

# Lending Club Case Study

**Group Members**

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# Business Requirement

- ❑ There is a huge shift of customers from a heavy weight banks to the new age **FinTech** companies
- ❑ As these companies are very quick in their KYC and provisioning the loan to the end customers. But with this ease comes the challenging part as well where these companies faces a great chunk as **Default**.
- ❑ Our objective as an analyst is to find out the **pattern** or some **corelation** in the defaults, so that companies can avoid giving loans to particular set of customers.

# Steps followed in the analysis

1. Data Loading & Understanding
2. Pre-processing Data
3. Missing Value Check
4. Imputation
5. Outlier Treatment
6. Risk Analysis (using EDA)

# Case Analysis

## Values of dataset

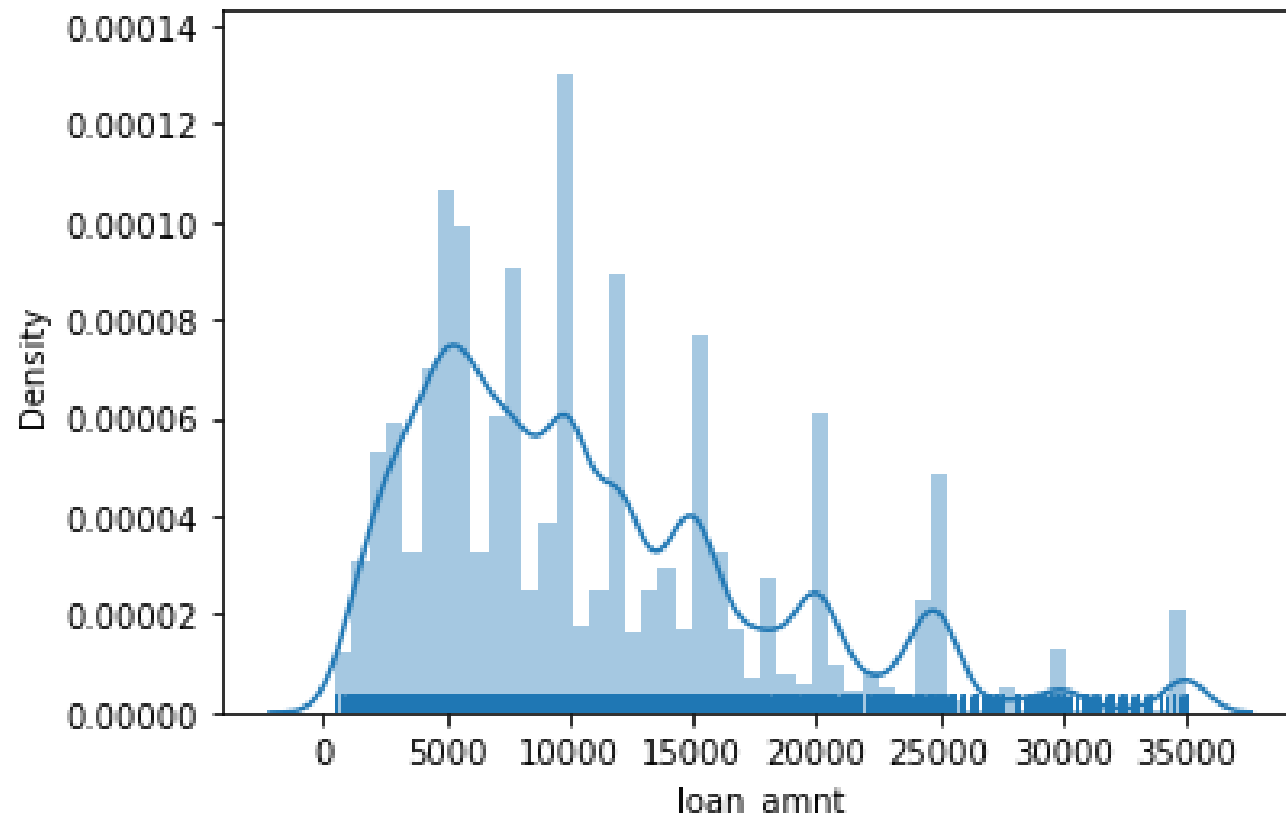
85.41% of the loan is good loan and fully paid off

14.58% is Defaulted

- Provided dataset has **85.41%** loan fully paid also called as **good loan**
- **14.58%** of the loan amount is charged off which means its not paid by the customer and gets defaulted also called **bad loan**

This Graph shows that most of the loans are between 5k to 15k. And there is a great spike at 10k.

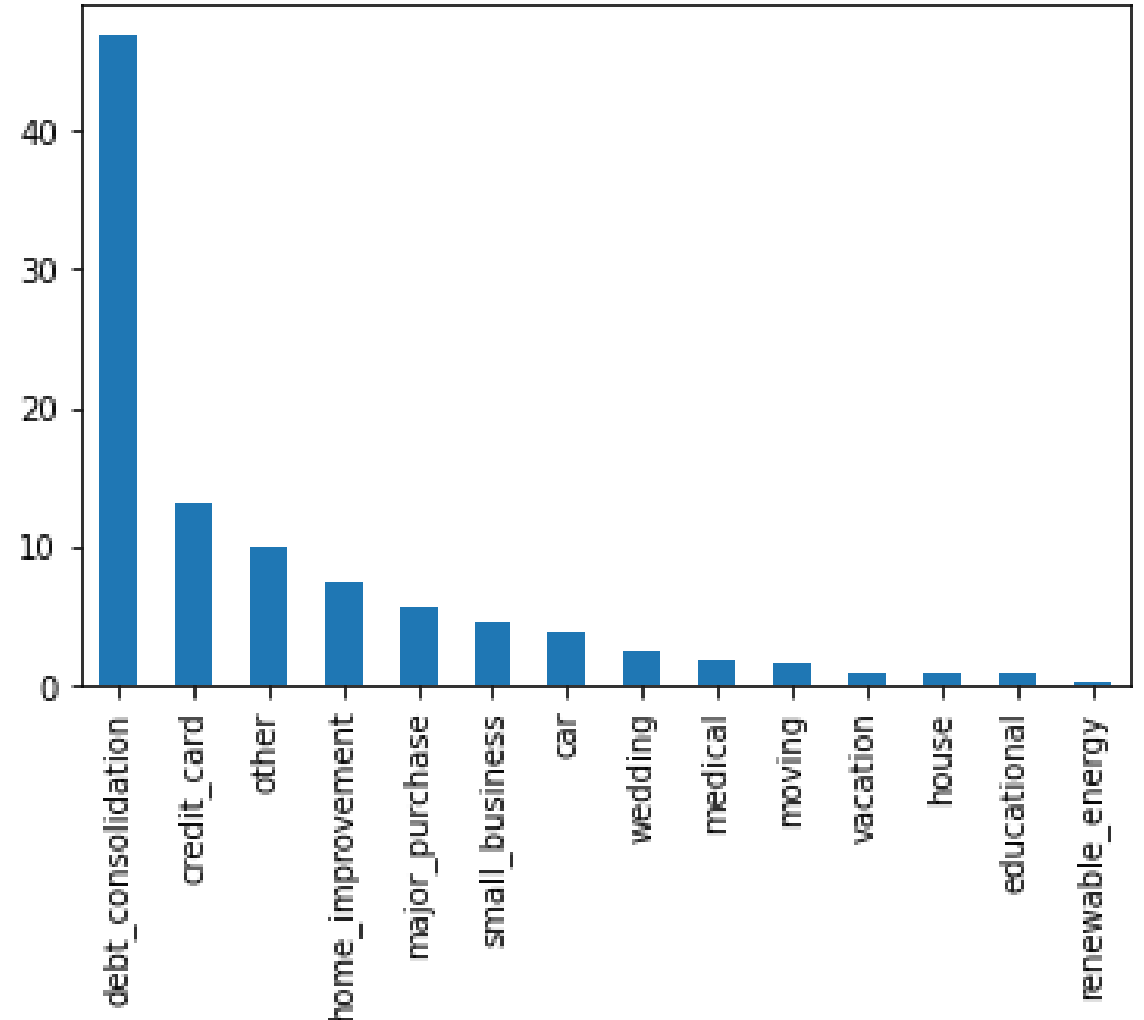
There is a possibility that people with plus minus 2k also request for 10k only, that's why we see a dip around 10k.



# Comparison against purpose of loan

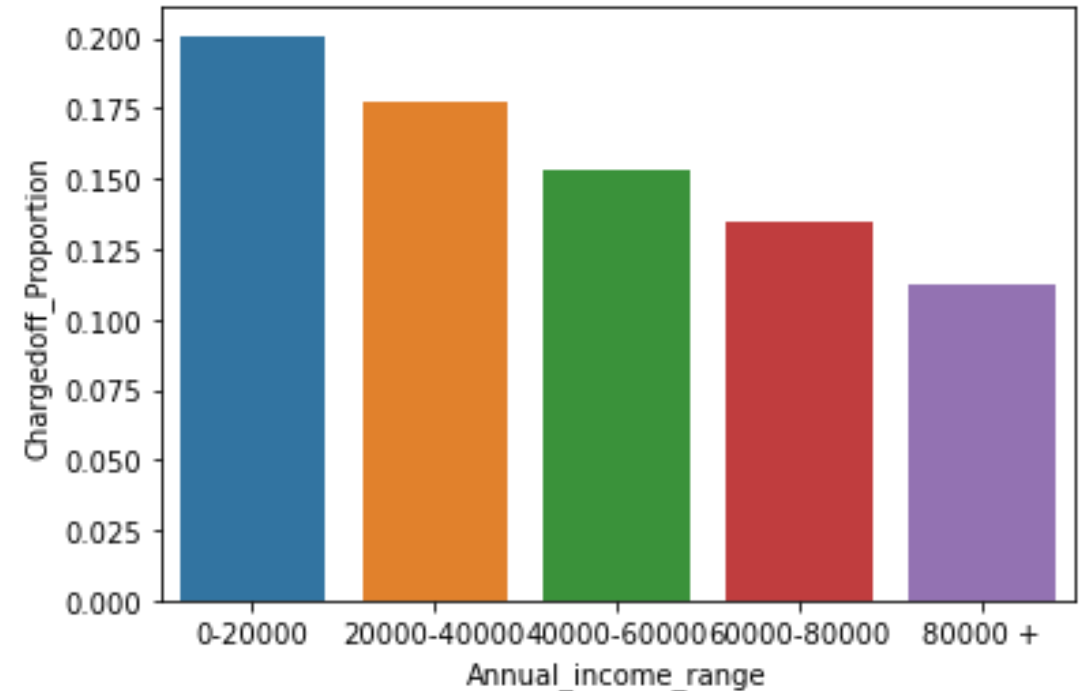
In the plot for purpose of loan  
We can clearly see the top 3 reasons for loan which comprises of 65% of all

- ✓ **debt\_consolidation**
- ✓ **credit\_card**
- ✓ **other**



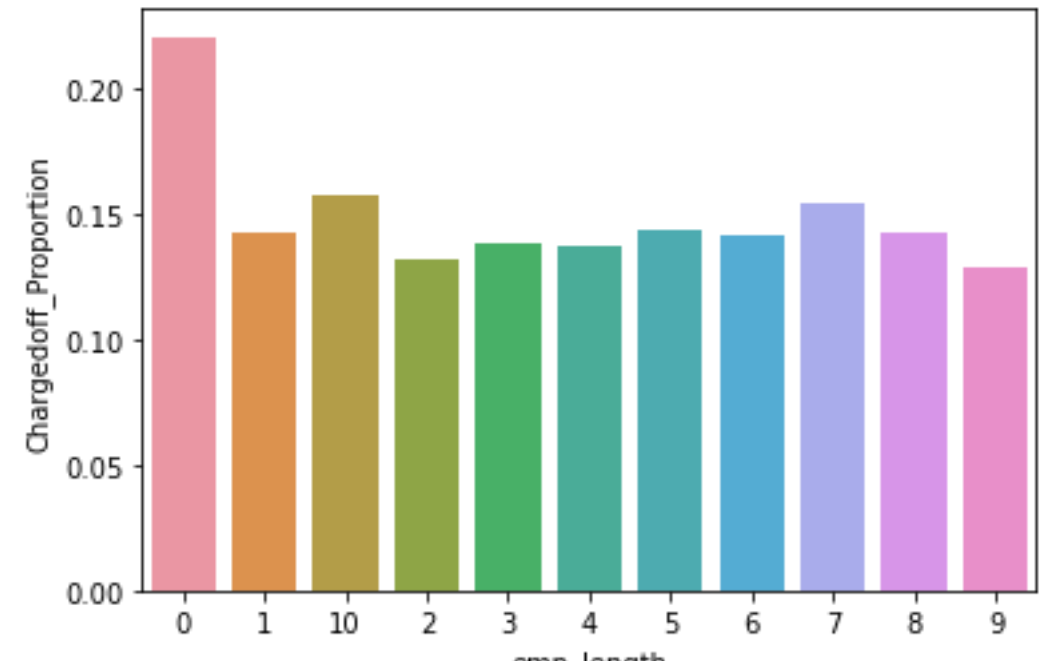
## Charge off Vs Annual income

People with high Income bracket are more likely to pay off the loans as compared to low income bracket.



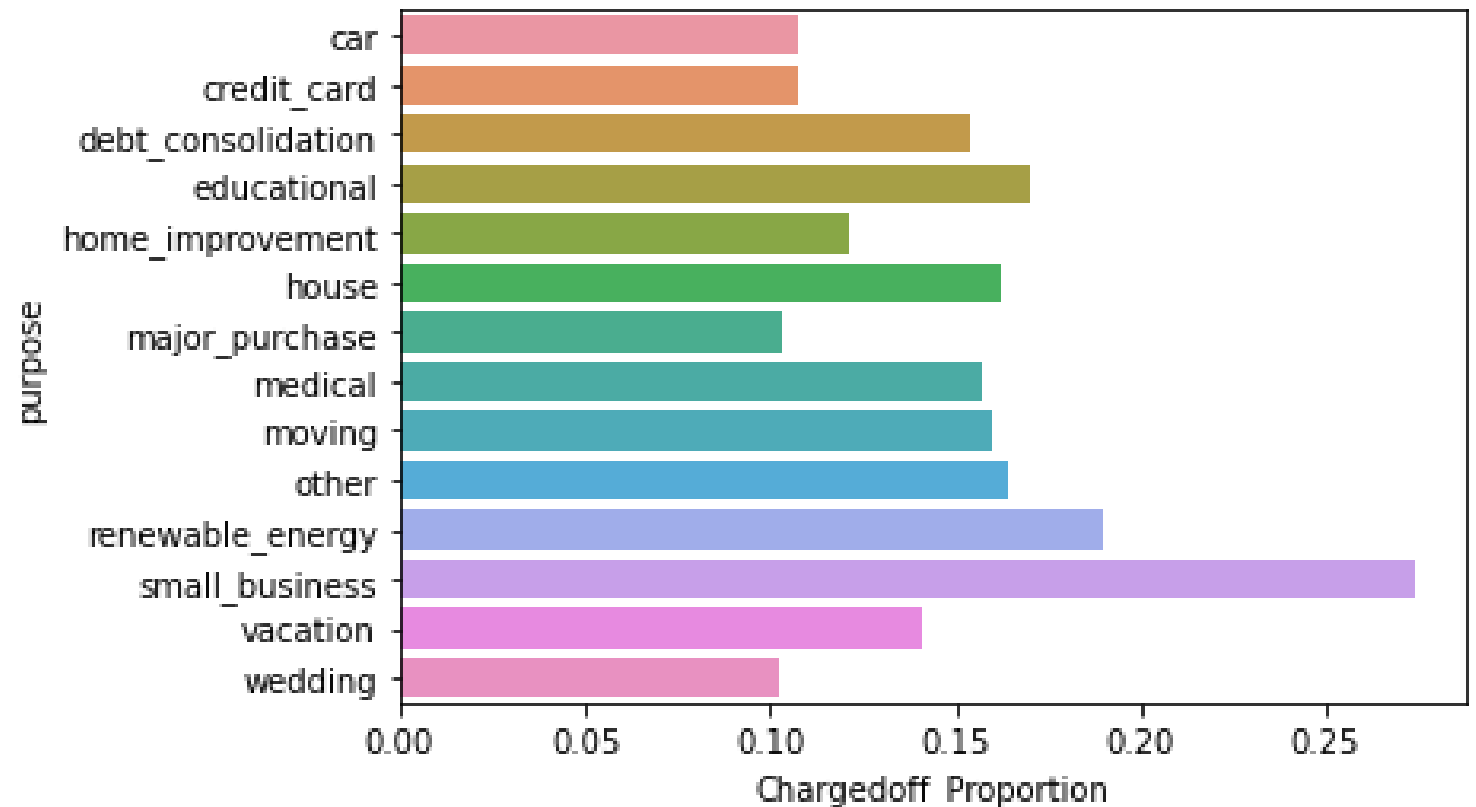
## Charge off Vs Annual income

Unemployed or people less than 1 years of experience have a higher default rate as compared to other set of people.



# Purpose Vs Charge Off

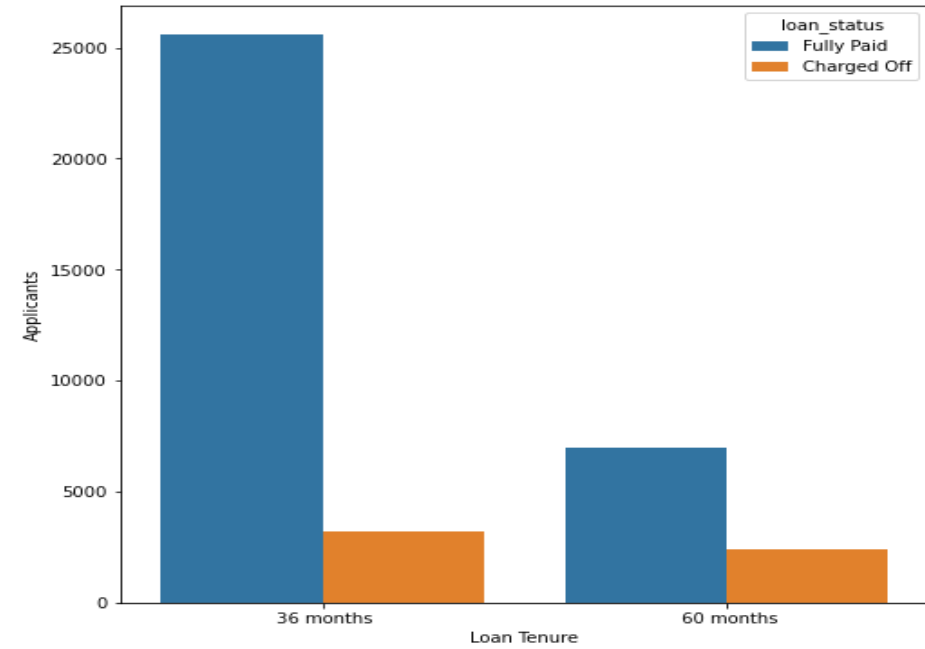
- Small business have the highest charge off rate, so there are high chances of a "**Small Business**" doing a **default**.
- Where as loan taken for "**Wedding**" has the lease charge off, so it is having a very high chances of **getting paid**





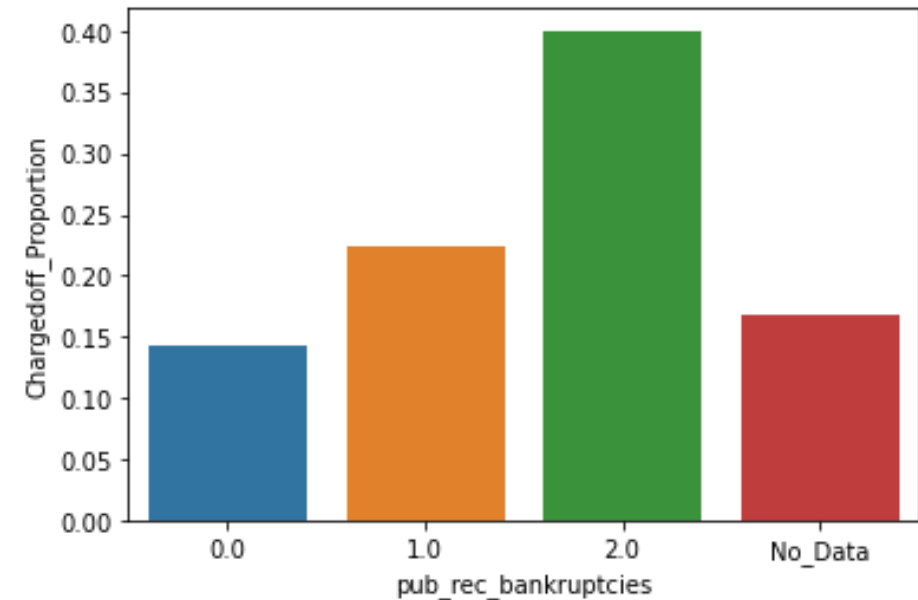
## Loan Tenure

There is an indication that people have a high pay off for 36 months tenure where as very less for 60 months tenure.

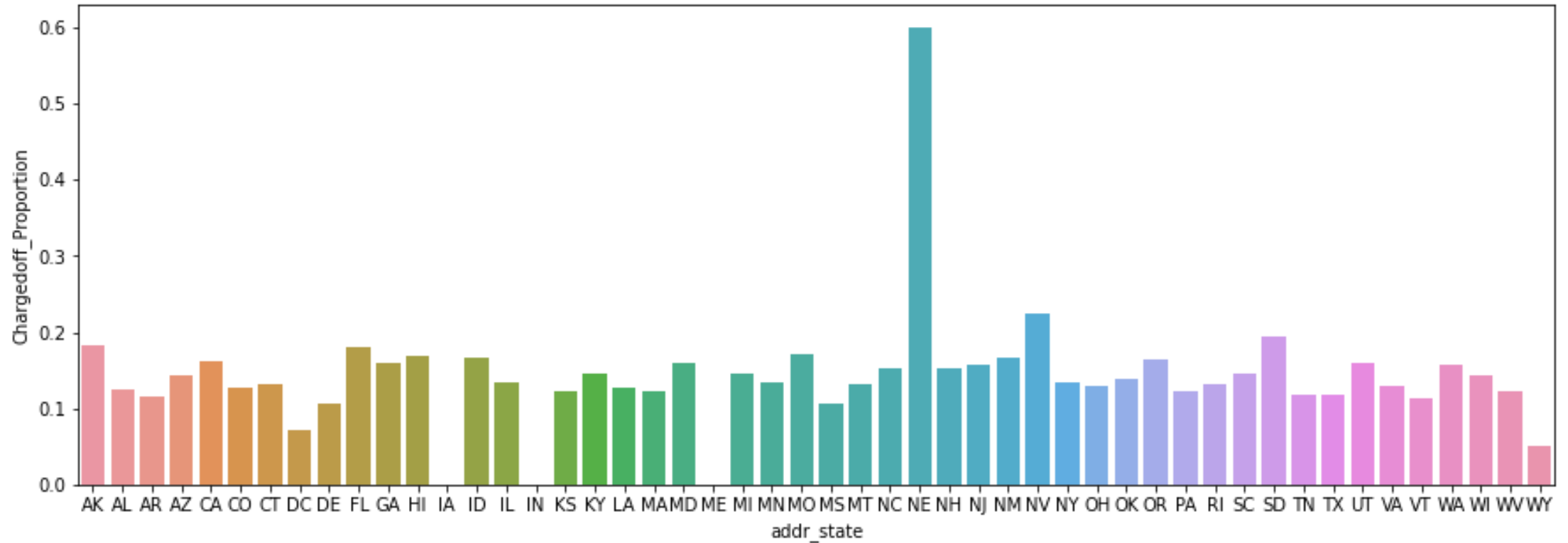


## Public Record Bankruptcy

Status 1 means first time defaulter and 2 means second time defaulter. So here we can see that once a defaulter have a very high chance of defaulting second time.



# State Wise Pattern



Most of the states have more or less the same charge off rate but as we see there is a huge spike in state “NE” for the loan default

# Driving factors for loan Default

- ❖ Number of years of experience an individual have
- ❖ Income slab
- ❖ Purpose of Loan
- ❖ Public Record of Bankruptcy
- ❖ Tenure of Loan
- ❖ State to which individual belong

# Conclusions

- People with the **higher income** slab can be given loan easily as compared to lower income.
- Bank should think before giving loan to **unemployed** or individuals with **1 or 2 years** of experience.
- Loan for **Wedding** can be given easily, whereas loan for **Small businesses** should be dually verified.
- Loan for **higher tenure** is at risk of more default as compared to shorter tenure.
- Loan should strictly **not be given** to the state “**NE**” before getting down to the roots of this high default rate.

Thank You 😊