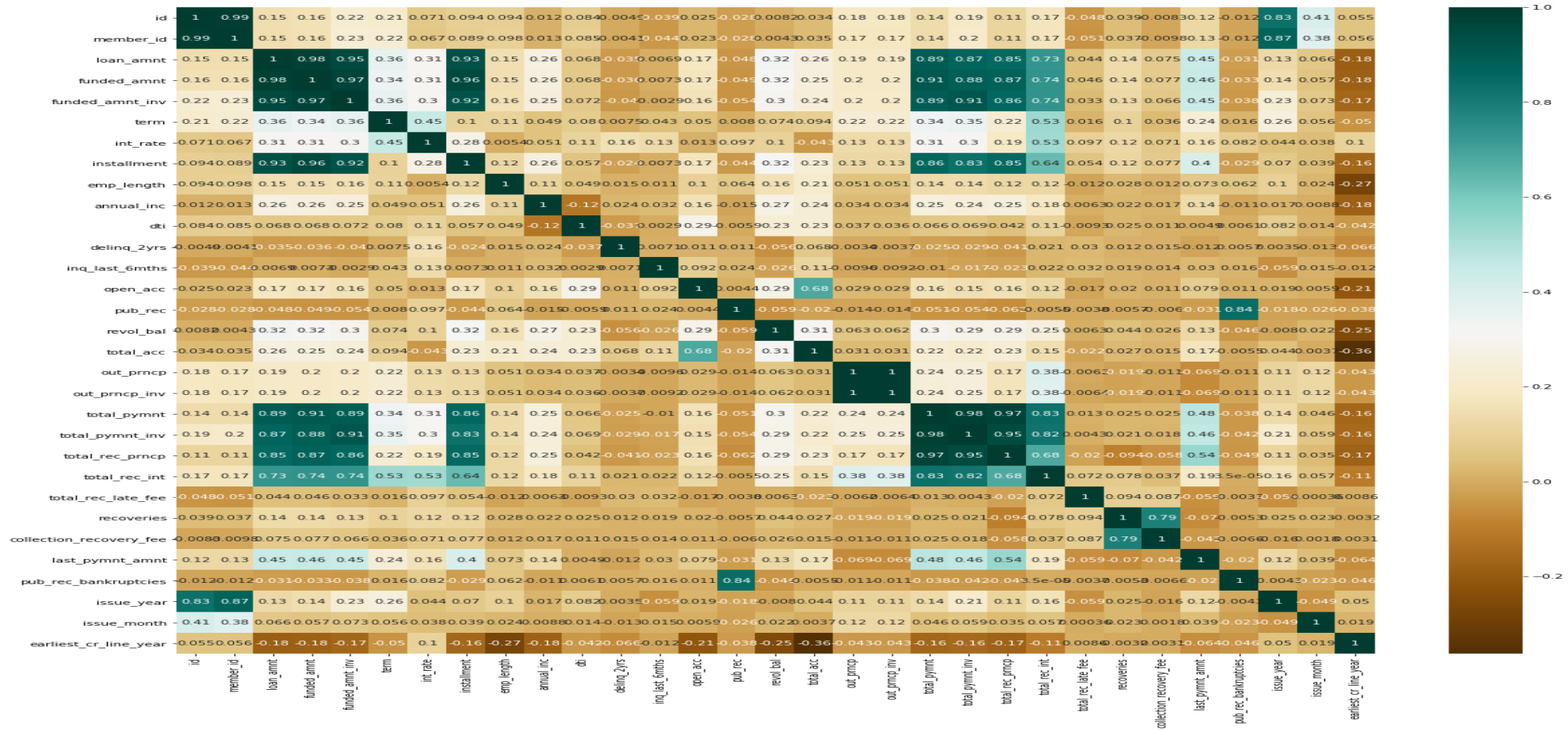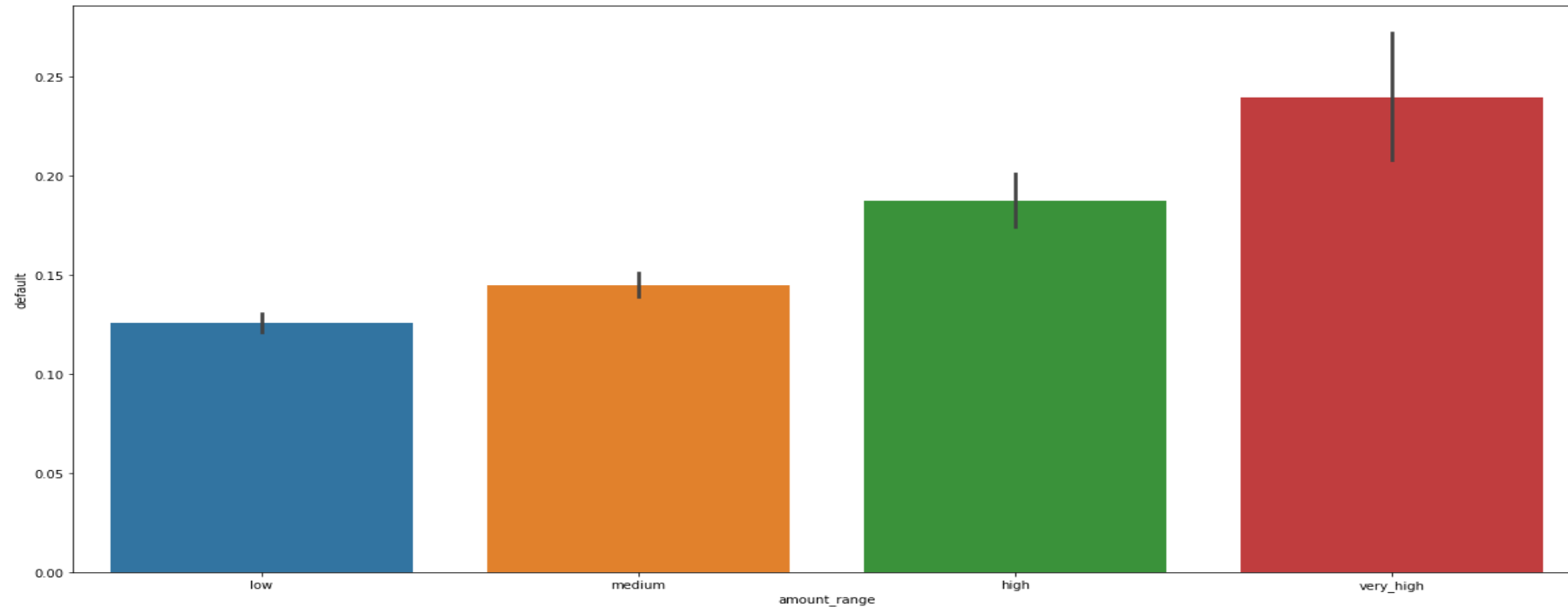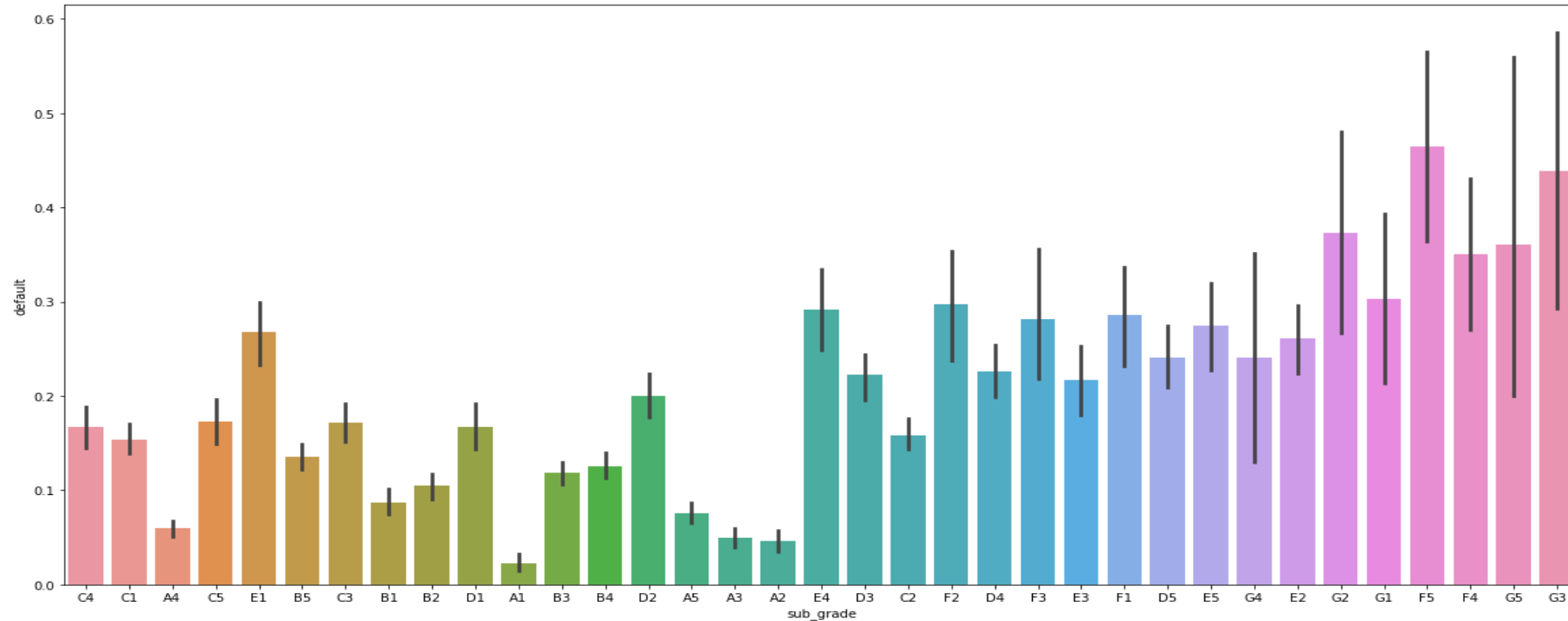# Exploratory Data Analysis

Using Python

Heat map

Loan Amount correlation with defaulters

Low: 0-10000
Medium: 10000-20000
High 20000- 30000
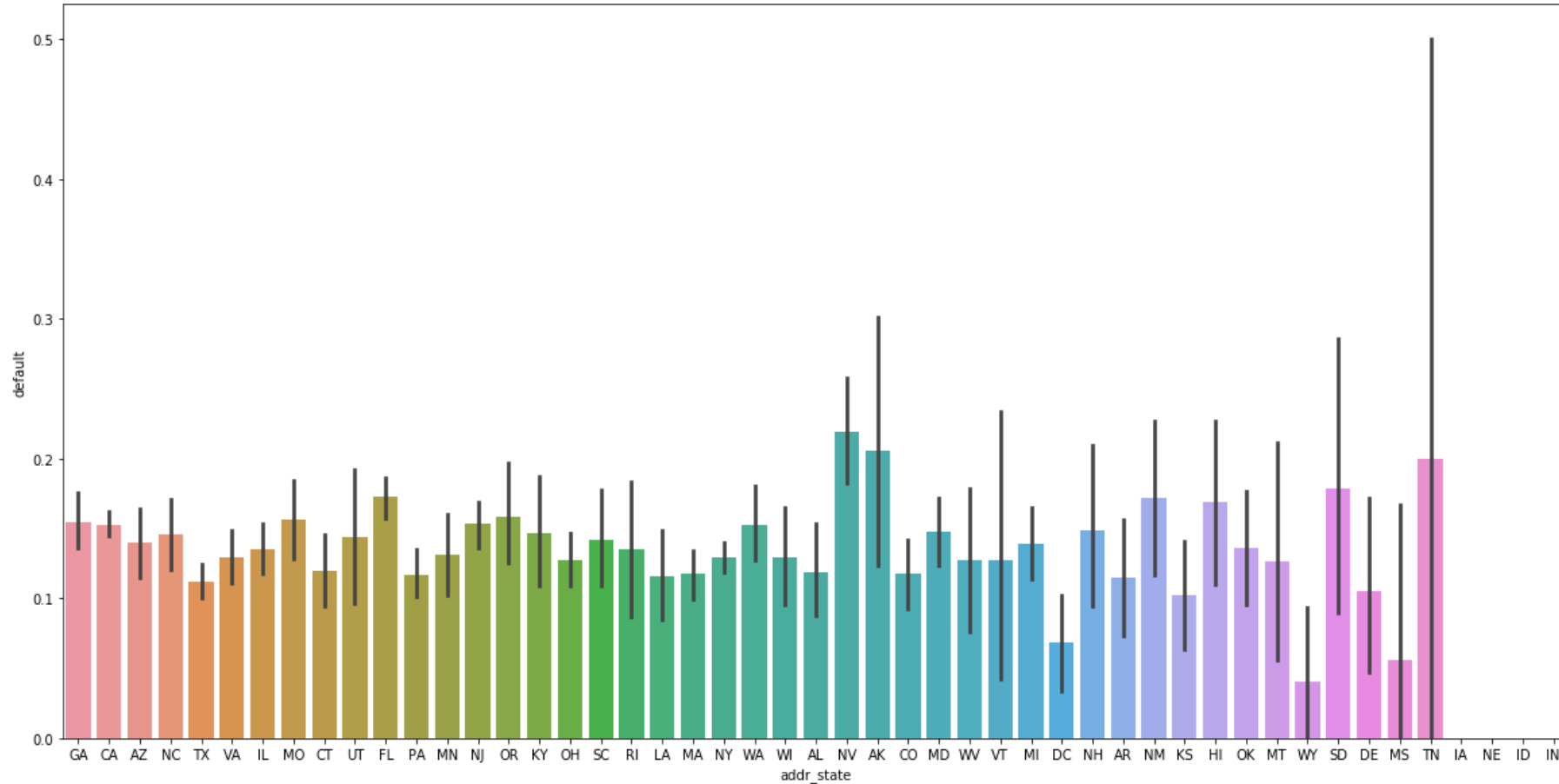Very high : 30000 onwards

As per the above plot loan with very high amount has more chances of default

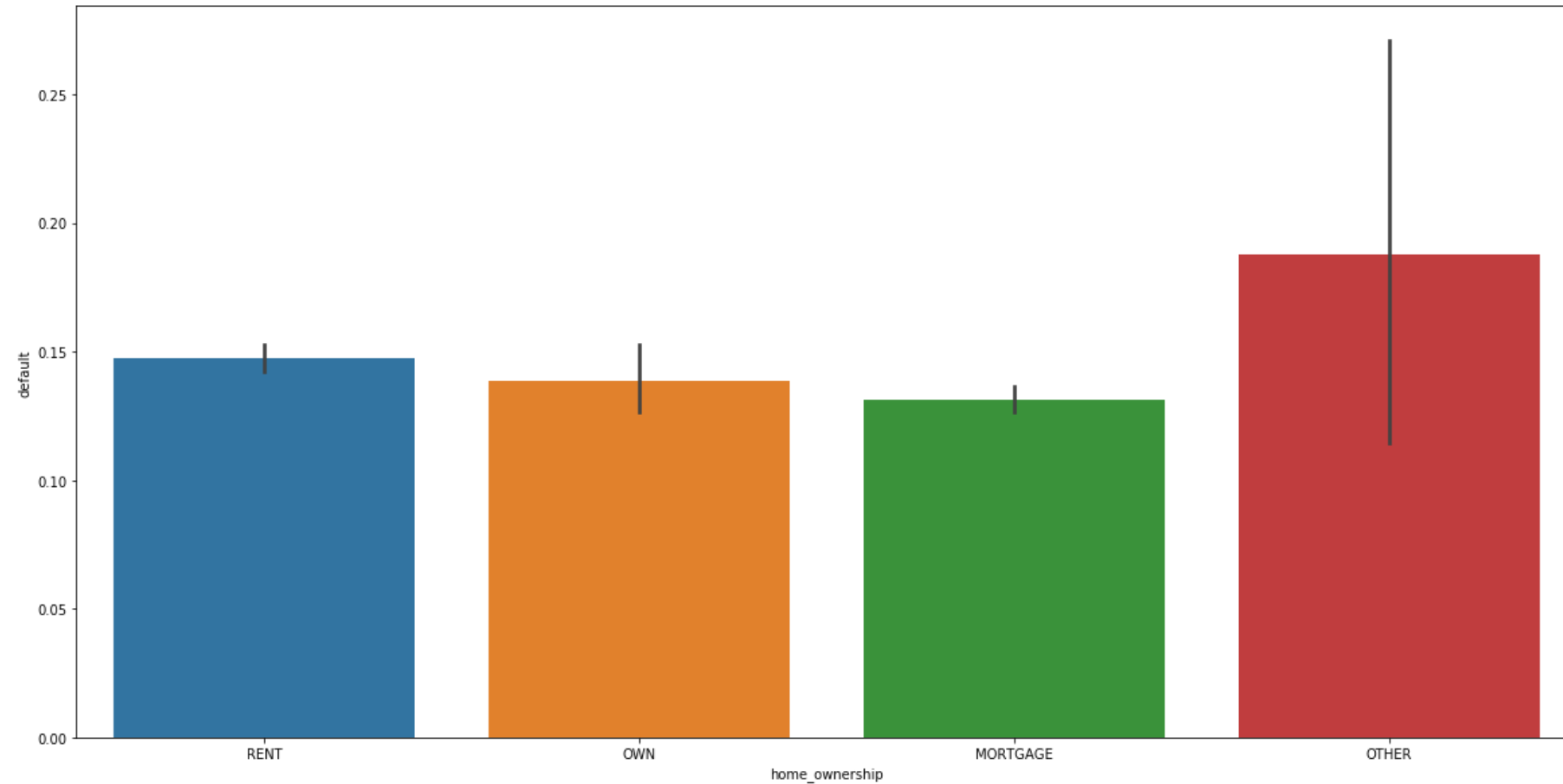# Sub grade correlation with defaulters

A1 has least chance of default and F5 with high chance of default.

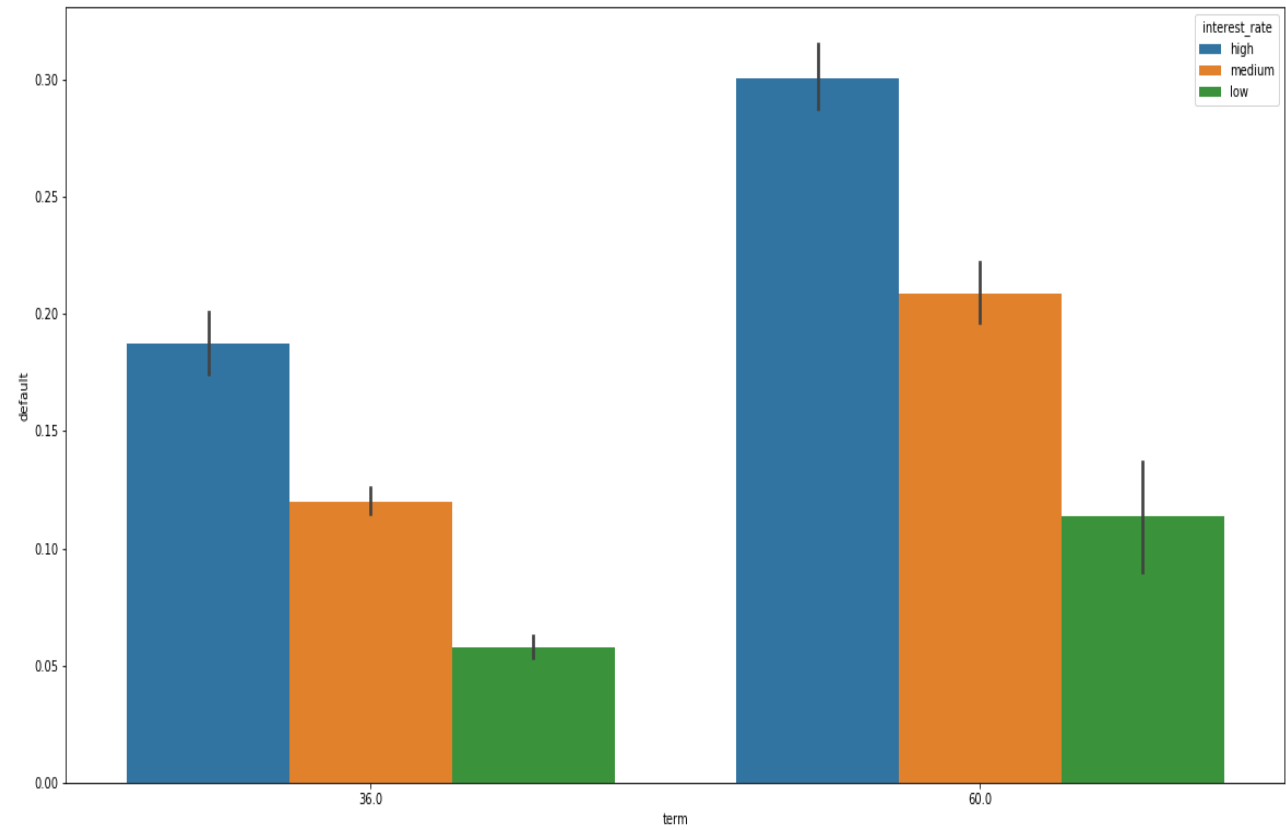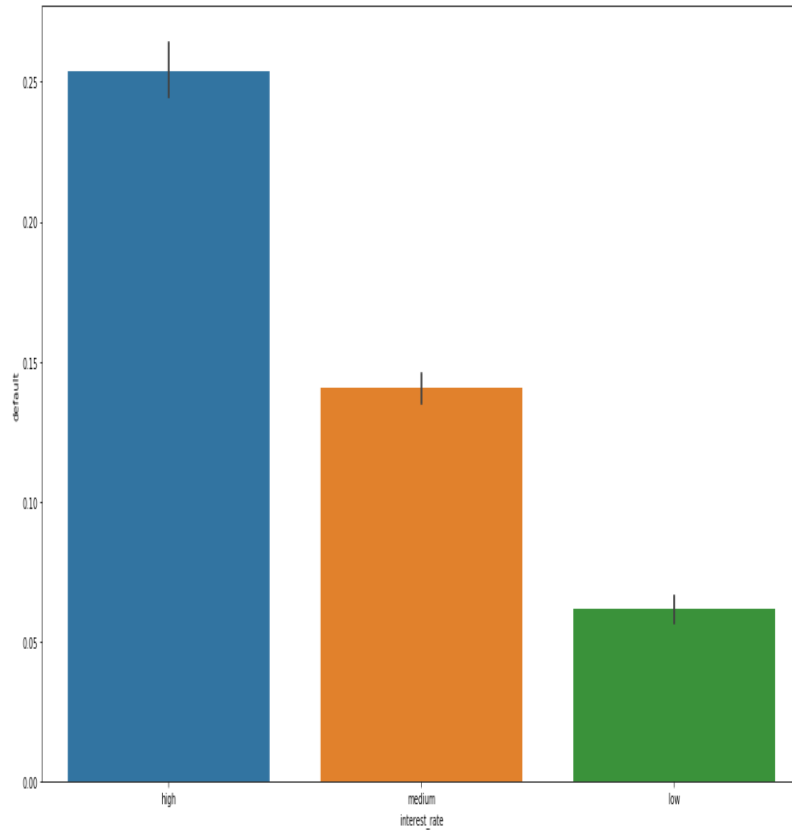# State correlation with defaulters

wy has least chance of default and ne with highest chance of default

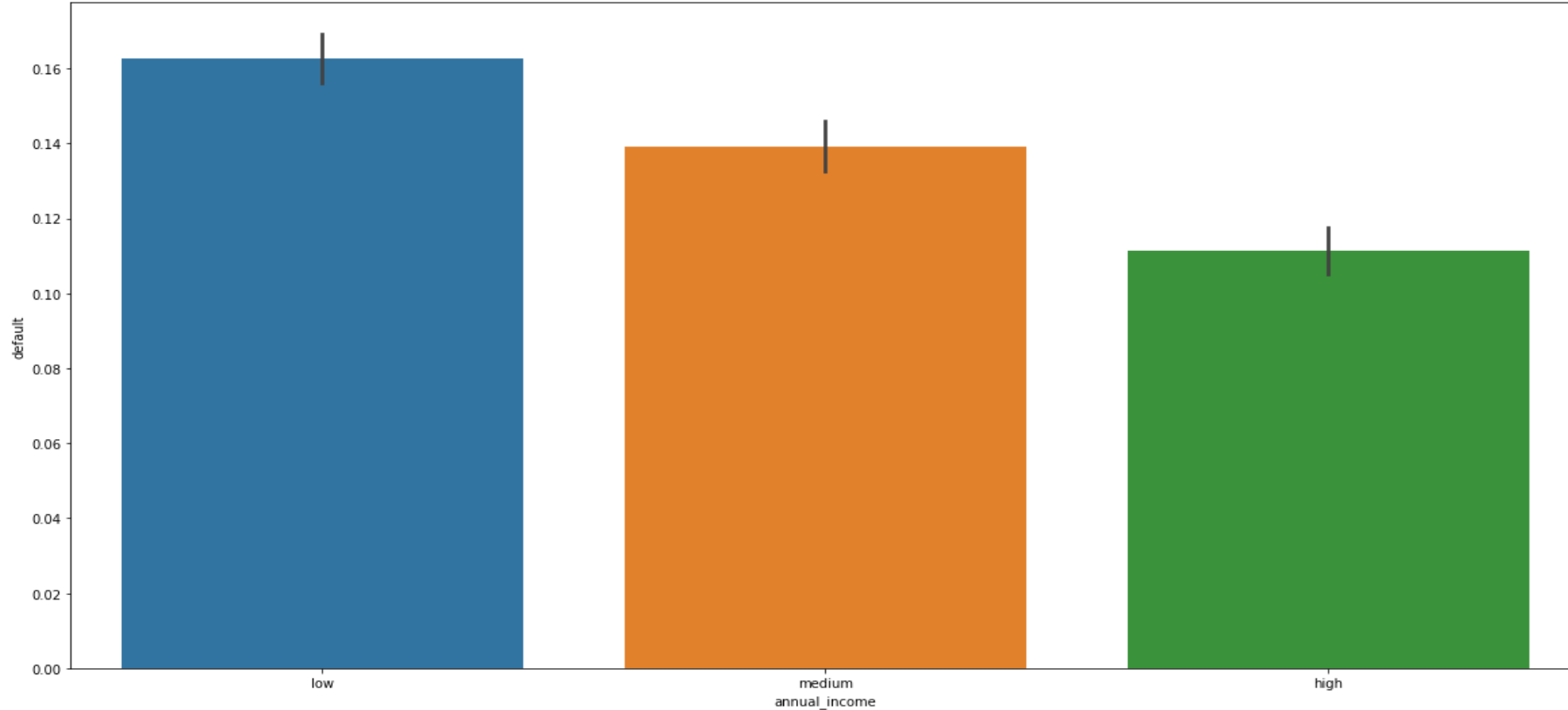# Home ownership correlation with defaulters

borrower who mention home ownership as other has chance of default

Interest rate correlation with defaulters

As per the plot we see, high interest rate has more chances of default and low interest rate has less chances of default
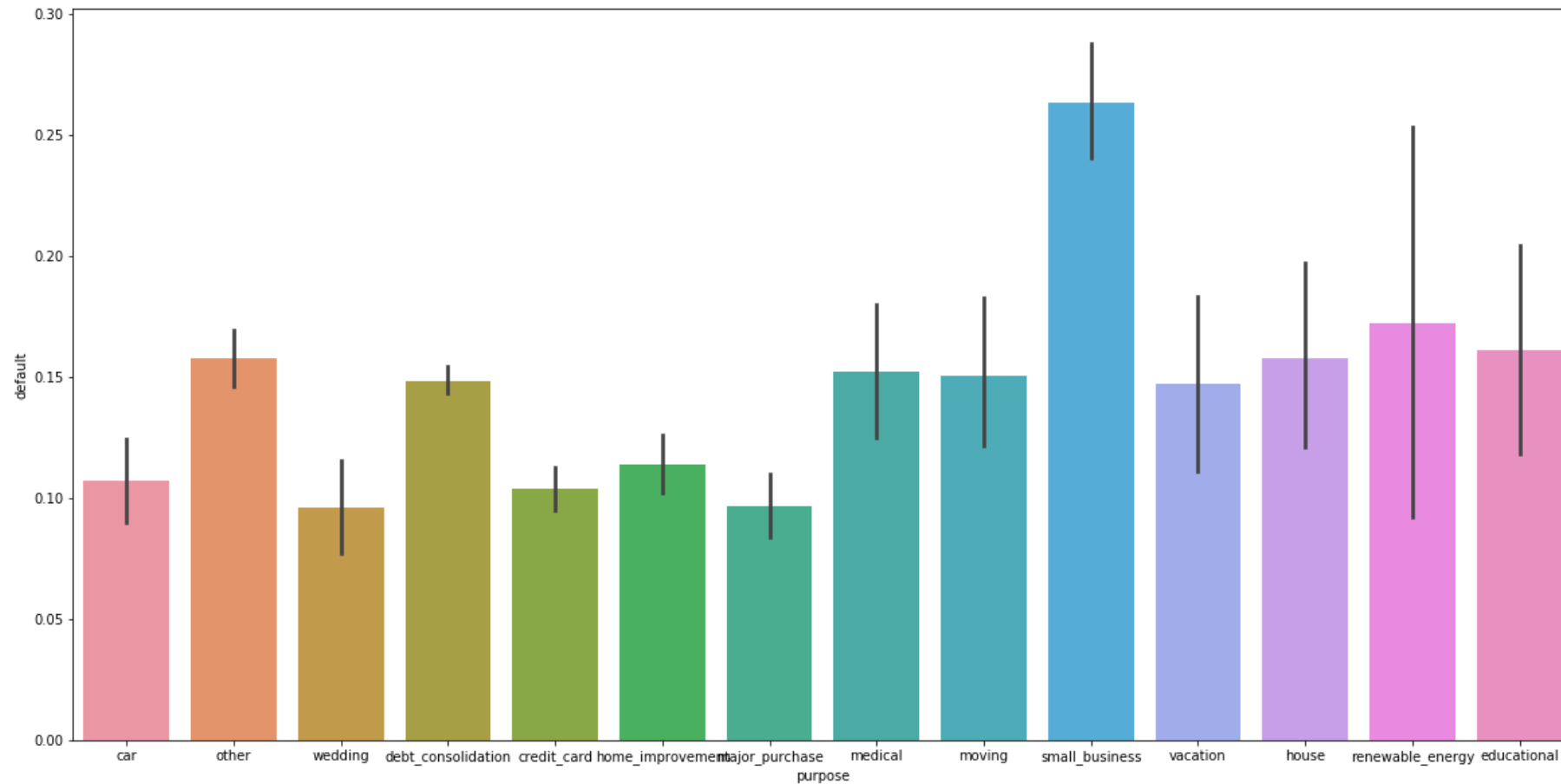
Annual income correlation with defaulters

As per the plot we see, income with low has more chances of default and high income has less chances of default
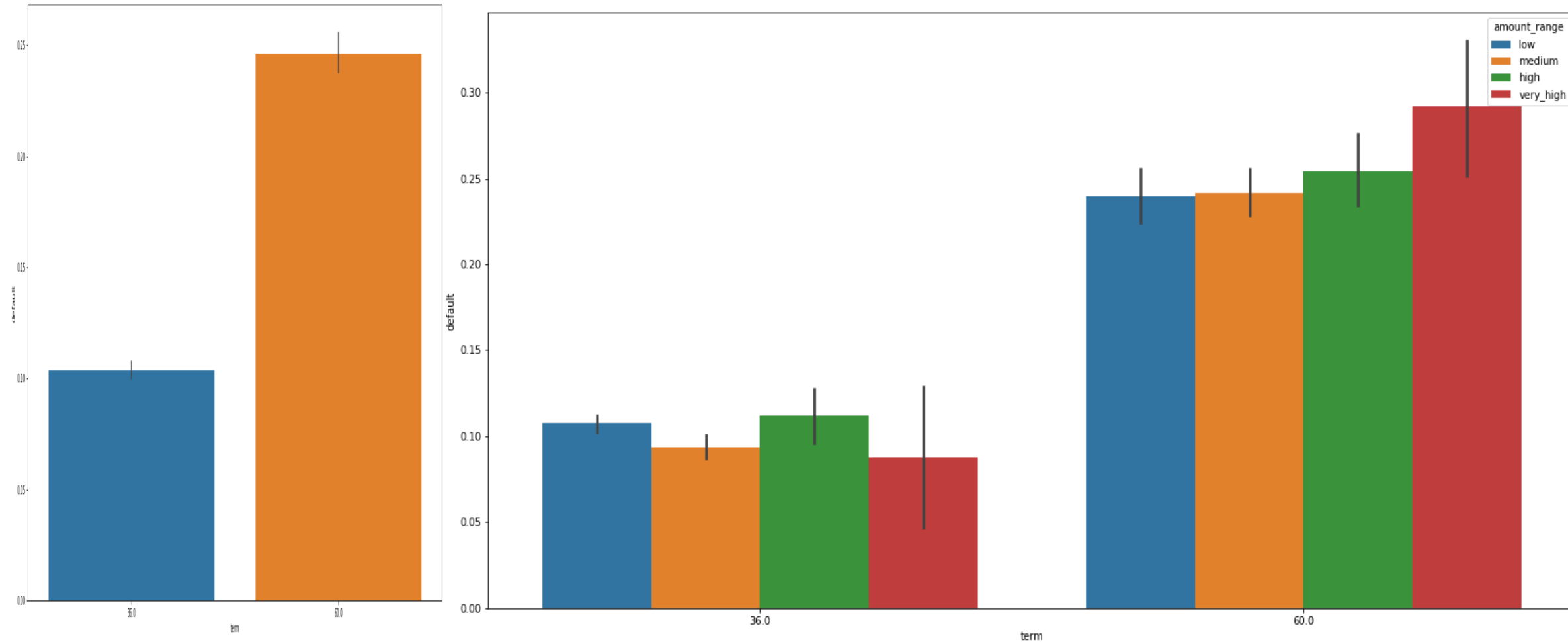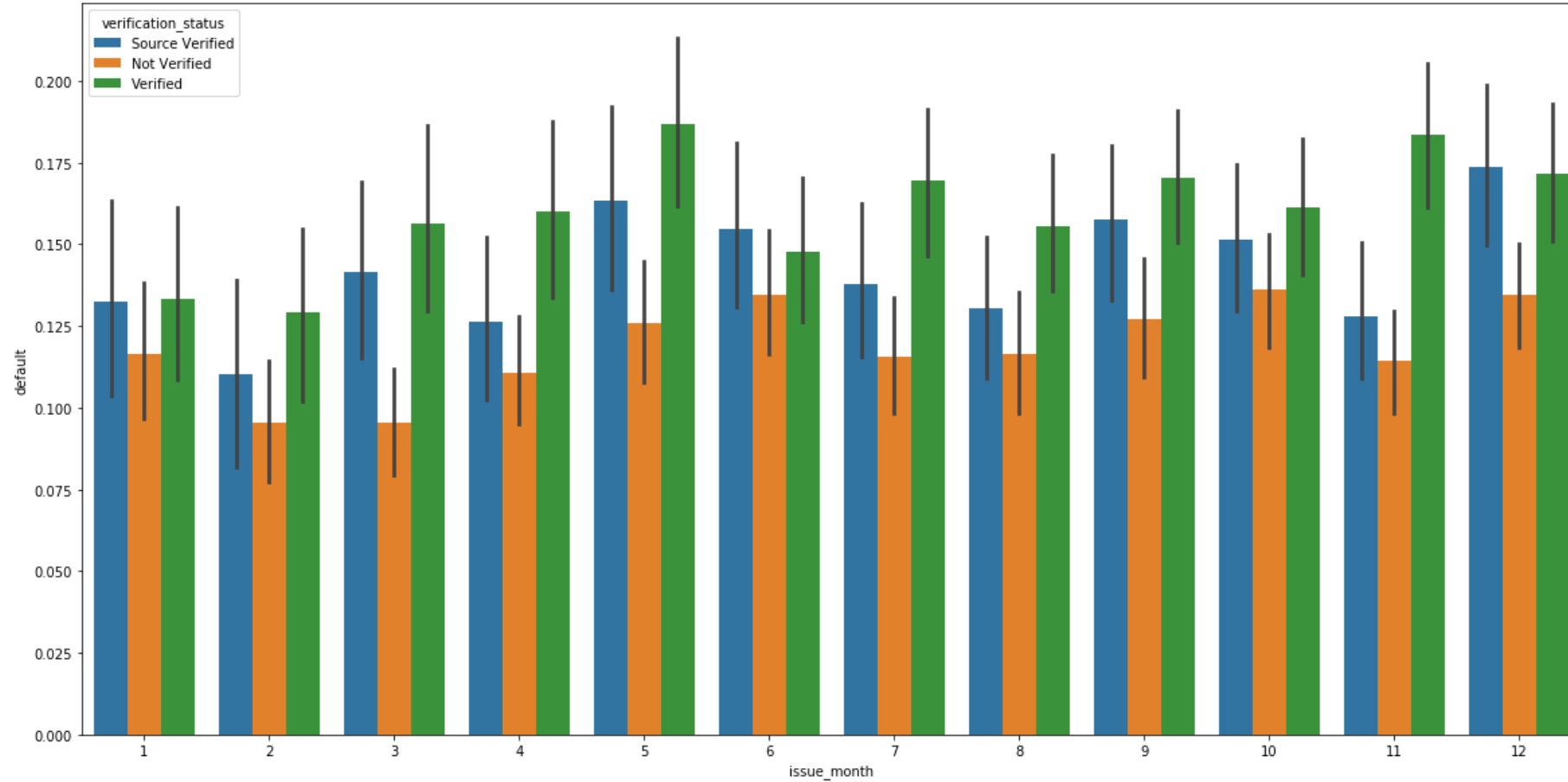
Purpose correlation with defaulters

small business purpose has chance of default
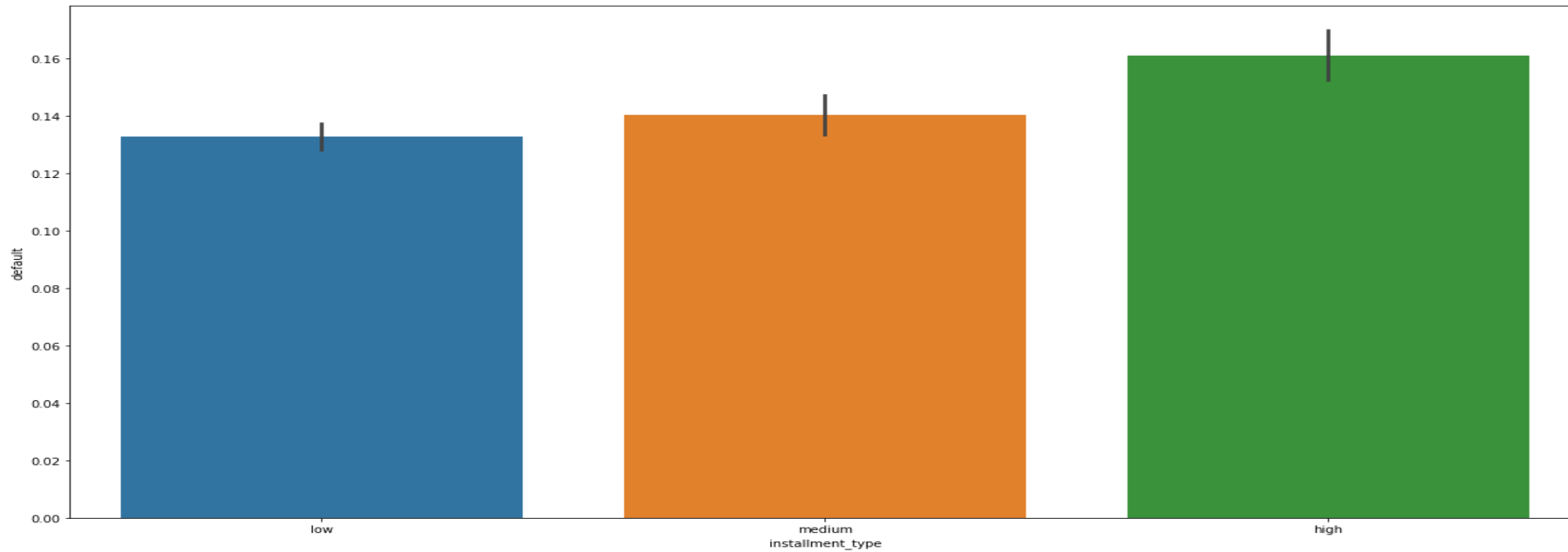
Term correlation with defaulters

As per the plot we see, for sort term high range has more chances of default but for long term Very high range has more chances of default.

Issued month and verification status correlation with defaulters

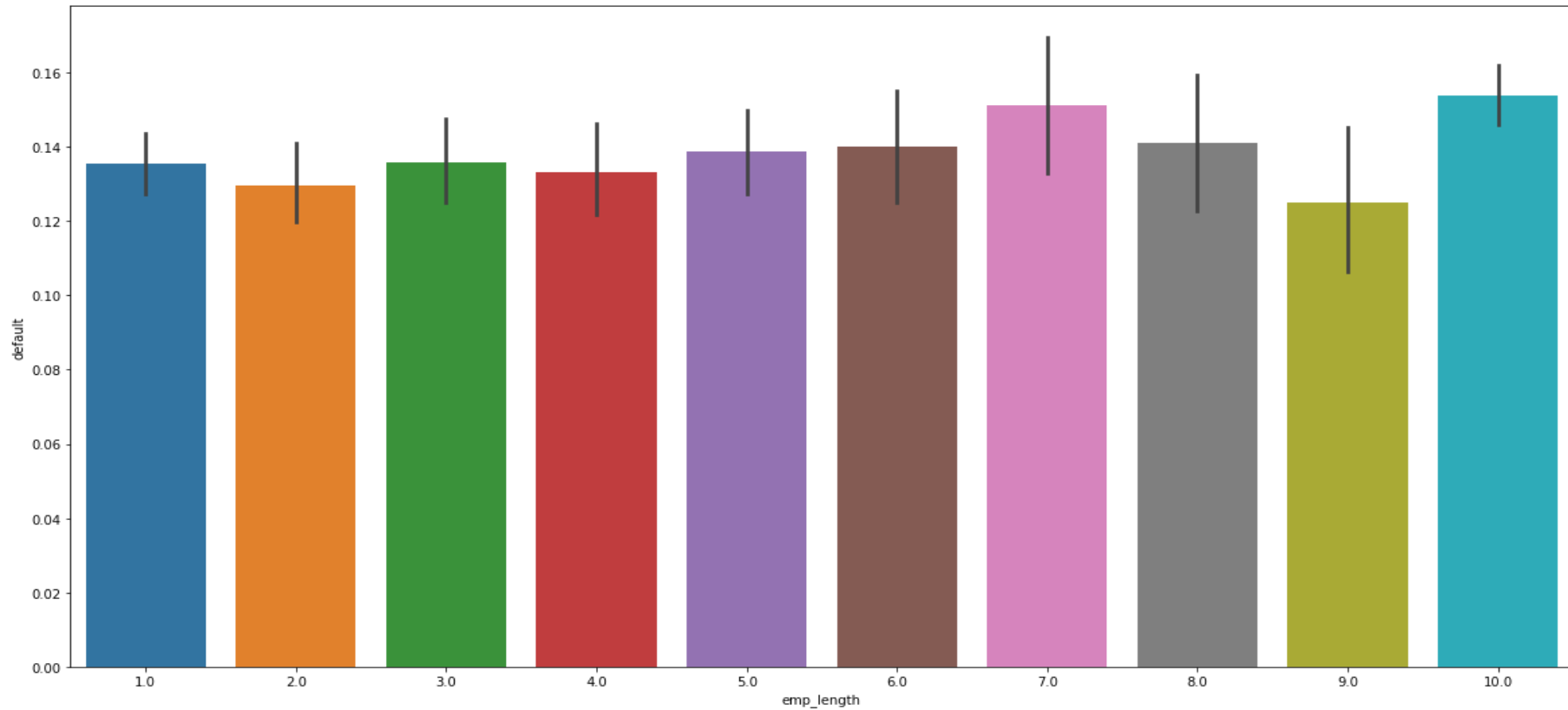As per the plot we see, loan verified on may has more chances of default.

Installment correlation with defaulters

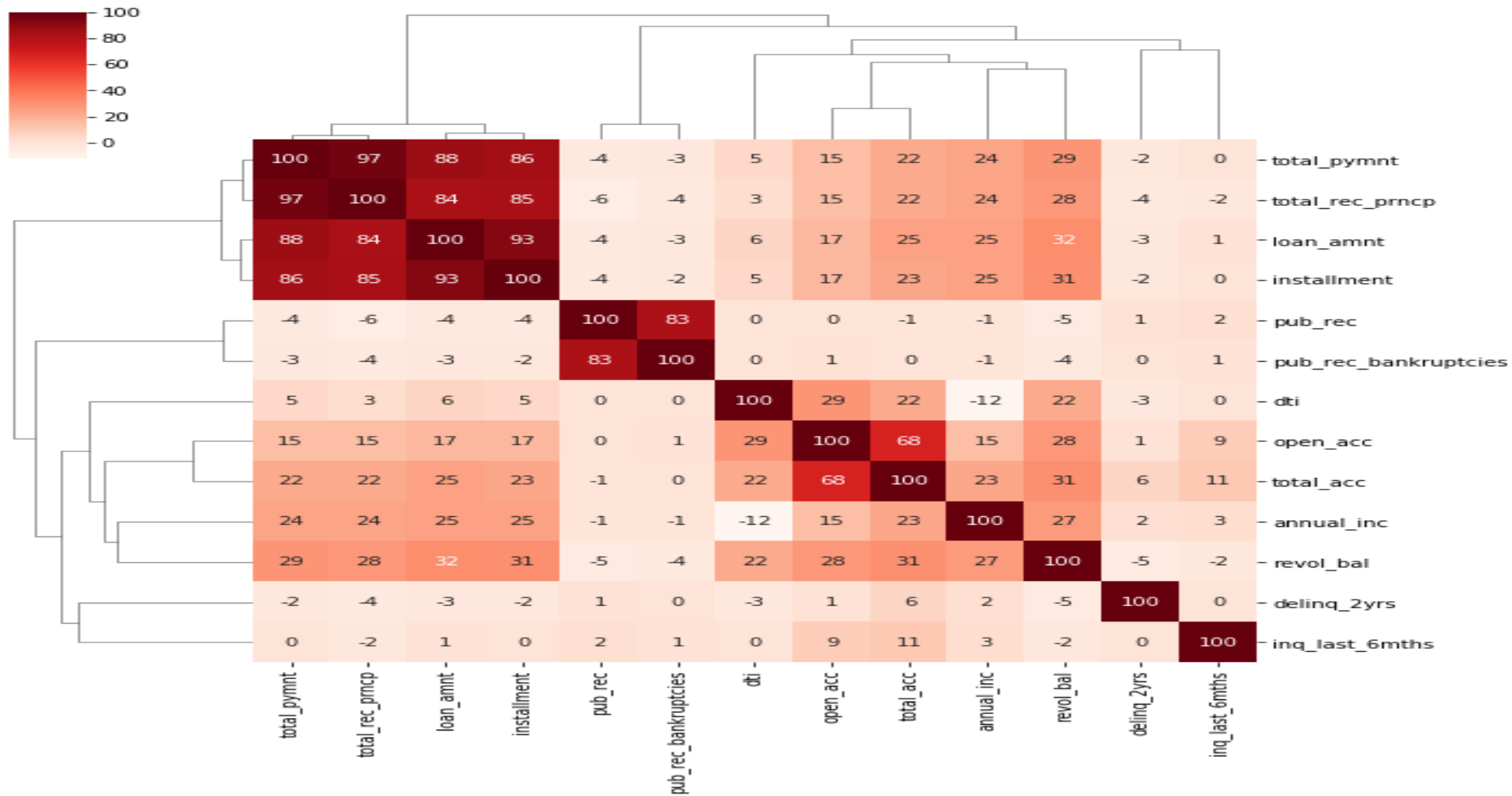Low: 0-300
Medium: 300-500
High: 500 onwards

As per the plot we see, installment having more than 500 has more chances of default.

Borrower work experience correlation with defaulters

As per the plot we see, employee who are 10 or 10+ experience has more chances of default

Conclusion

As per the above correlation we see that customer who has derogatory public records or public record bankrupties has a very less chance of repaying the loan amount. Leading them to be a defaulter, So avoiding giving loan to these applicants would decrease the risk of defaulters.