

LOAN CASE STUDY

Femi Shajan

PROBLEM STATEMENT

Able to identify risky loan applicants, so the aim is to identify patterns which indicate if a person is likely to default.

ANALYSIS APPROACH

Loan status has 3 outputs:

- Fully Paid
- Current
- Charged off

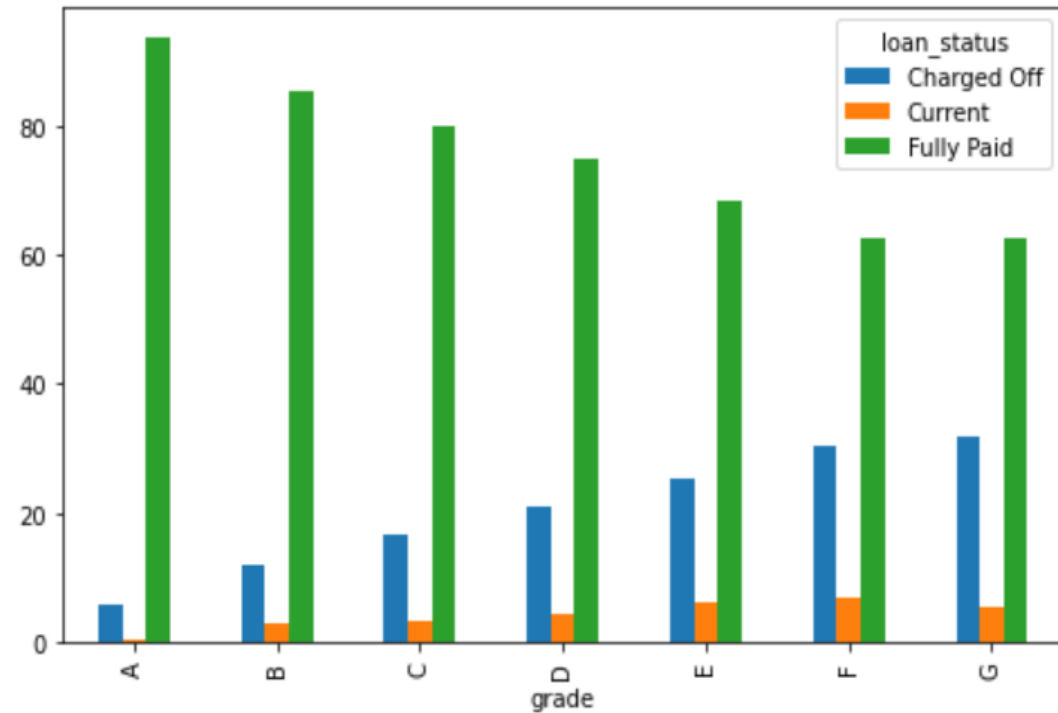
Running Analysis on the above 3 outputs on different variables we have in data to analyse the risk factors.

TOP PARAMETERS FOR LOAN DEFAULTER

1. Grade
2. Purpose
3. Income
4. State/Address
5. DTI
6. Loan Amount
7. Income

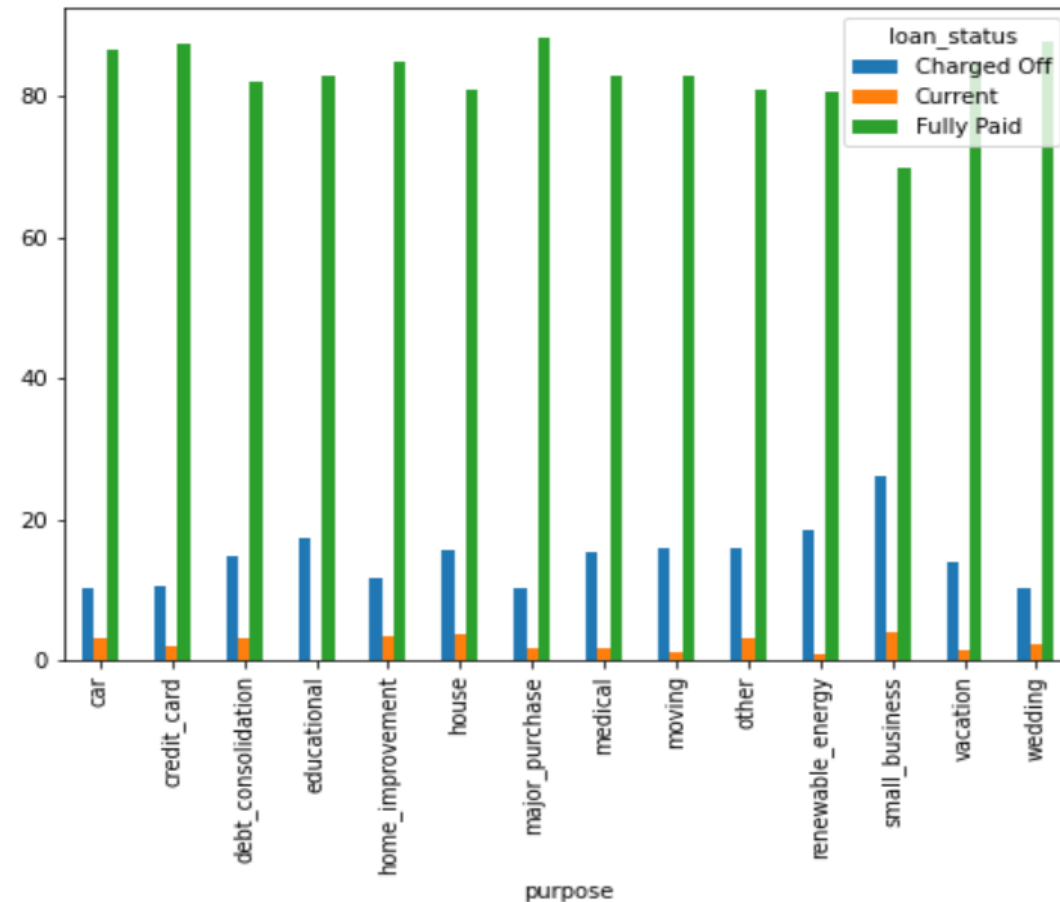
ANALYSIS ON LOAN STATUS VS GRADE

The plot says that grade is an important factor . As the grade is going down so does the defaulters increase.



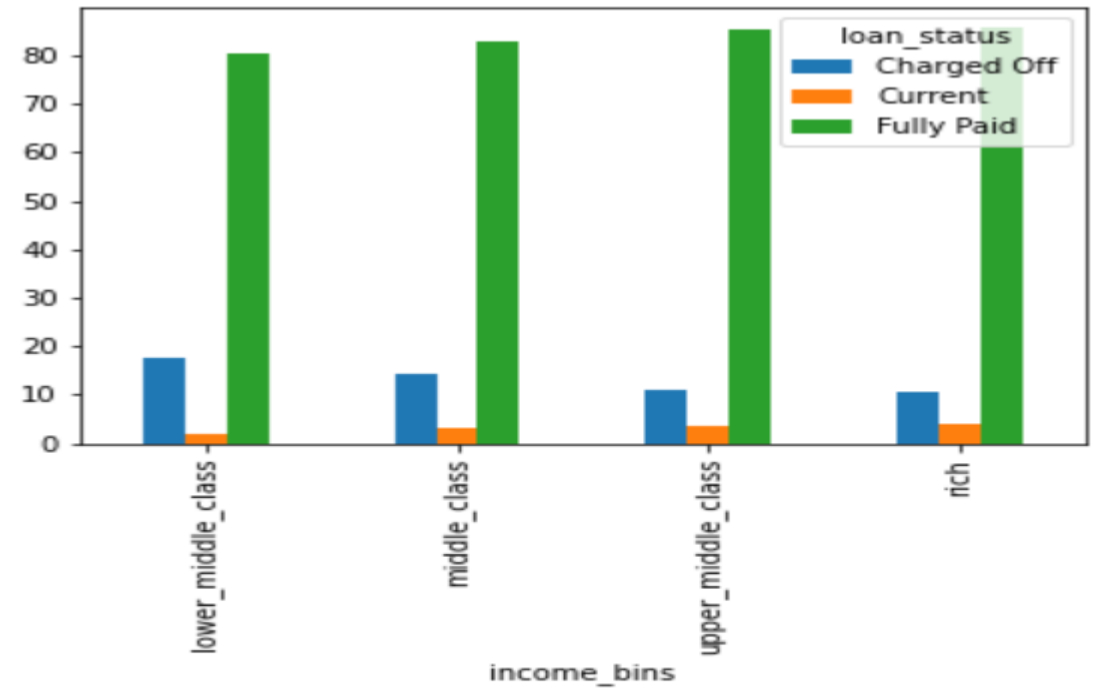
ANALYSIS ON LOAN STATUS VS PURPOSE

Its obvious from the plot above that small business go into loss and they automatically become part of defaulters



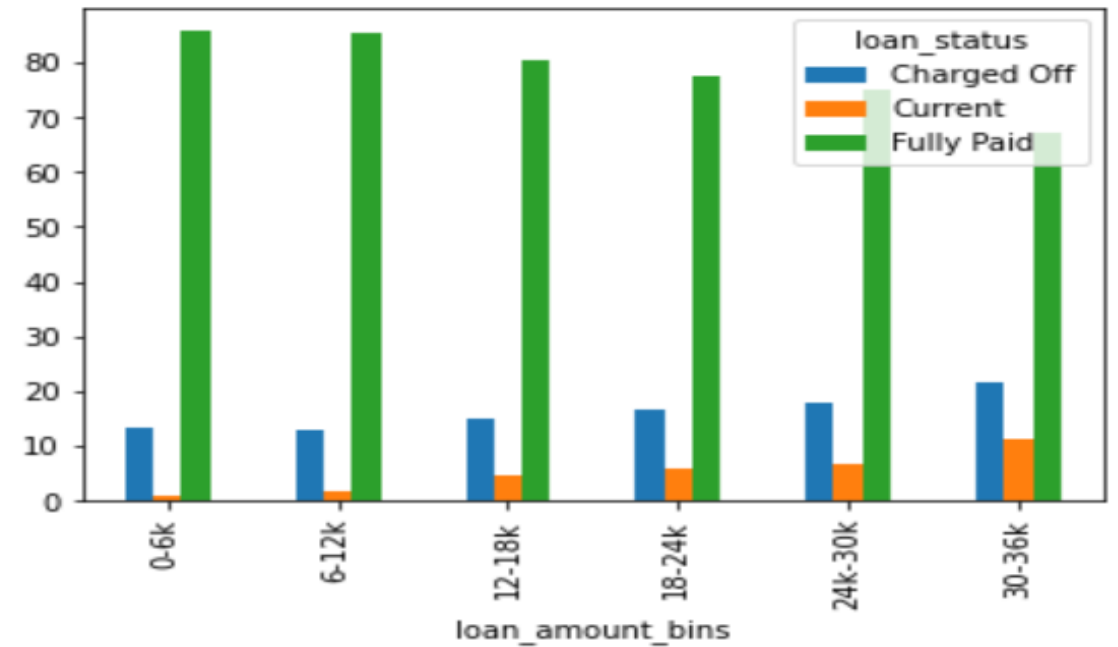
ANALYSIS ON LOAN STATUS VS INCOME

It is clear from the plot that lower income people are not able to pay the loan and hence defaulters.



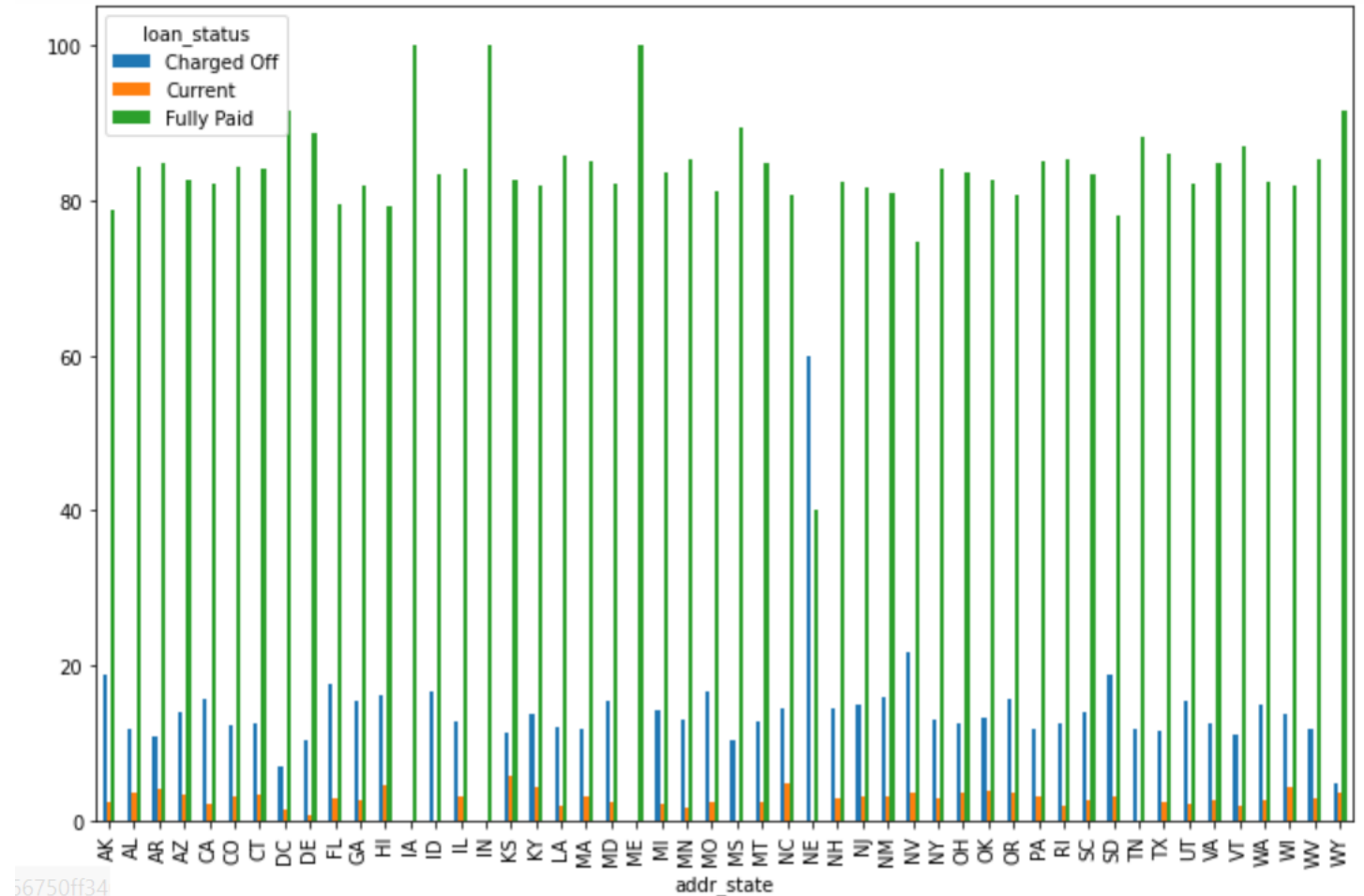
ANALYSIS ON LOAN STATUS VS LOAN AMOUNT

Above plot does explain that how defaulters increase with higher loan amount



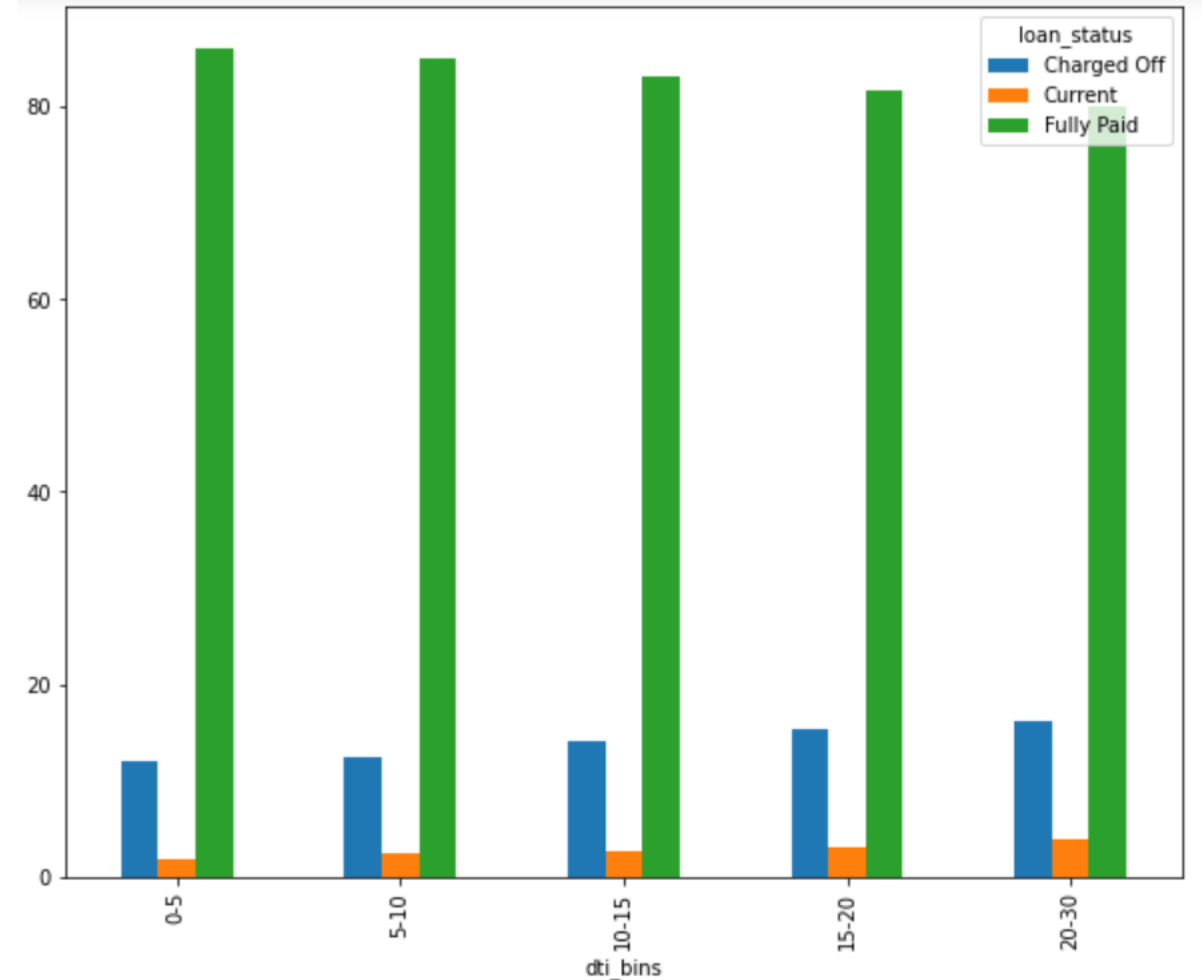
ANALYSIS ON LOAN STATUS VS STATE/ADDRESS

From the plot we can see that the state "NE" has maximum number of defaulters.



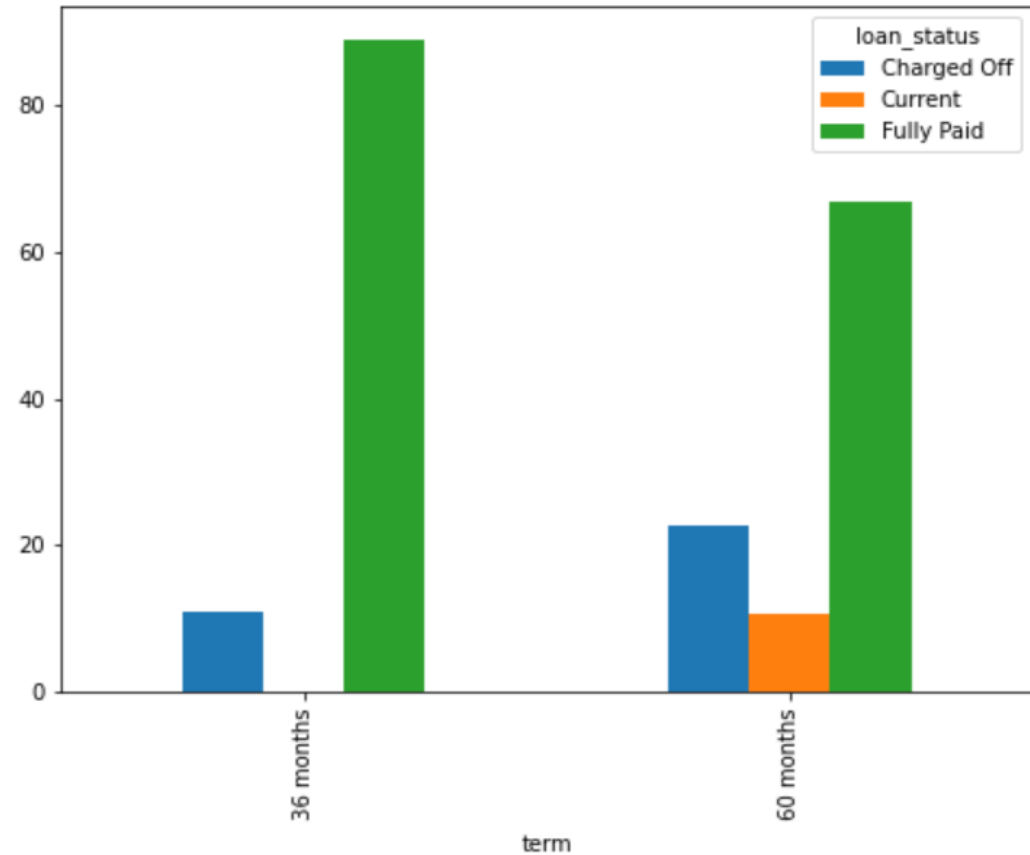
ANALYSIS ON LOAN STATUS VS DTI

It is clear that the DTI has an relation with number of defaulters. As we can see that as the DTI increases from 0-5 to 20-30, the charged off cases increases.



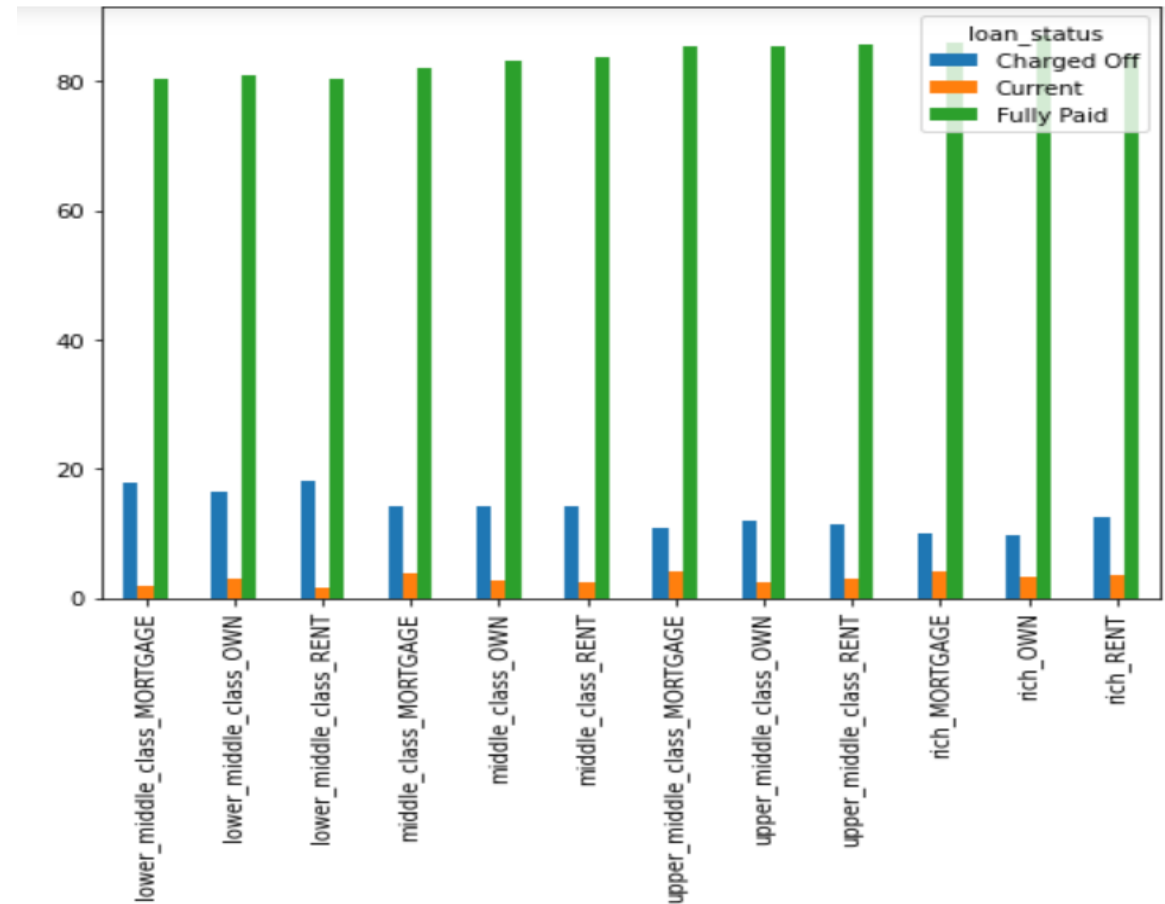
ANALYSIS ON LOAN STATUS VS TERM

The plot explains that if loan period is higher people tend to pay the money back often



ANALYSIS ON INCOME AND HOME OWNERSHIP

The plot clearly states that lower income tend not to pay off the loan and hence become the defaulters



OBSERVATIONS AND RECOMMENDATIONS

Observation	Solution
The higher loan amount has more number of defaulters.	The loan amount should be considered only after having a verified analysis on the income.
The higher loan period has more number of defaulters	The loan period should be extended much so that people can pay it off as soon as possible and only these people should be considered for loan.
The loan grade is directly proportional to the number of defaulters.	Can be reference from current data to make future decision.
Small business purpose tend not to pay loan because of loss	Business purpose loans need special attention before approval as the risk factor of loss is higher.
The State “NE” has more number of defaulters.	The applicants from the state “NE” should be verified double.
The people having low income tend not to pay loan amount	People income matters the most when loan is given out because we should see if they can even pay it back. Therefore verification on annual income is