

Objective

To understand the drivers of high loan defaulters using the historical loan data

Methodology

We plan to do exploratory data analysis on the data in order to find the parameters/metrics which lead to high default percentage of loans

Definition

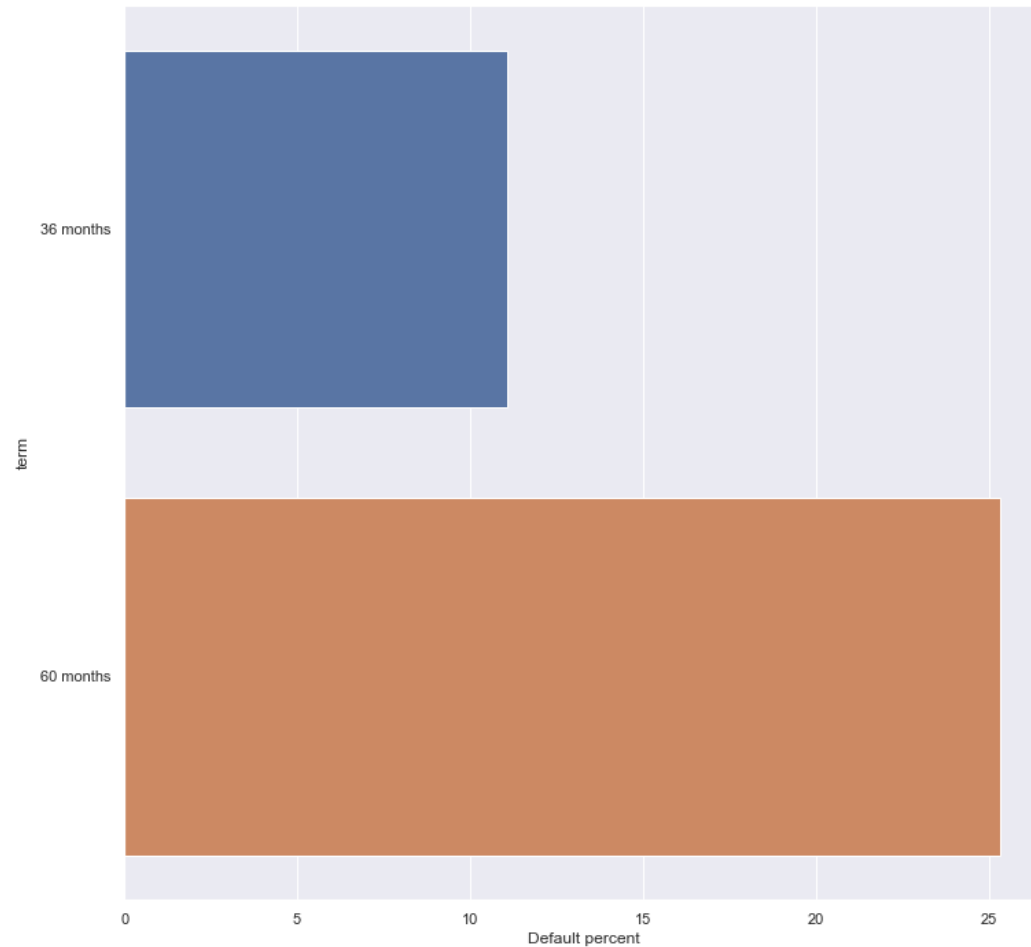
$$\text{Default Rate} = \frac{\# \text{ Charged off loans}}{\text{Total number of loans}}$$

Results

Based on the analysis we found below parameters as key drivers for high default rate

- Term: # instalments/payments of the loan
- addr_state: State of the borrower
- pub_rec_bankruptcies: # Number of public record bankruptcies of the borrower
- loan_amnt: amount applied by the borrower as loan
- installment: The monthly payment owed by the borrower if the loan originates.
- int_rate : Interest Rate on the loan
- Purpose: A category provided by the borrower for the loan request

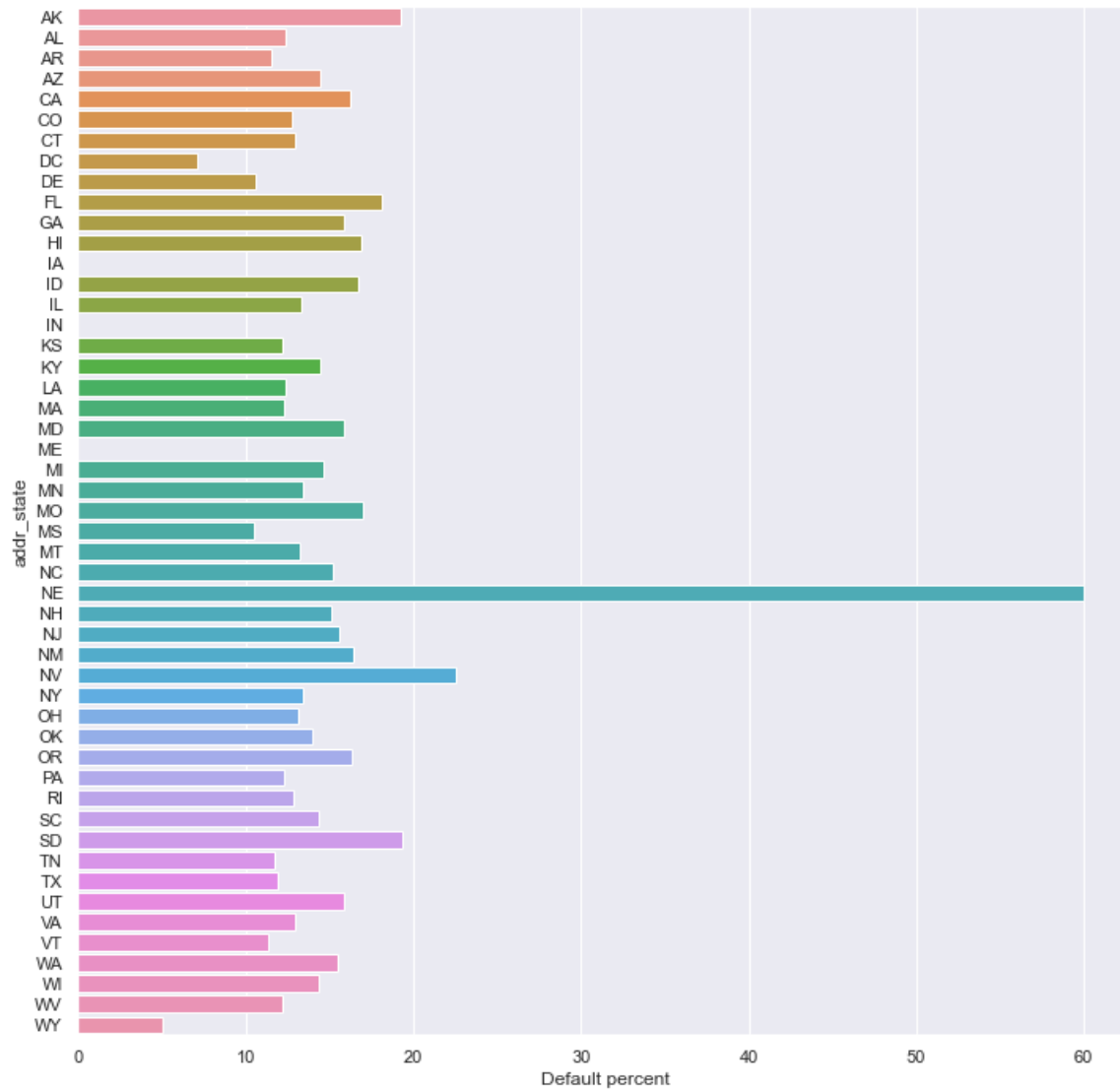
Default Rate by “Term”



Insights

Loans having “60 months” tenure have higher default percentage than the “30 months” i.e. higher chances of getting charged-off

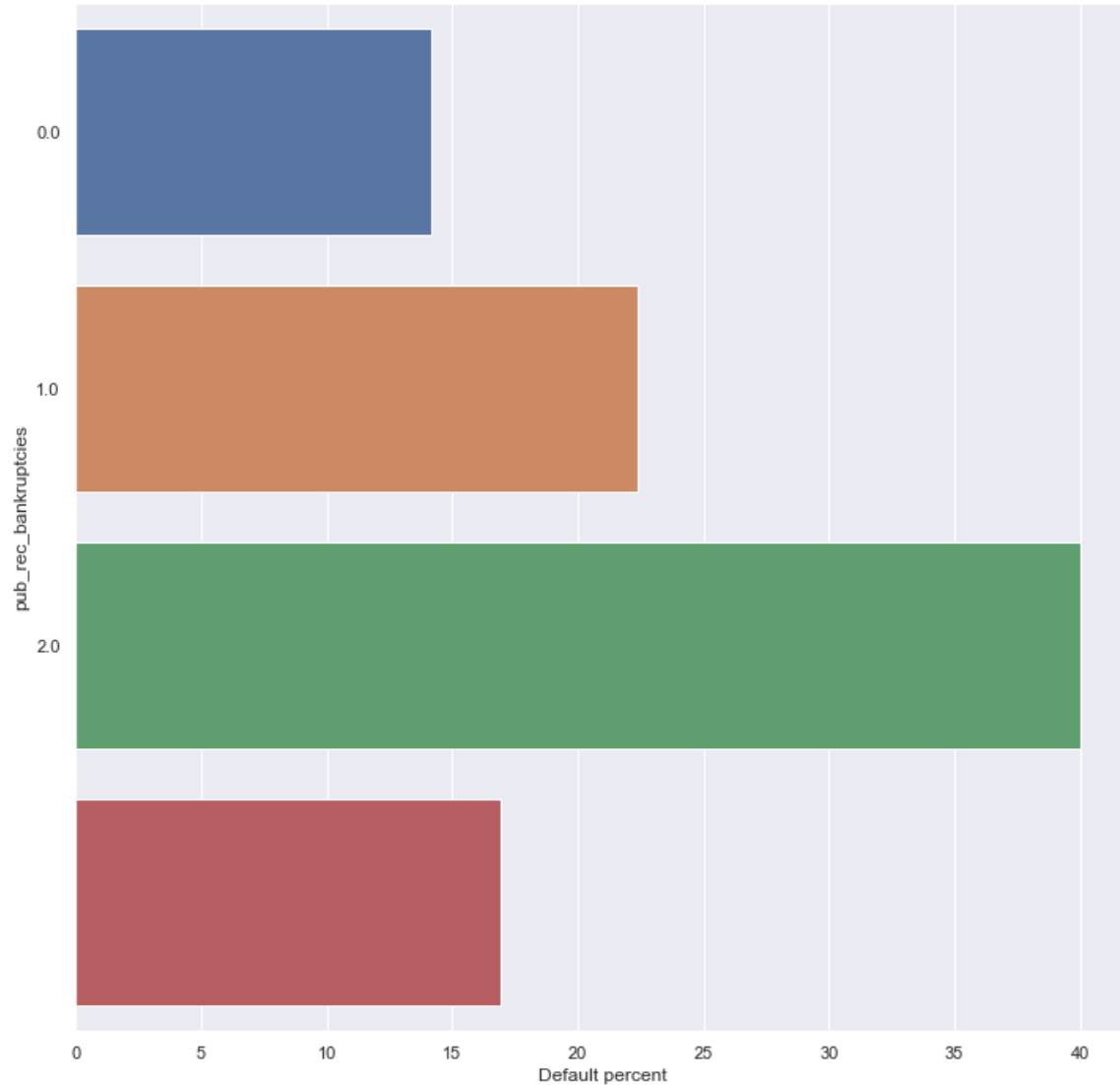
Default Rate by “State”



Insights

NE or Nebraska has very high default rate than other states

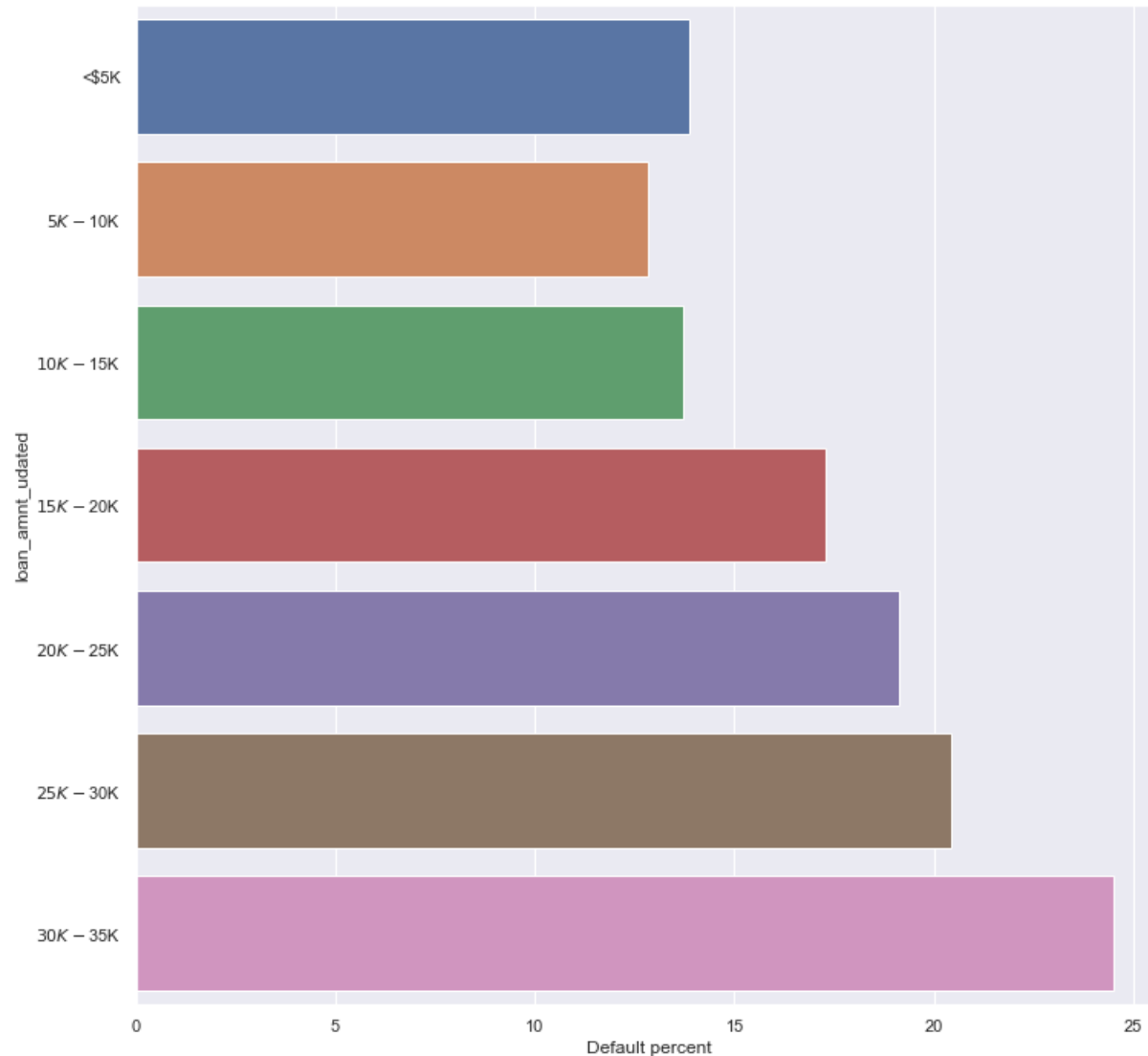
Default Rate by “# Bankruptcies”



Insights

Individuals having 2 bankruptcies have higher default rate than other

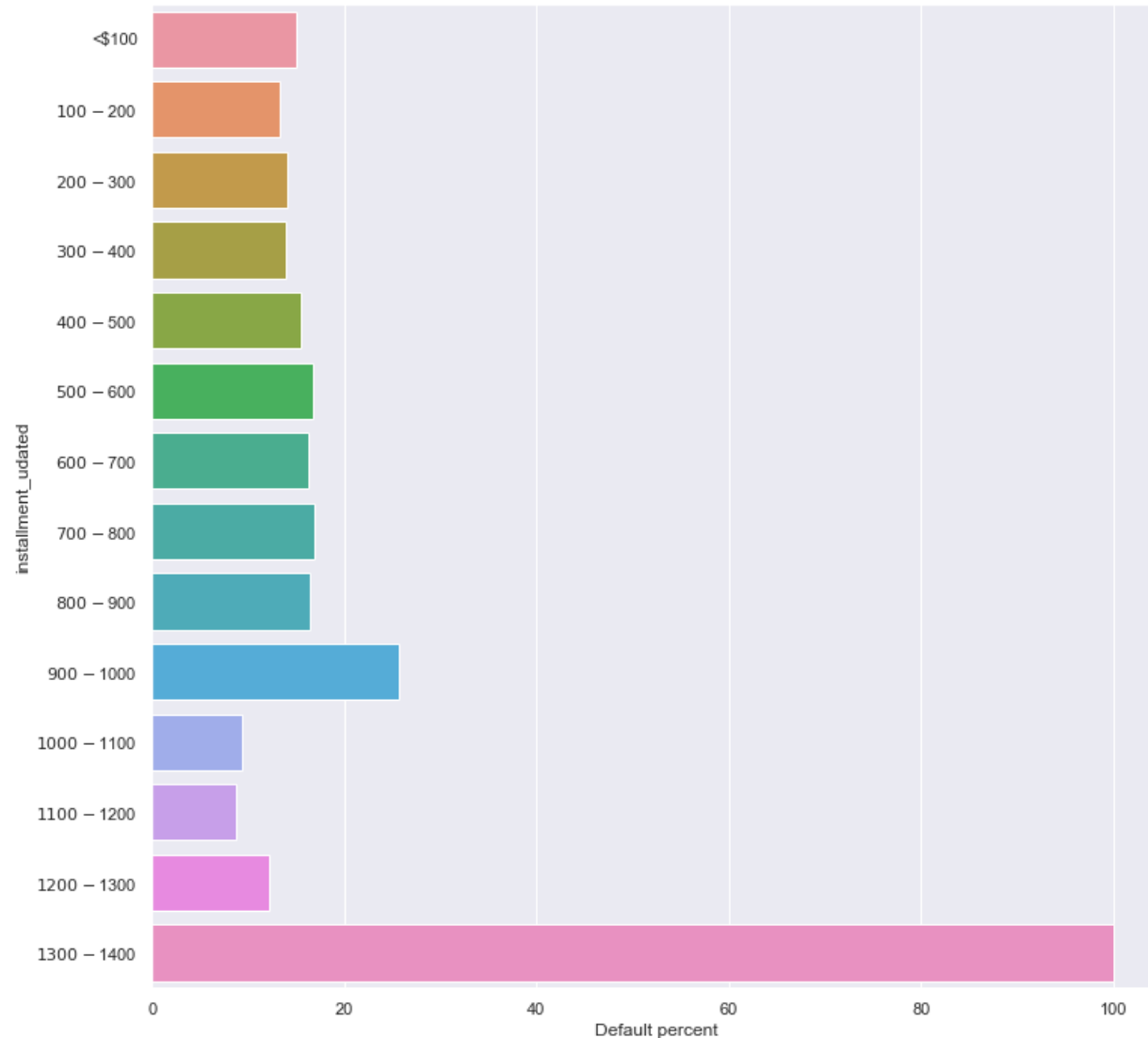
Default Rate by “Loan Amount”



Insights

Higher the loan amount more the default rate i.e default rate increases with increase in loan amount

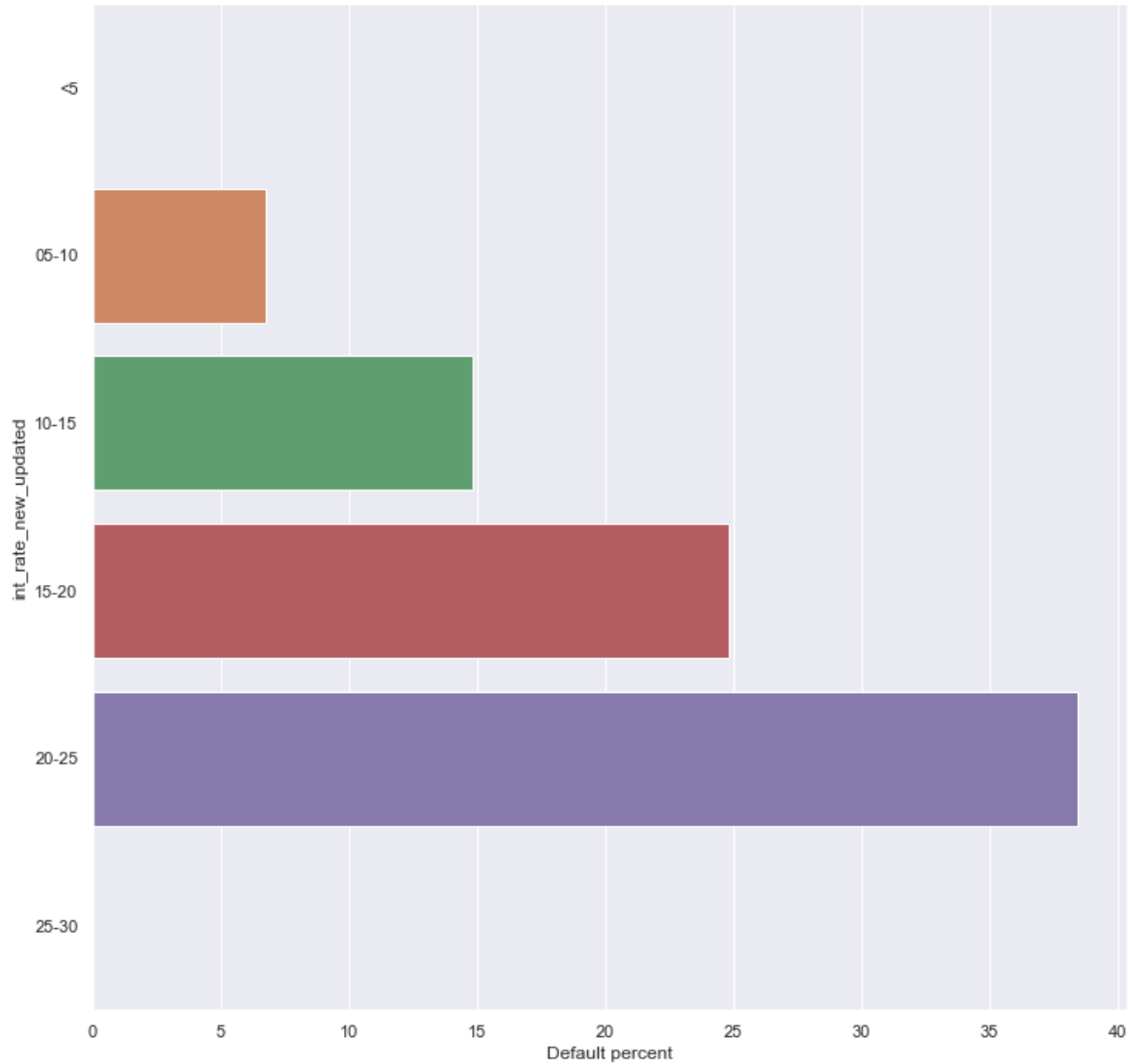
Default Rate by “Instalment Amount”



Insights

Loans having instalment amount between \$1300 to \$1400 ne have highest chances of getting default

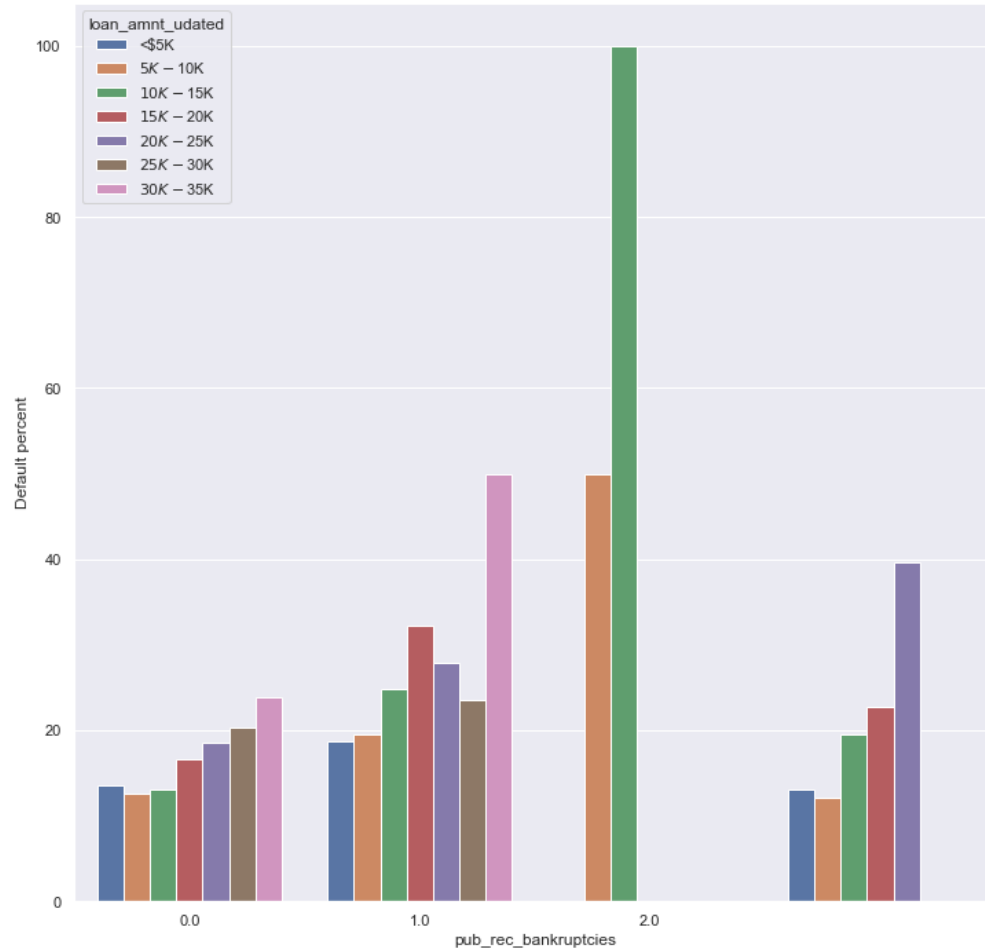
Default Rate by “Interest Rate”



Insights

Default percentage increases with increase in interest rate with 20 to 25 % interest rate leading to highest default rate

Default Rate based on “# Bankruptcies” and “Loan Amount”



Insights

Among people with 2 bankruptcies those having loan between \$10k- \$15K have higher chances of default