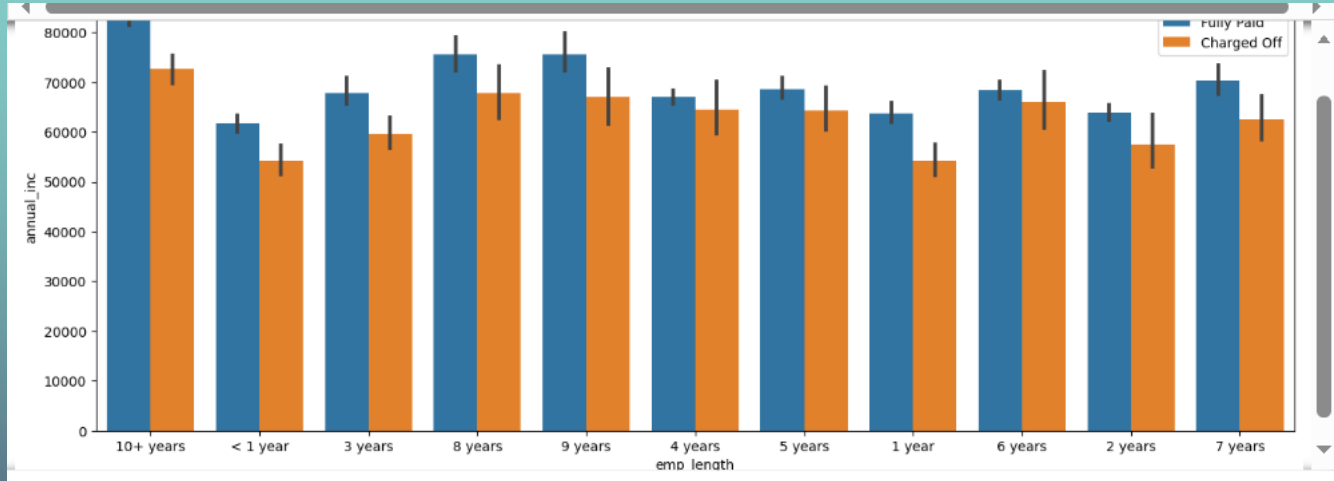**We can see that members who took high loan amount are charged off**

Verification status
We can see that most of the charged off member's source isn't verified
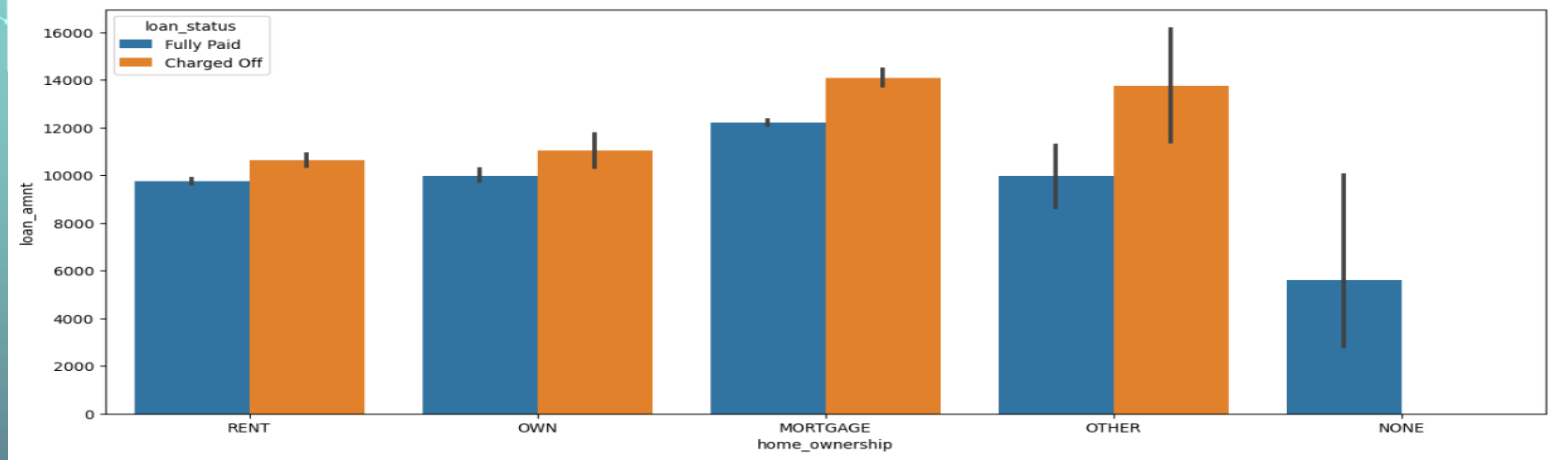
Home ownership vs Annual income
We can observe that most of the charged off people's home ownership as MORTAGAGE and
annual income is between 70k to 80k

Annual income vs Employee length
We can observe that most of the charged off people are having employee length more than 10 years and whose annual salary close to 70k
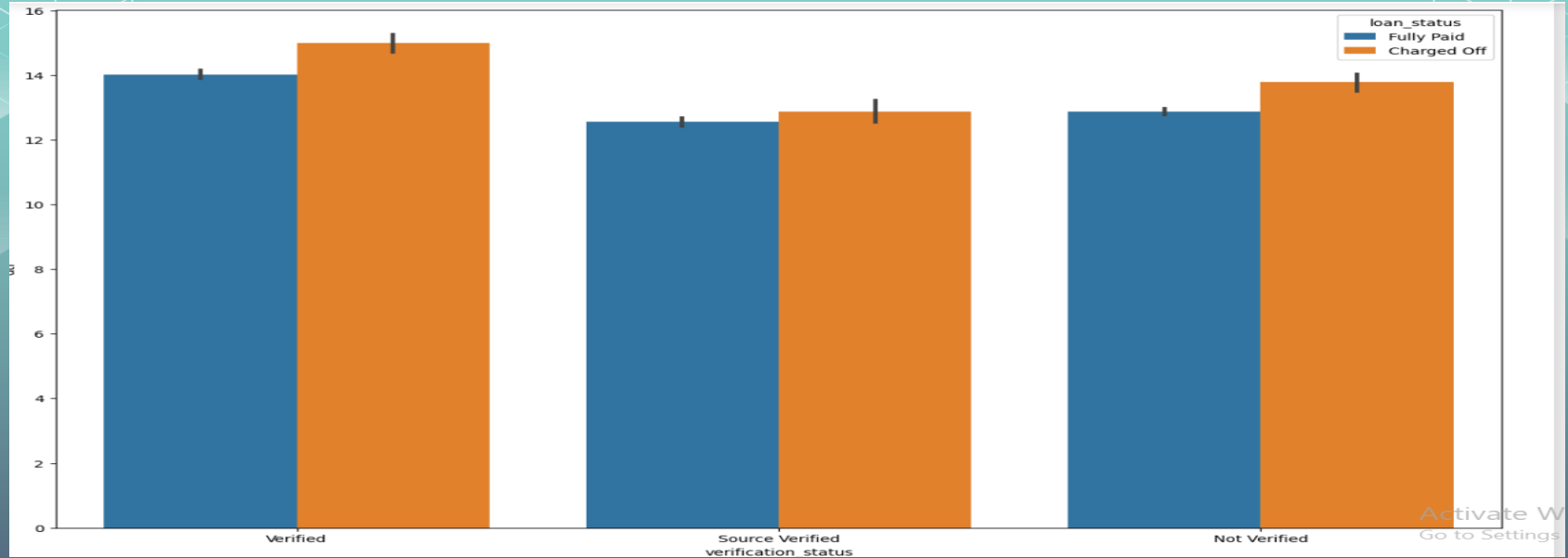
Loan amount vs Home ownership
We can observe that most of the charged off people are having loan amount is close to 14k and whose home ownership as MORTAGE and OTHER
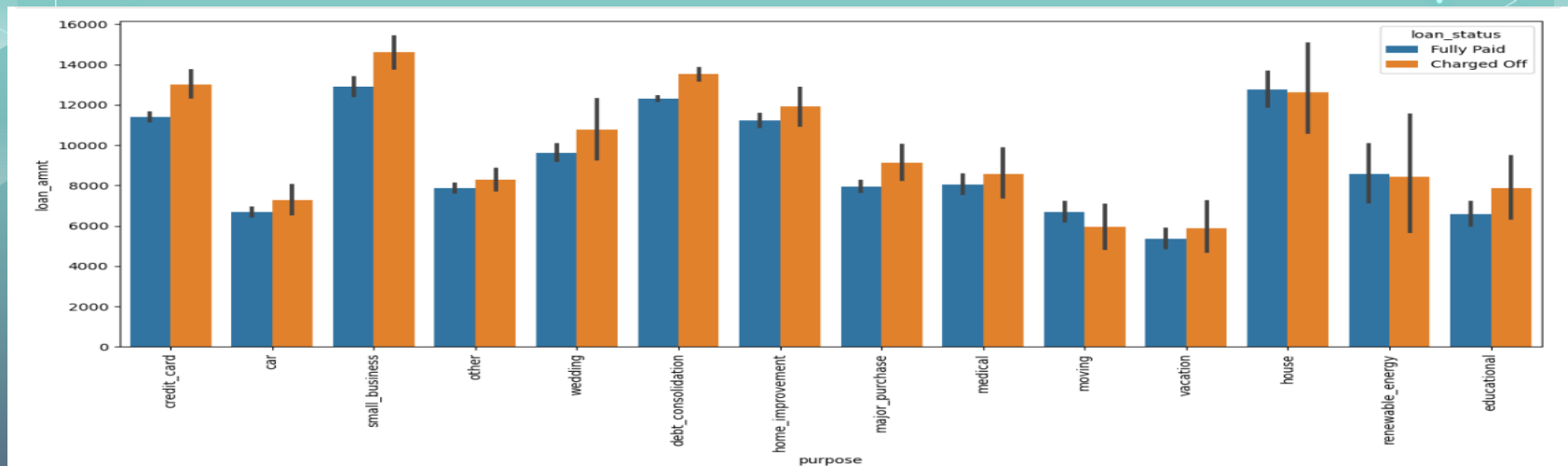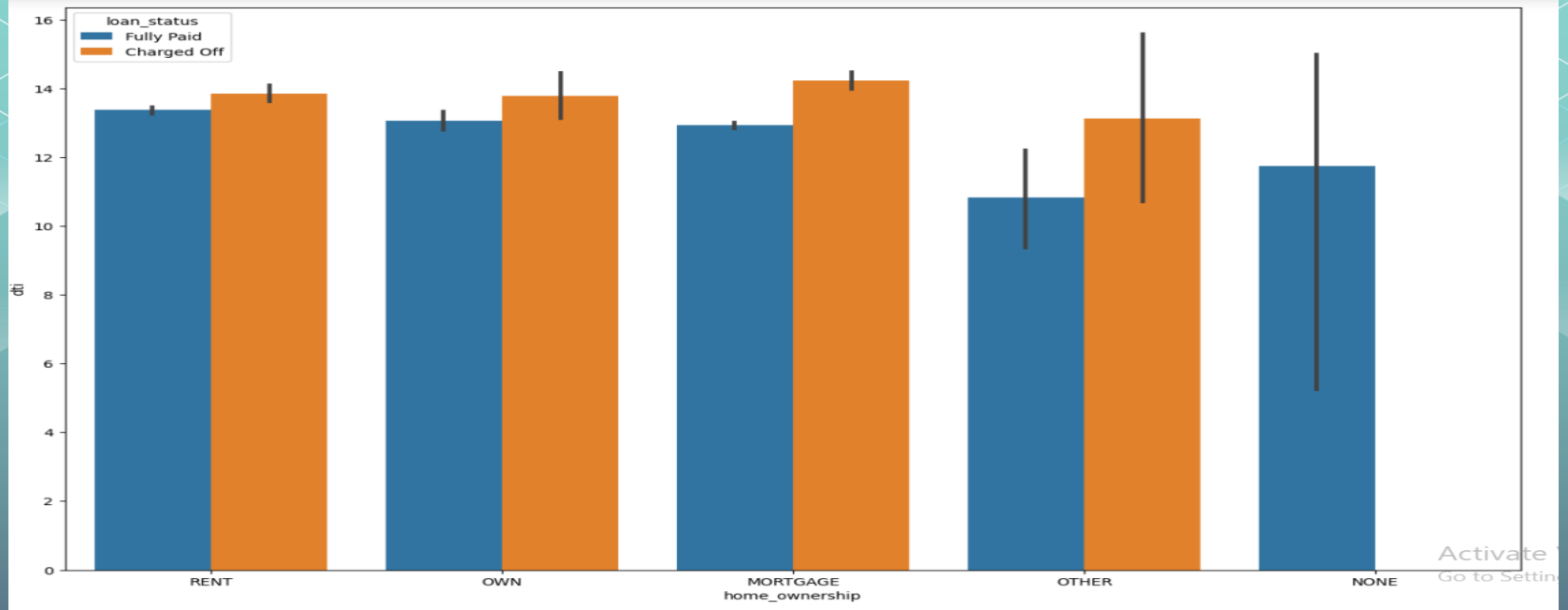
Loan amount vs Purpose

We can observe that most of the charged off people are having loan amount is close to 14k and home ownership as MORTAGE and OTHER

Verification status vs DTI
We can observe that most of the charged off members who are verified and their DTI is more than close to 15

Home Ownership vs DTI

We can observe that most of the charged off members who's home ownership is RENT, MORTAGAGE and their DTI is more than close to 14

Recommendations & Summary

Below are the key factors of defaulters:

1. DTI
2. Having home ownership as RENT, MORTAGAGE
3. Most of the defaulters are from state CA, FL, NY
4. Employee work experience is 10+ years
5. Purpose of loan is to clear other debts and small business
6. Defaulters loan amount is high compared to Fully paid customers