

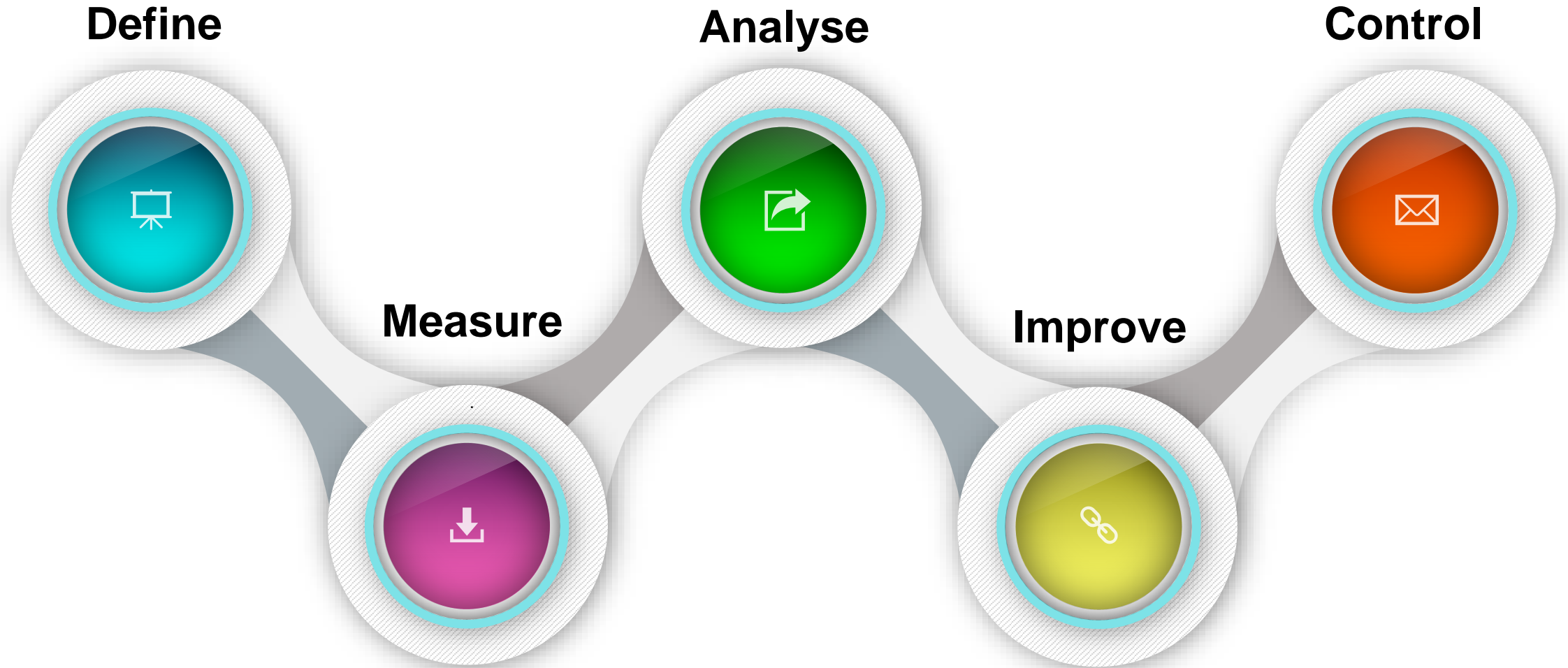


Credit: Case Study

Name: Amit

Name: Vikas Goyal

5 STEP APPROACH : DMAIC



DEFINE

To assess the credit worthiness of the client based on the historical data to minimize the financial loss and maximize the business objective

To Reduce Type I Error

To Minimize the Risk of
Rejecting an Eligible
Case [Minimize the
Business Loss]

To Reduce Type II Error

To Minimize the Risk of
Not Rejecting Not
Eligible Case [Minimize
the Financial Loss]

MEASURE

1



Identify & Act: Outliers

2



Validate: Data Types of All Attributes

3



Conclude: Dropping Columns

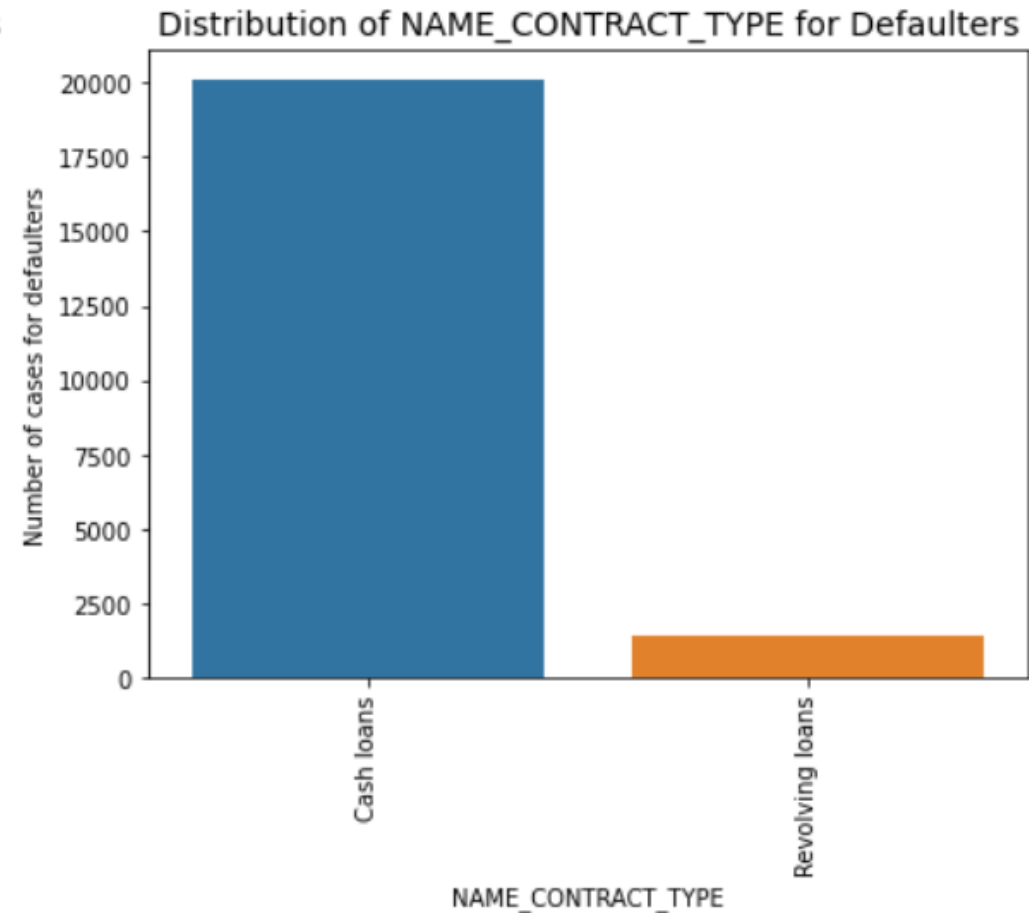
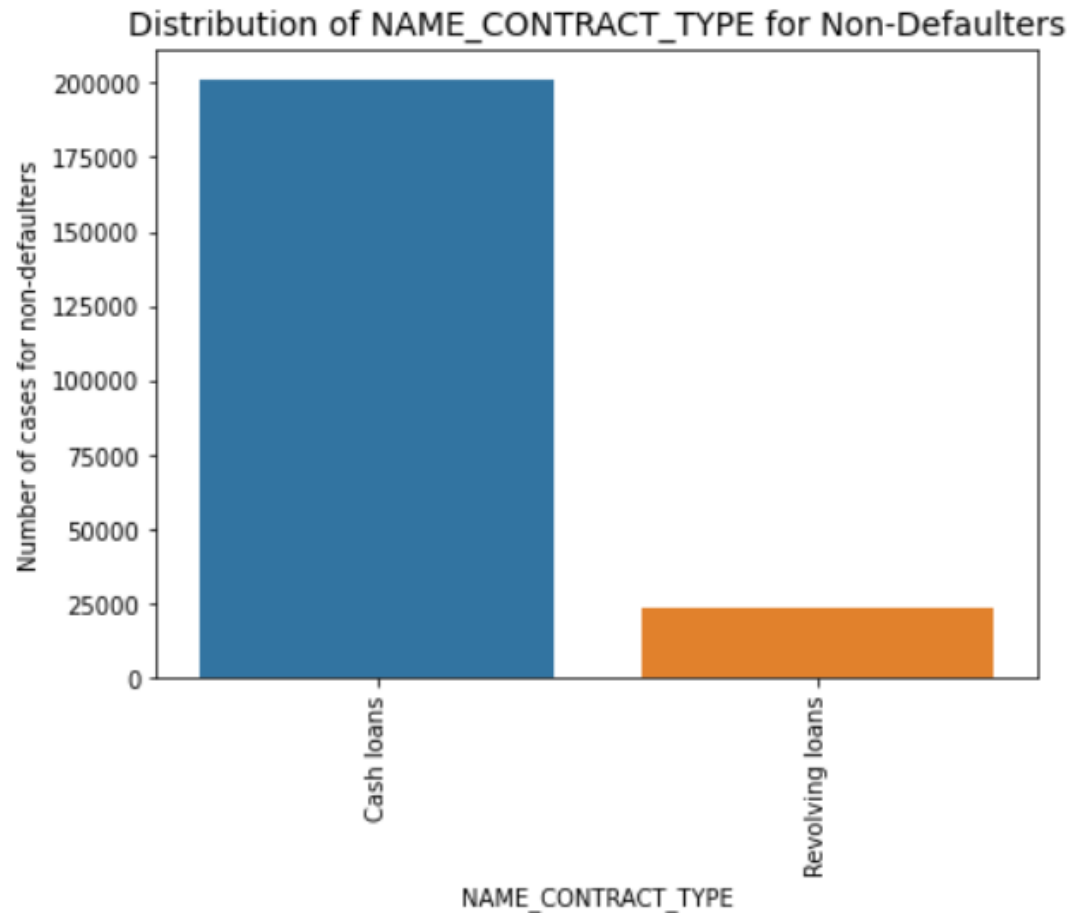
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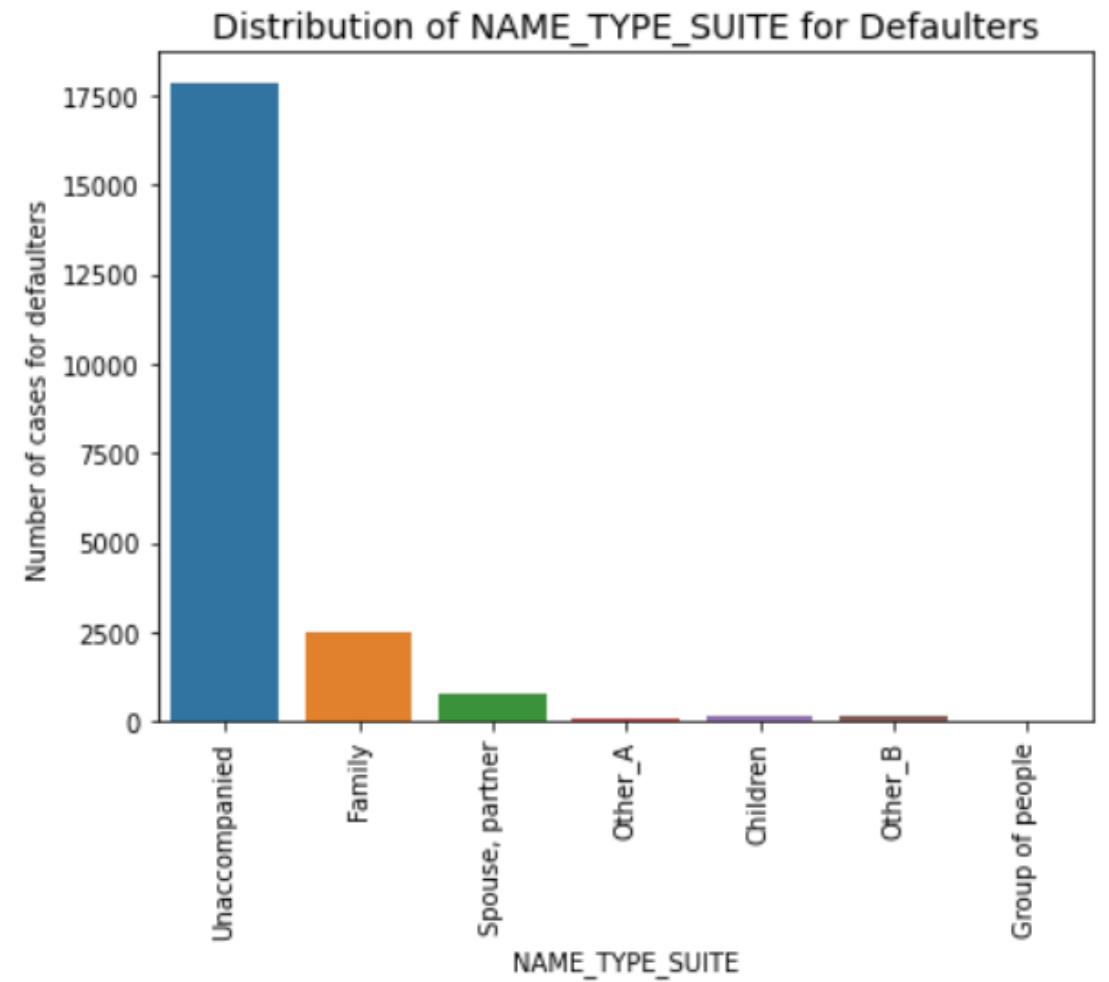
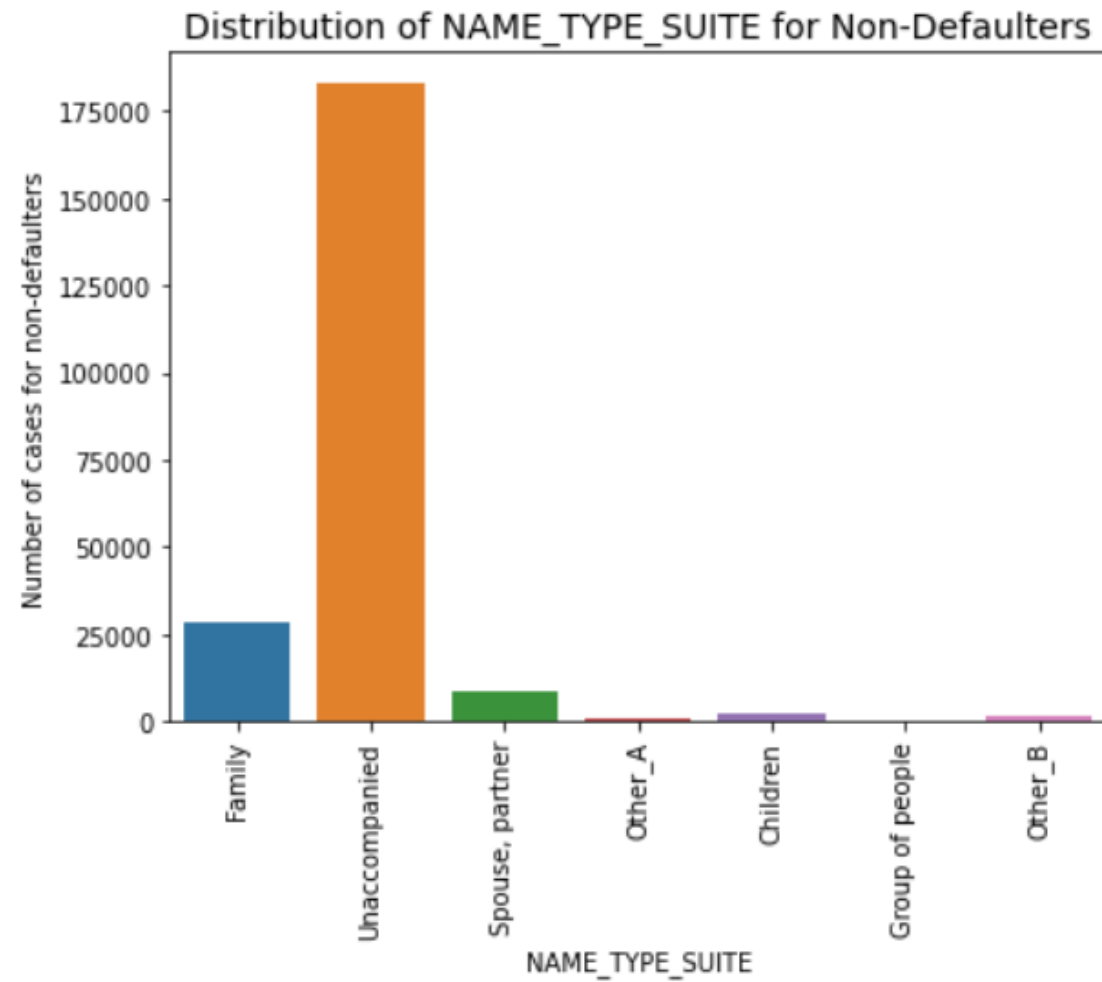


Handle Missing Values [Replace Or Remove]

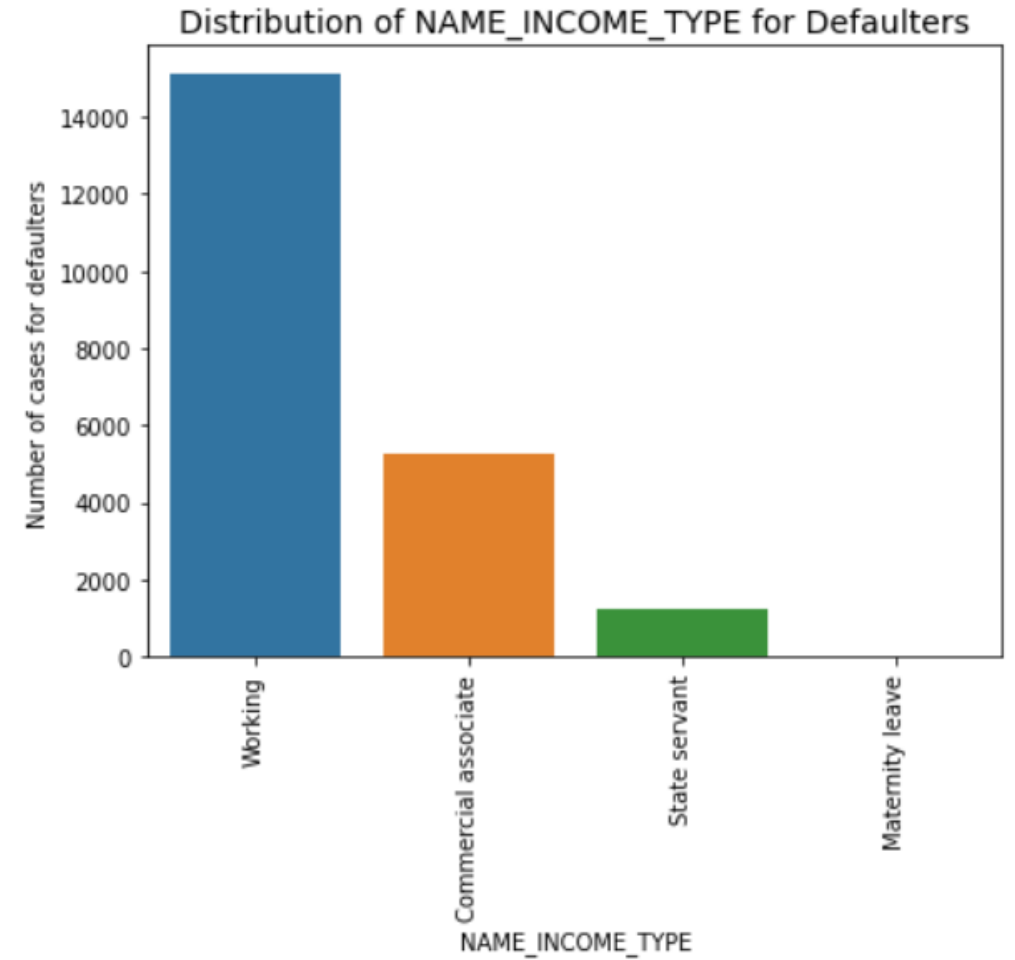
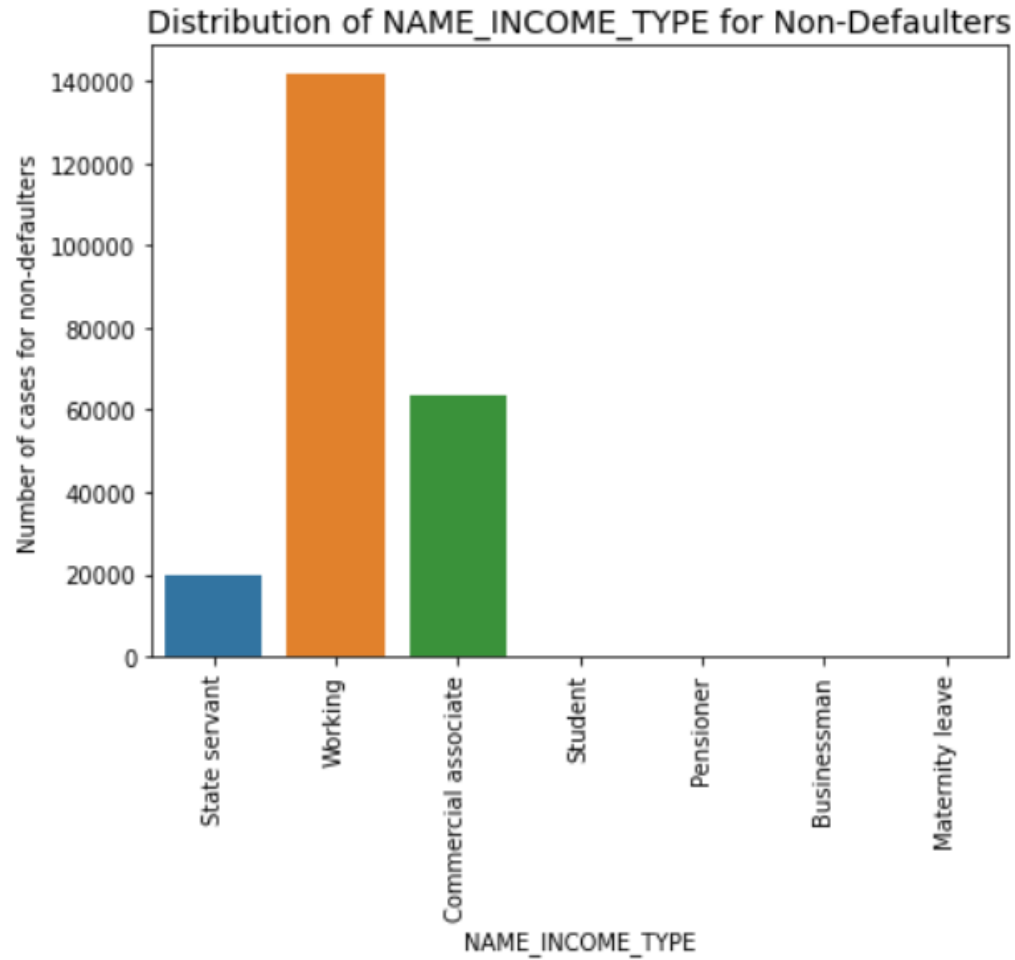
ANALYSE/IMPROVE

We can notice that revolving loans are lesser in the defaulted population. Hence we can infer that revolving loans have comparatively safer. This may be attributed to the Nature of revolving loan as it is considered a flexible financing tool due to its repayment and re-borrowing flexibility

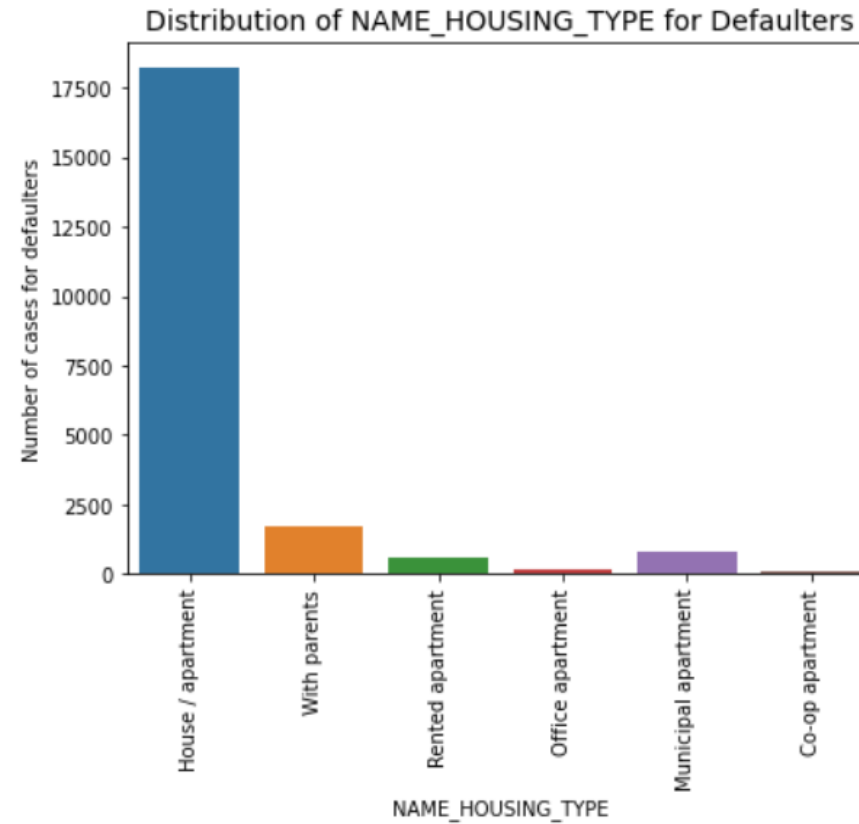
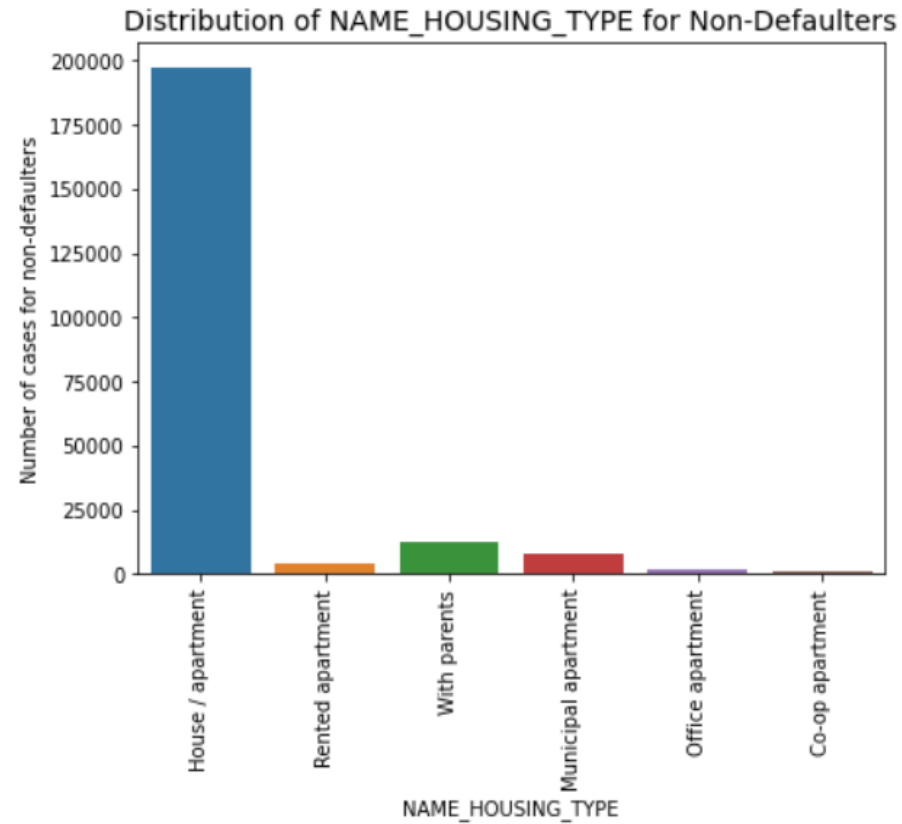




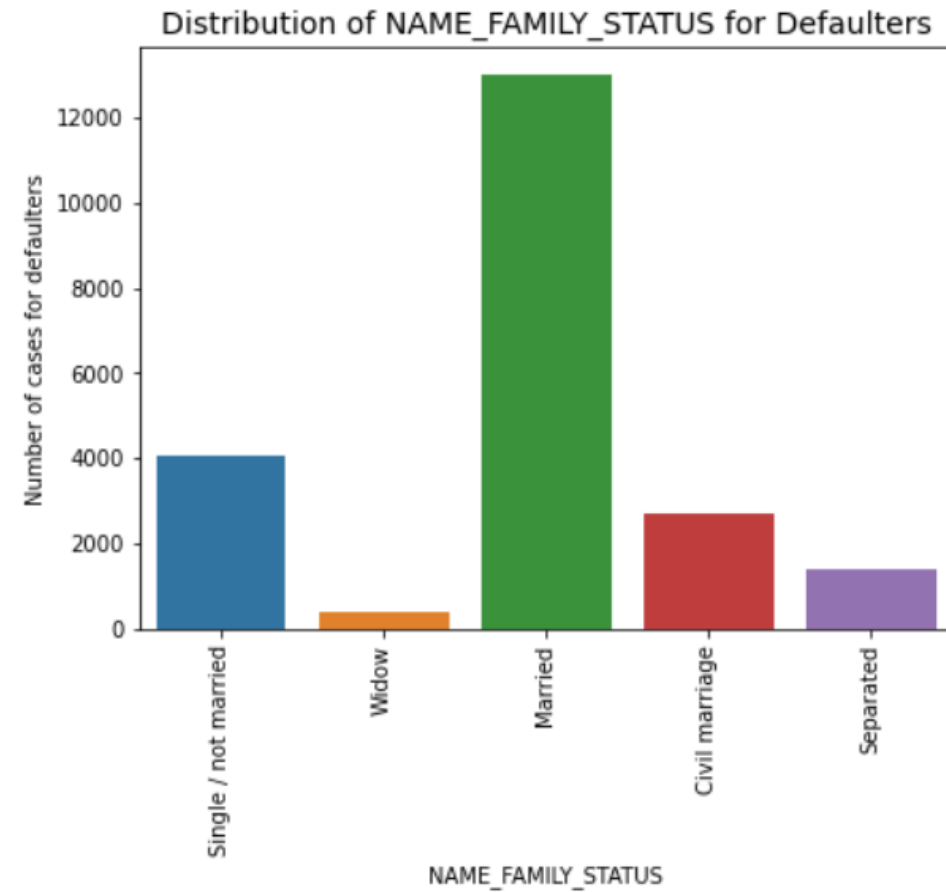
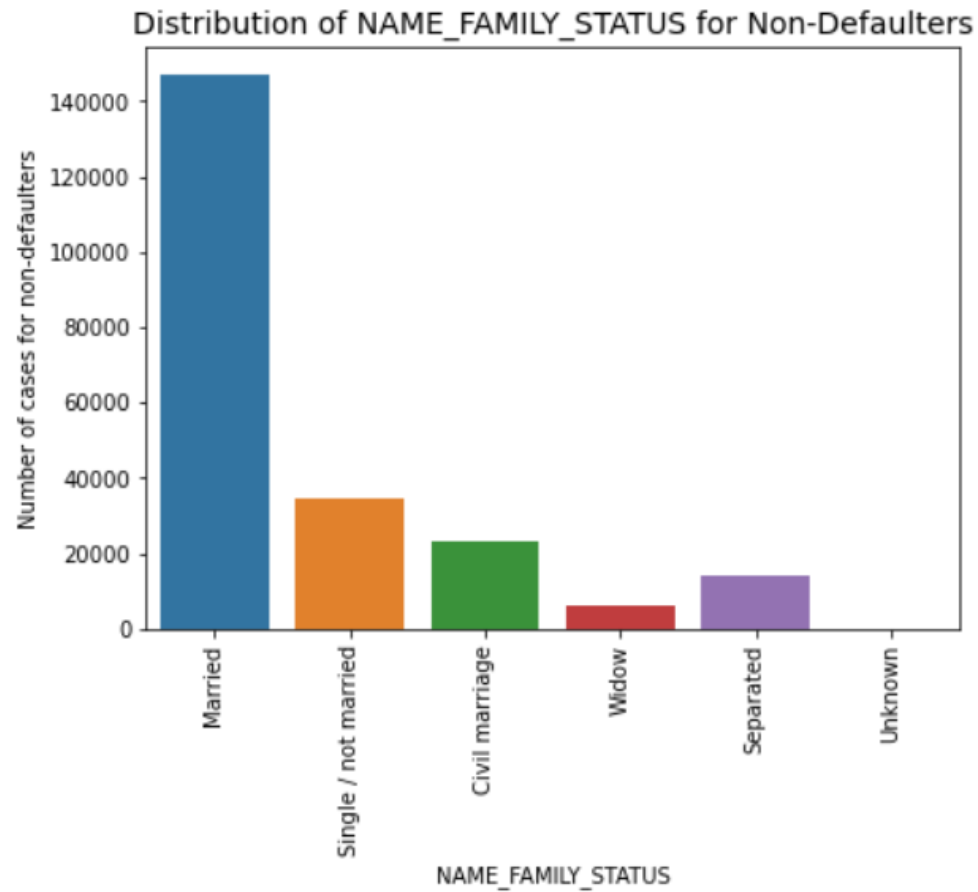
Who was accompanying client when he was applying for the loan does not have any impact on the default. Both populations have same proportions.



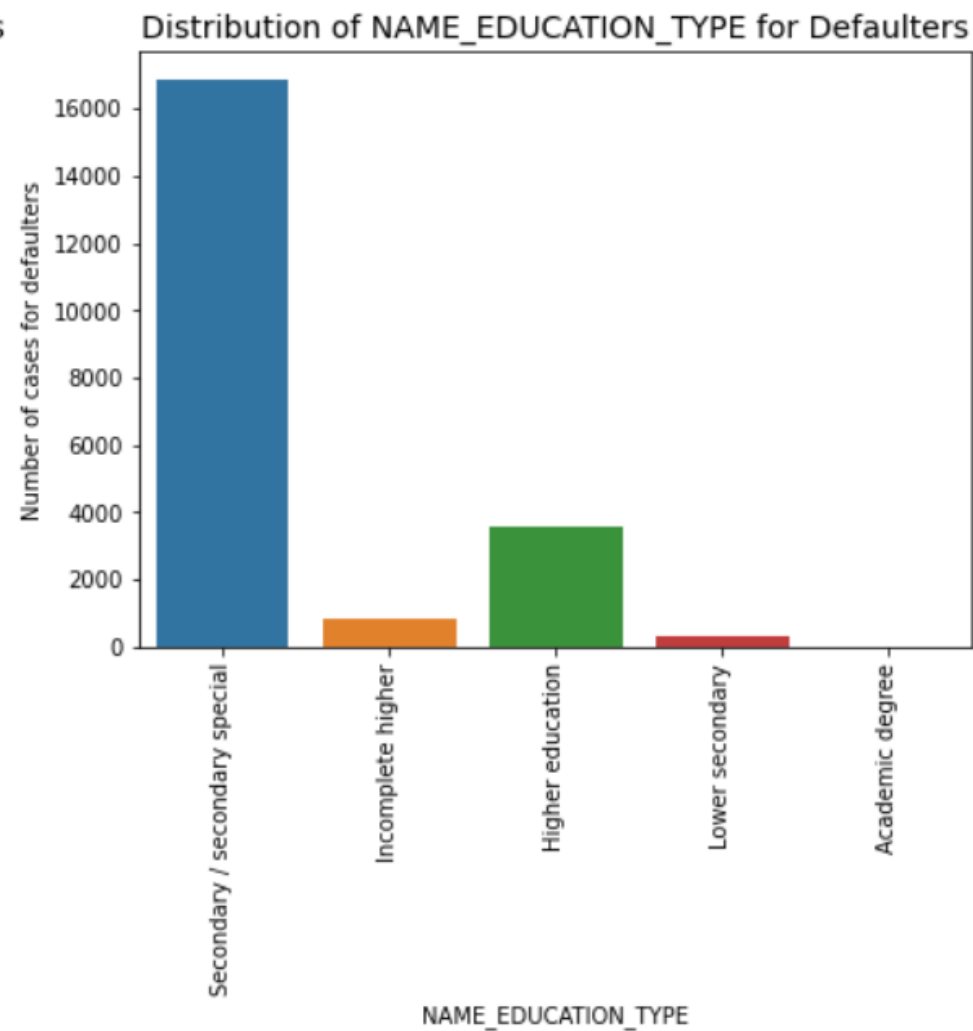
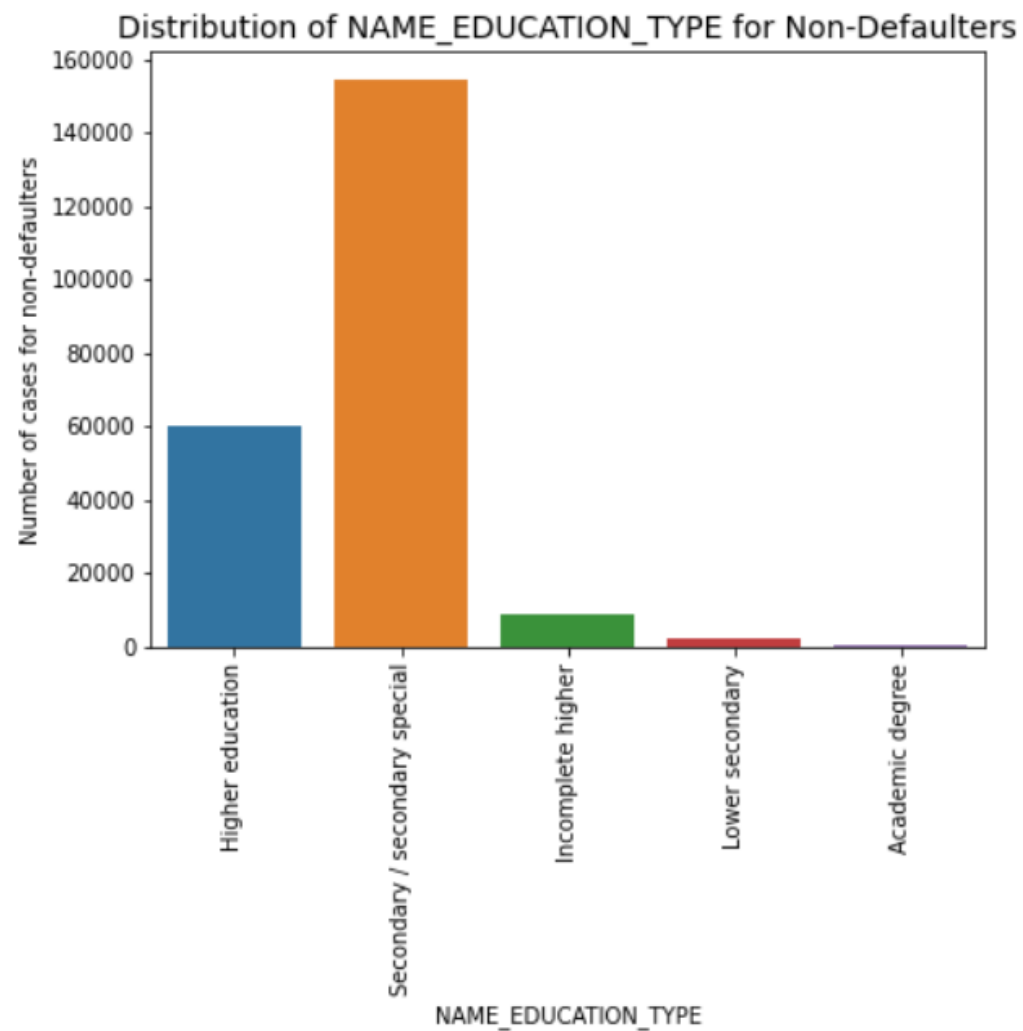
Most of the defaults are from Working population.



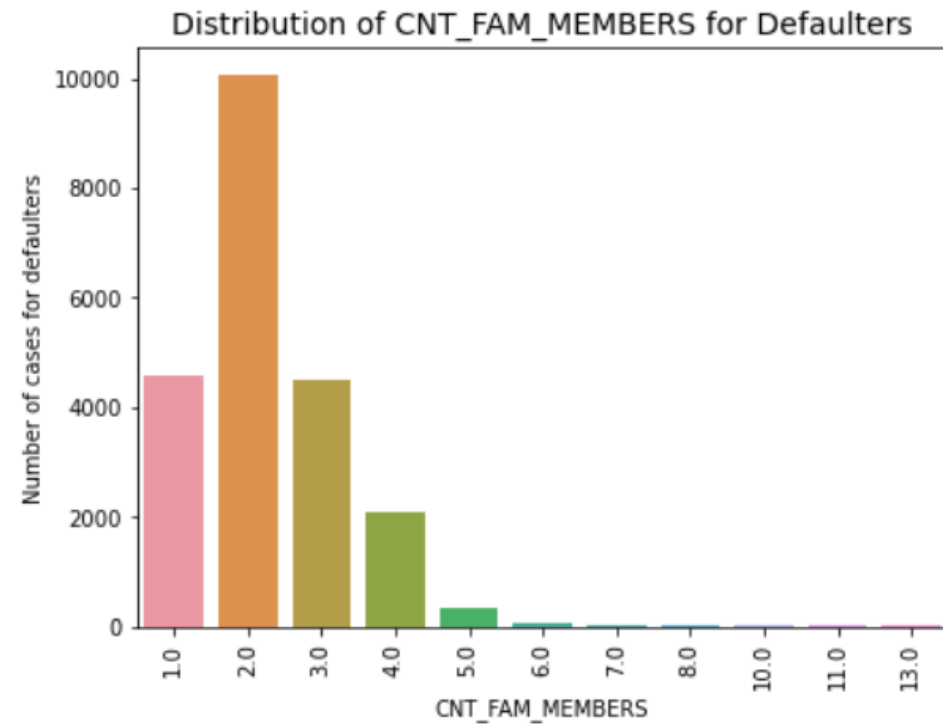
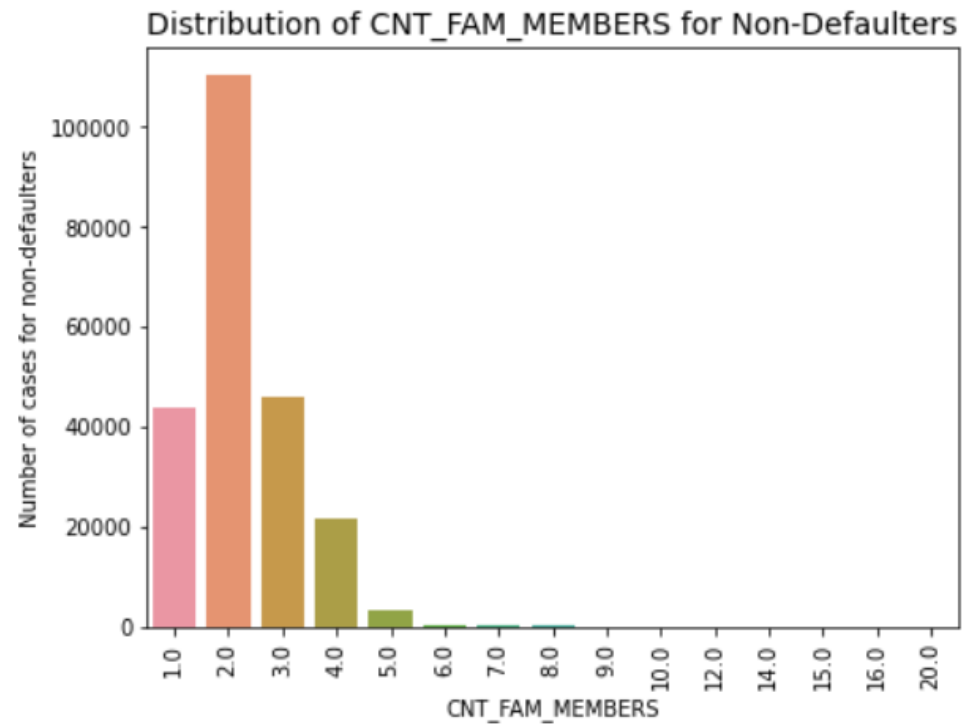
Population living in Rented apartments and those living with parents have higher default rate as they have higher proportion in the Defaulted population as compared to non defaulted population. Living in rental apartment means a cash outflow towards rent and thus less cash left for repayment of loan. Living with parents may suggest that the income is not too high and thus difficulty in repayment of loan.



Single/ not married is proportionally higher in defaulted population as compared to non defaulted population. This shows that Single applicants have higher defaults.



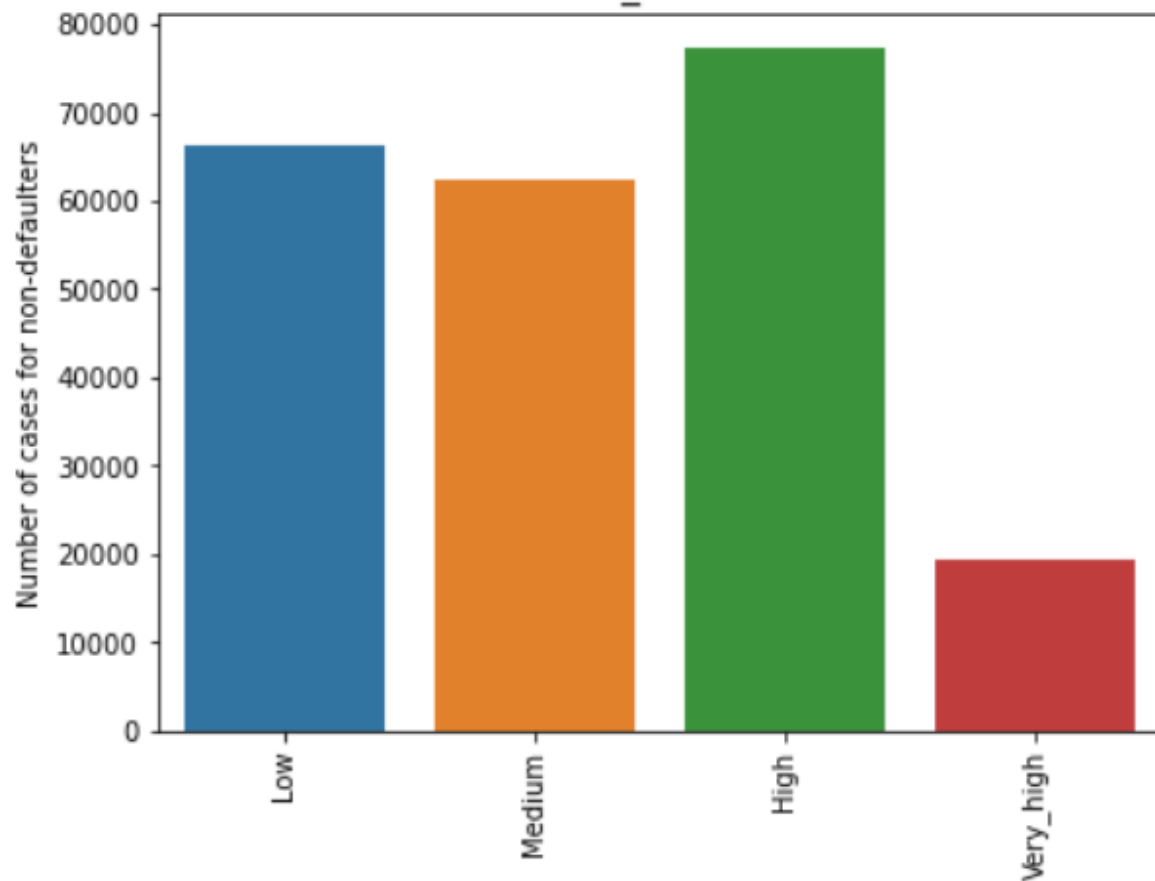
Higher education count is proportionally lesser in defaulted population as compared to non defaulted population. Hence Higher the education level, lower the default rate. This is logical as higher degree category should be earning more and hence easier to pay off loan instalments.



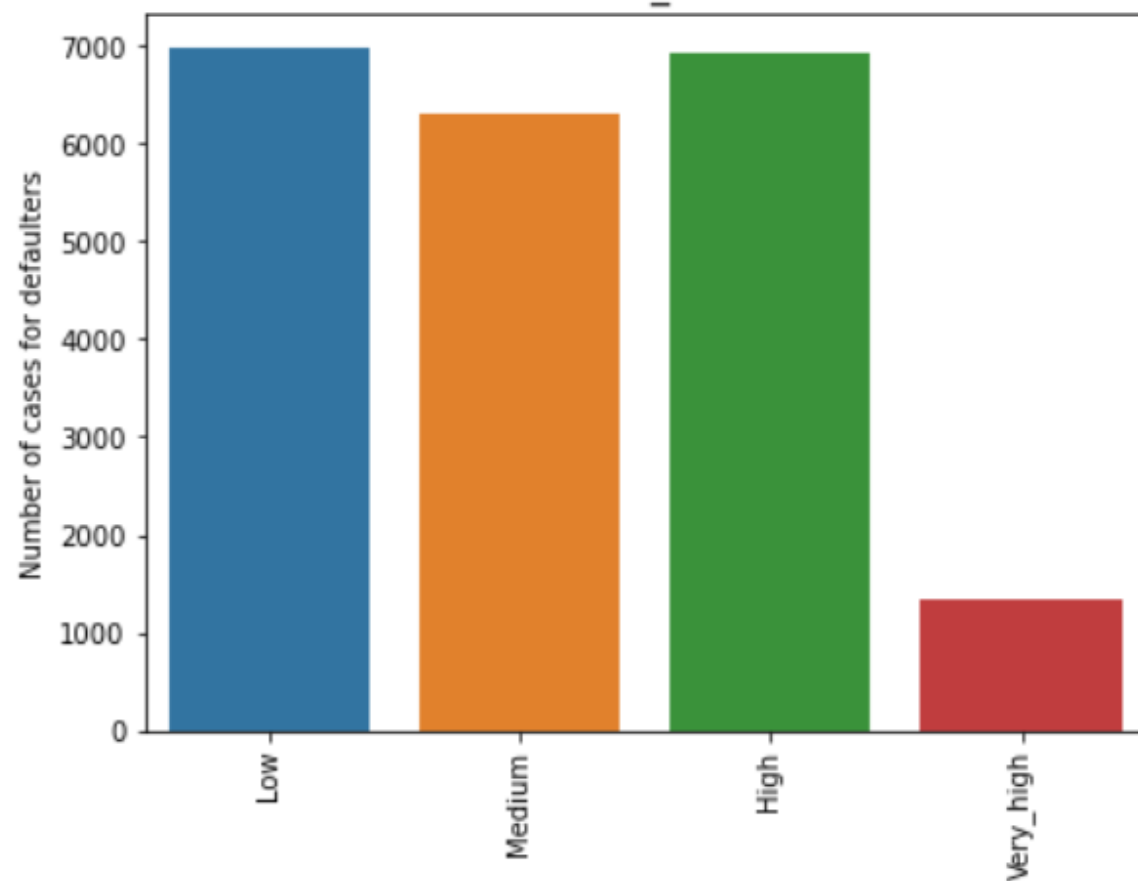
Children count seem to have some impact on default rate. As the proportion for higher count of children is more in defaulted population as compared to non defaulted

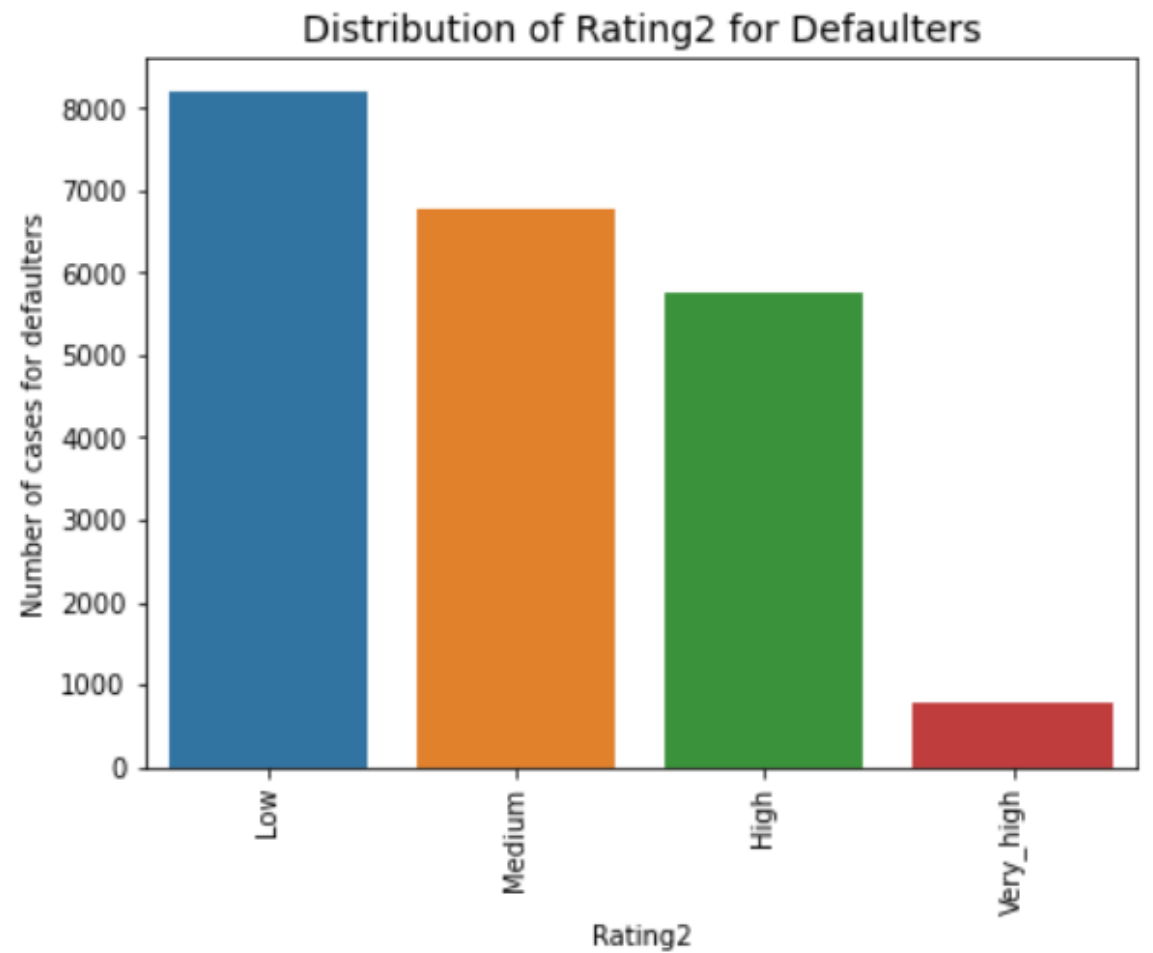
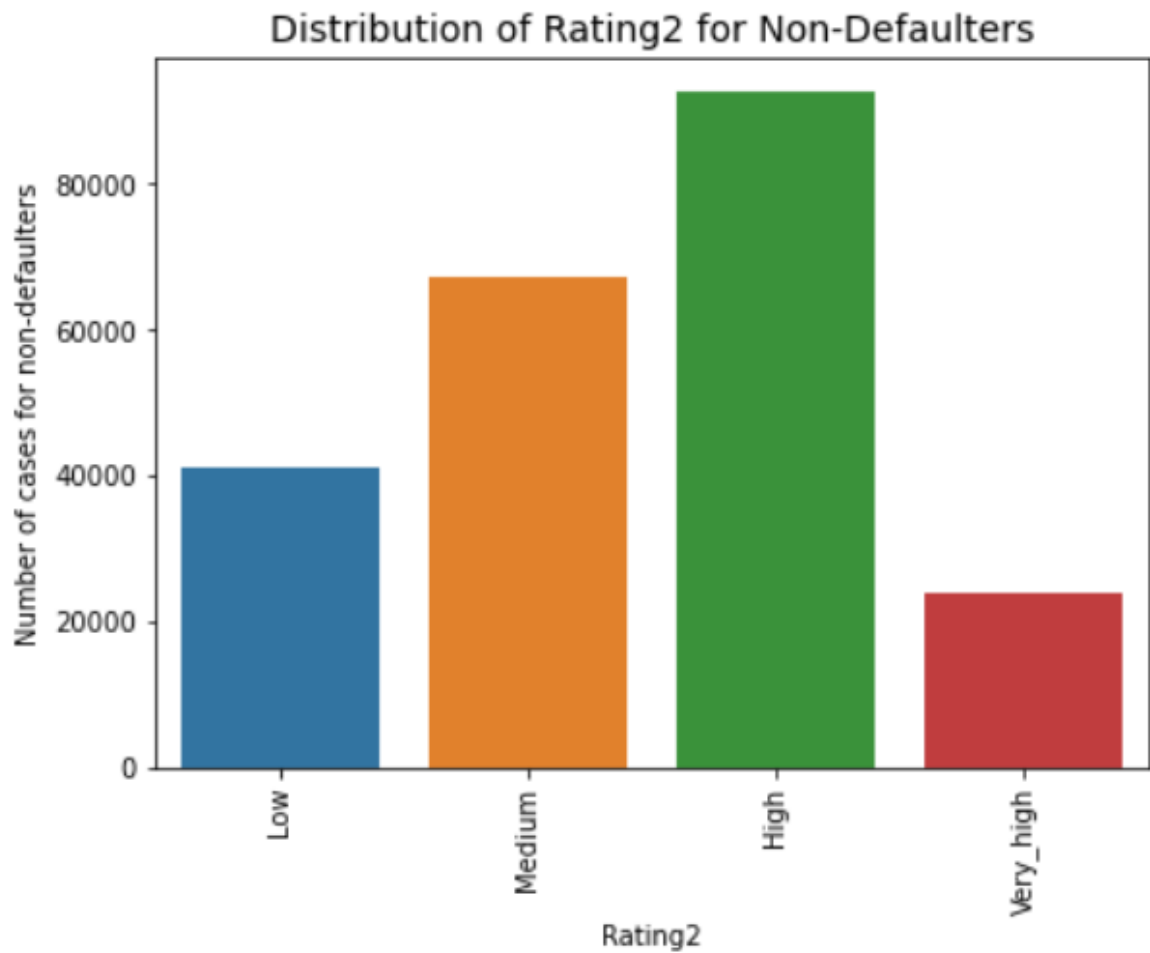


Distribution of INCOME_RANGE for Non-Defaulters

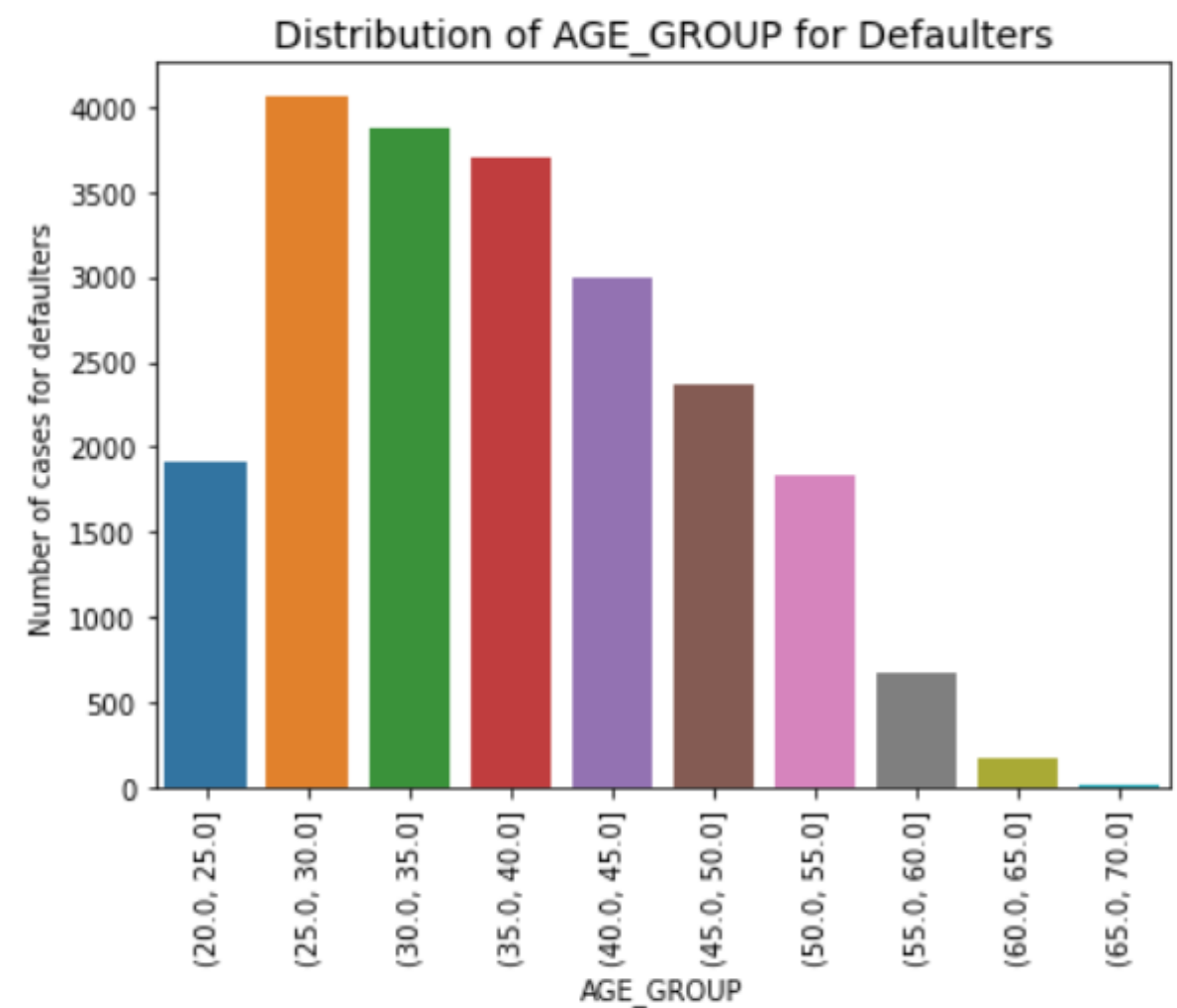
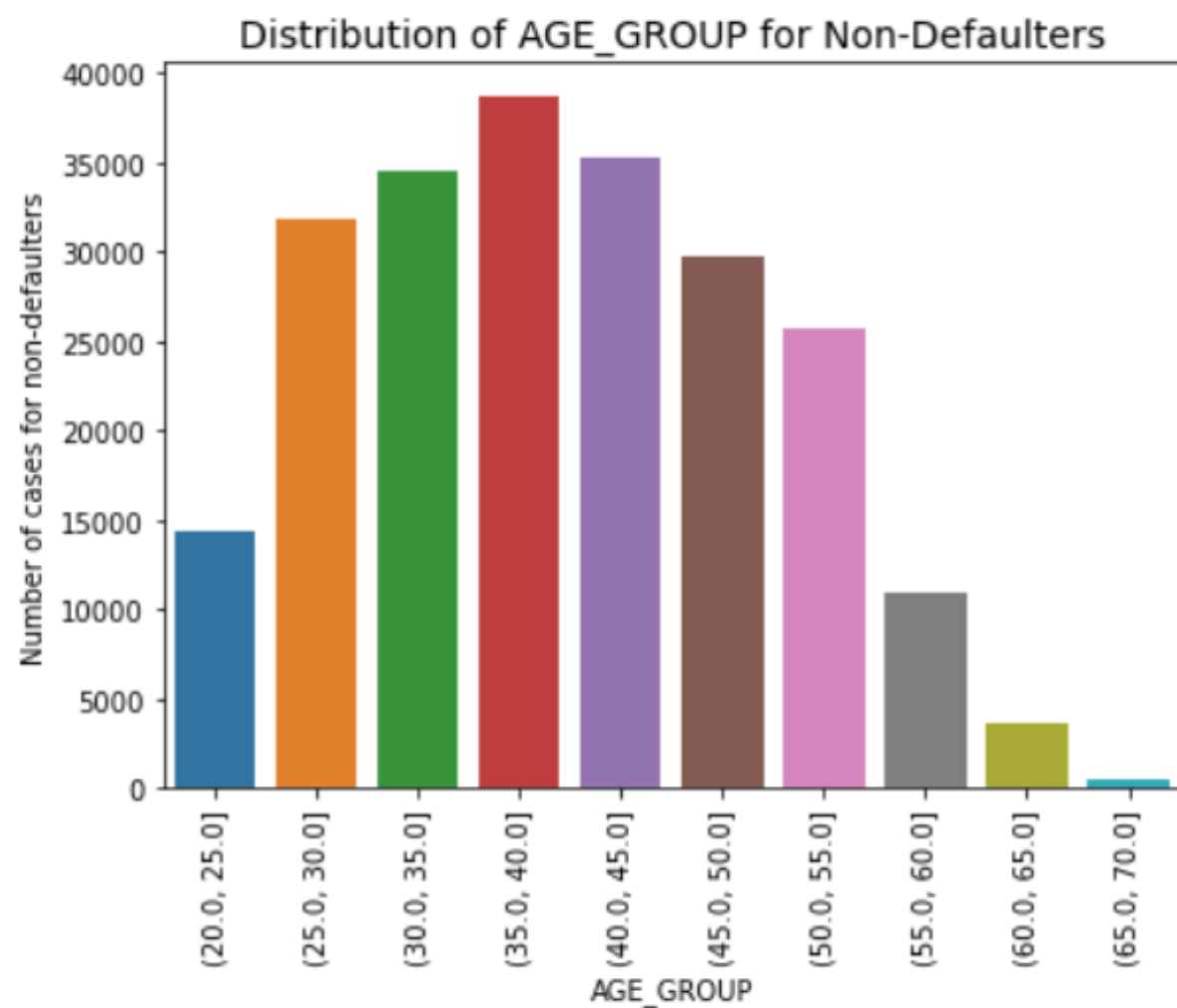


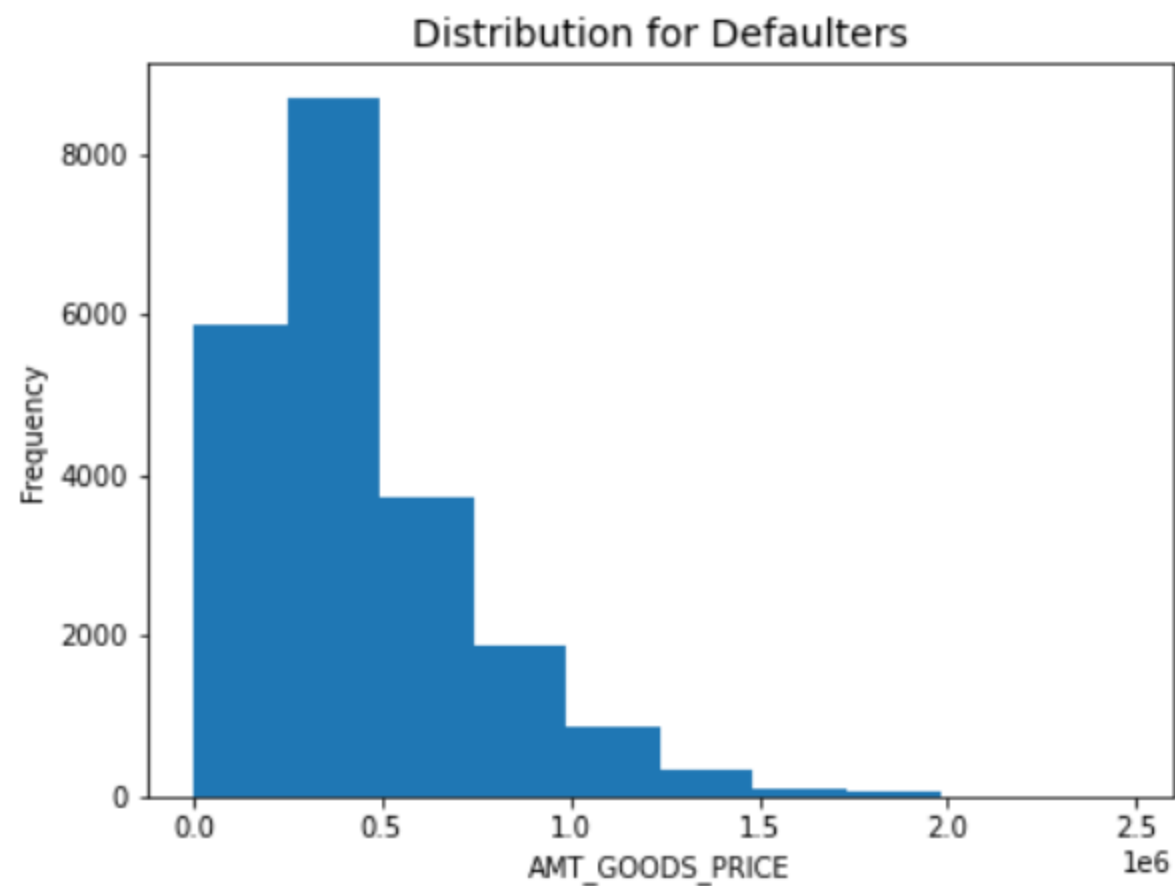
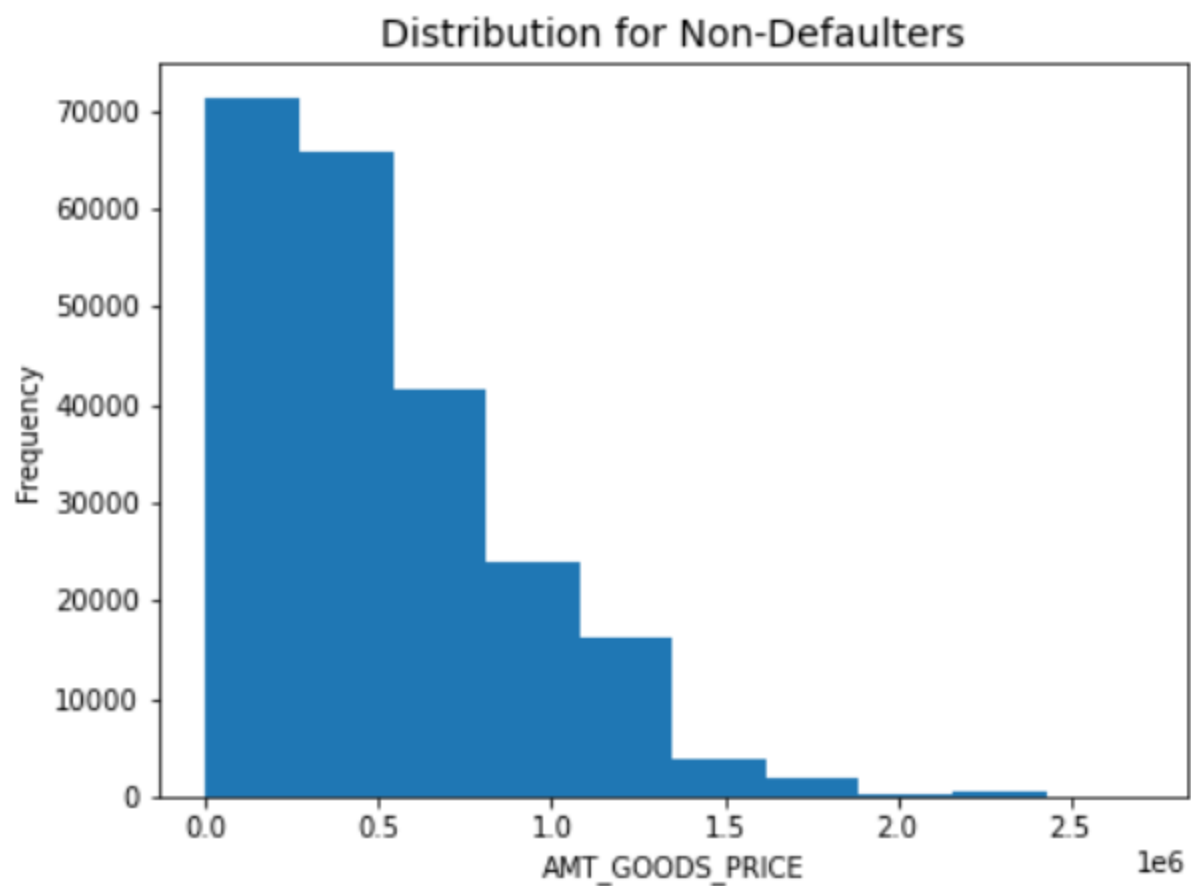
Distribution of INCOME_RANGE for Defaulters



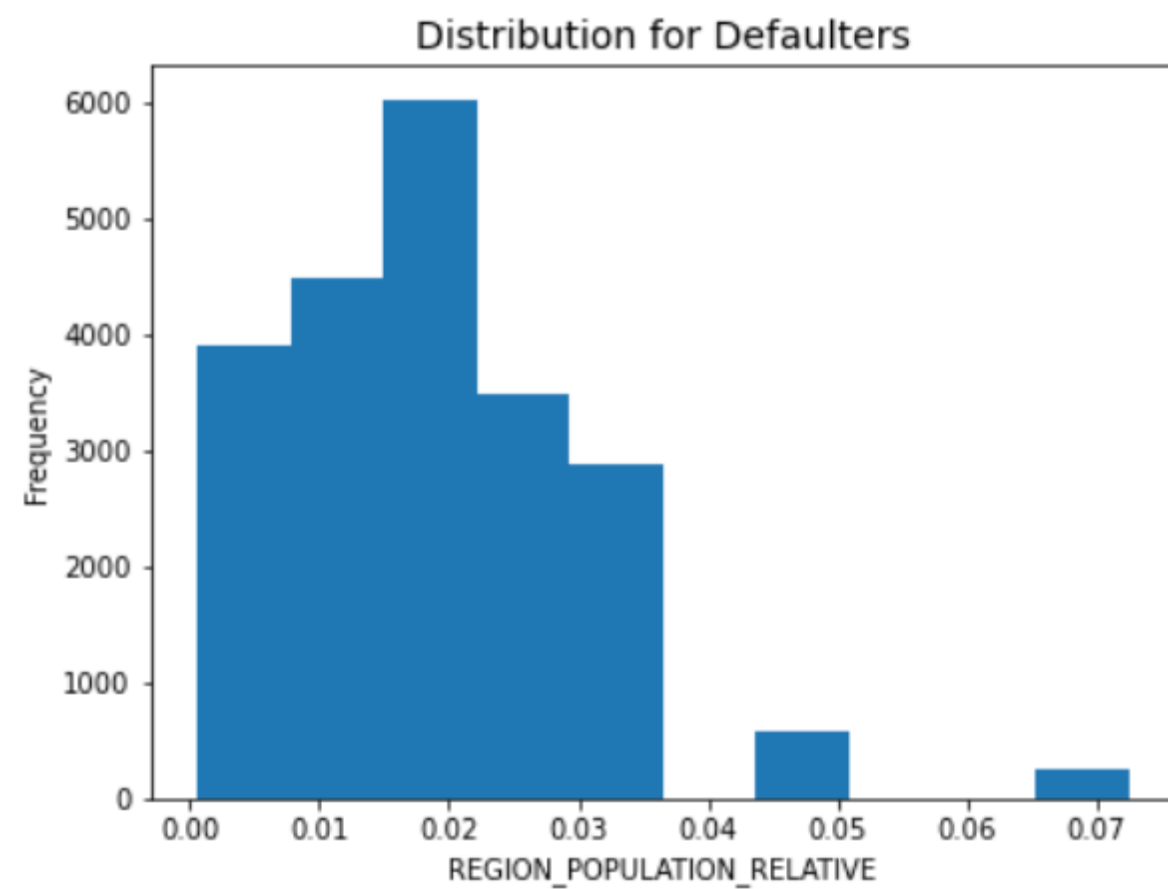
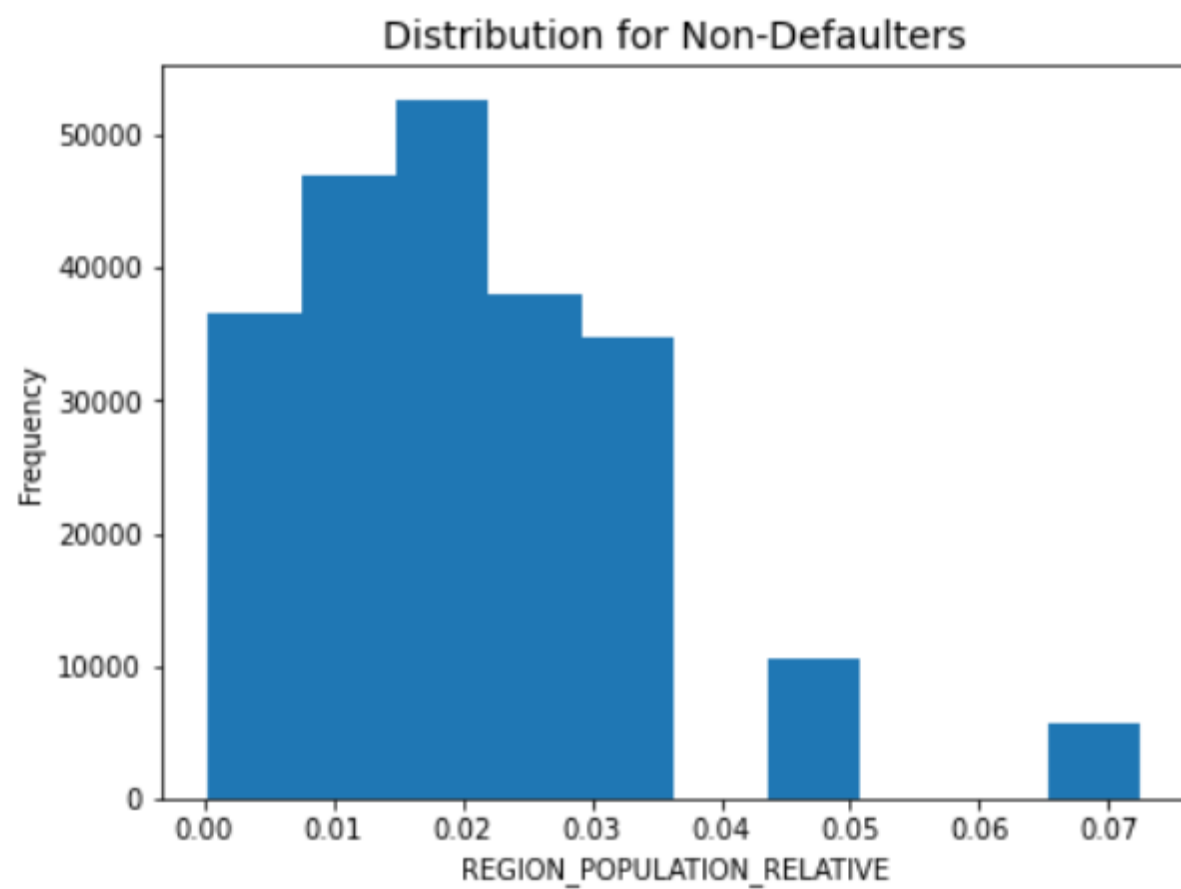


People having low Rating2 tends to Default more.



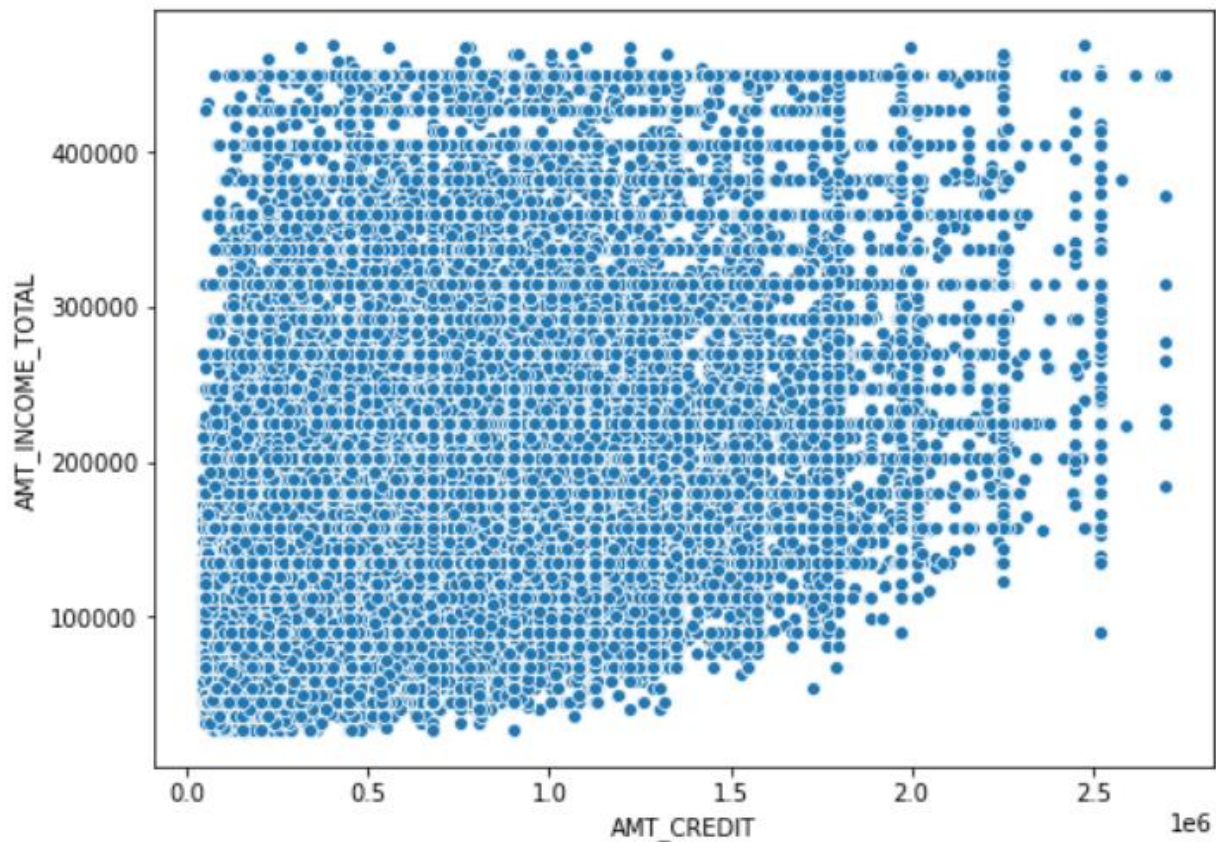


Defaults are higher for price of the goods for which the loan is given is lesser (between 0 to 500,000)

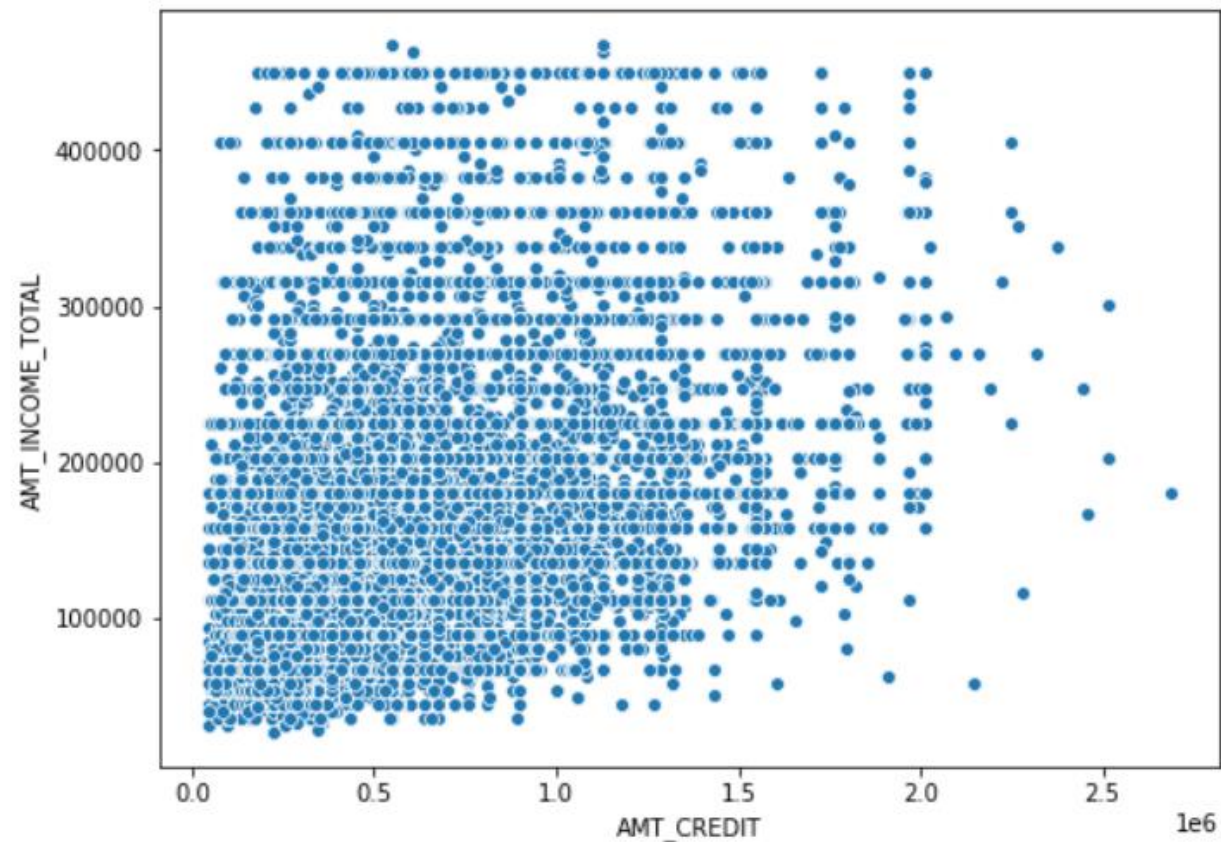


People living in higher density areas having lesser defaults

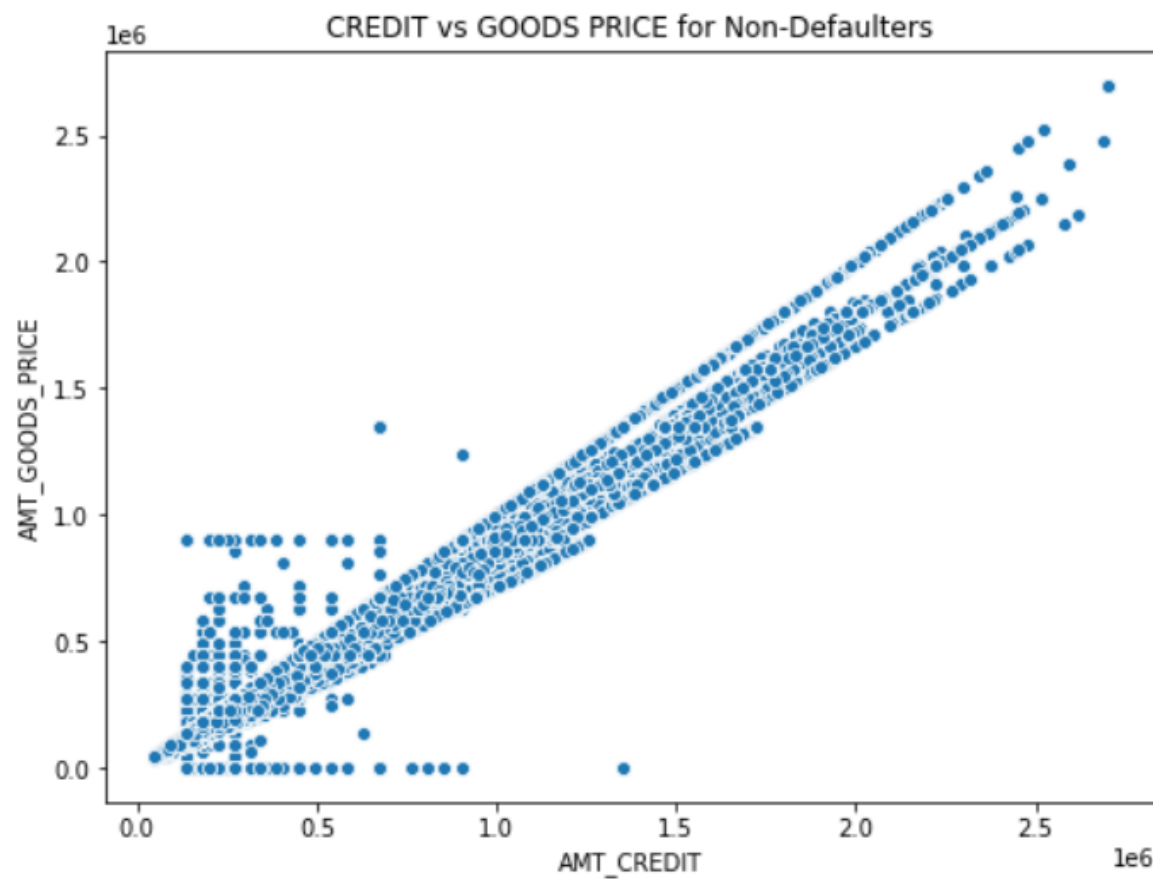
INCOME vs CREDIT for Non-Defaulters



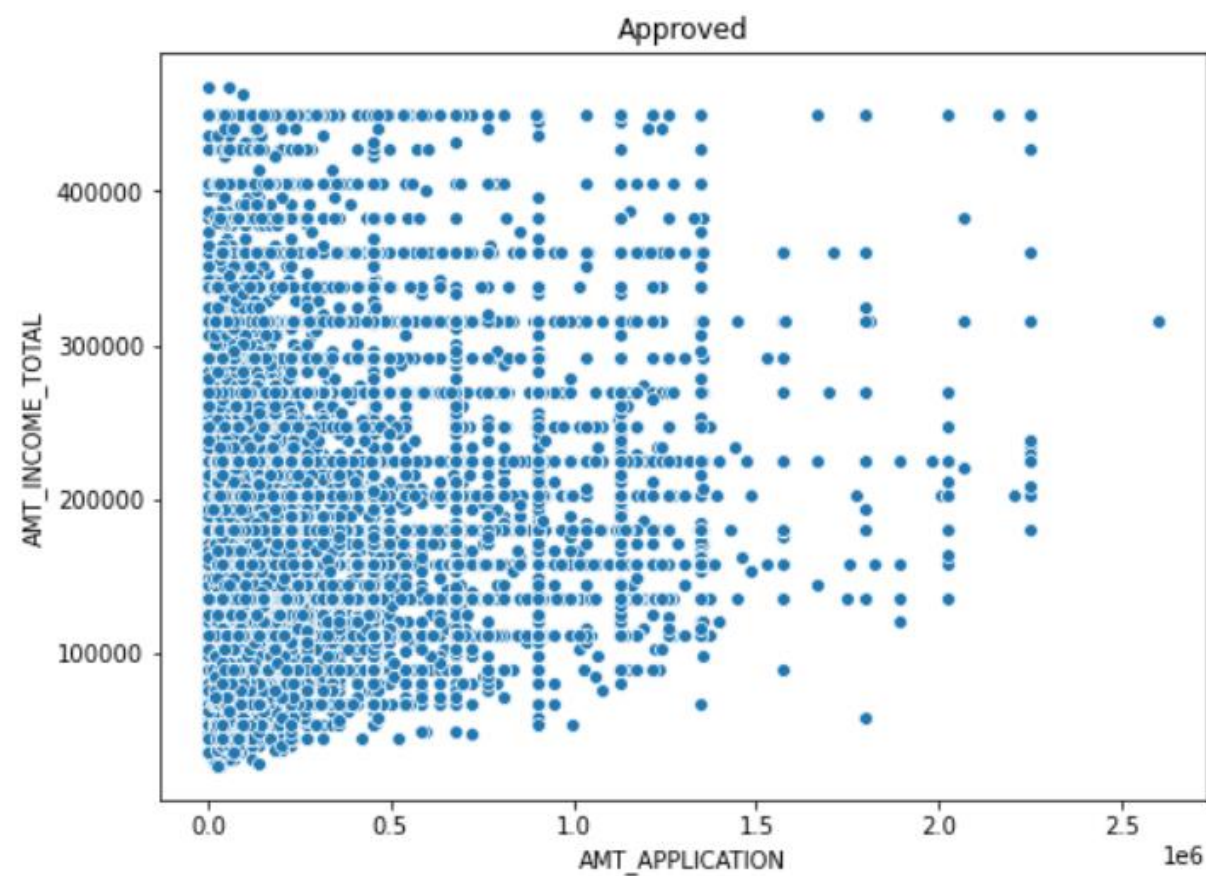
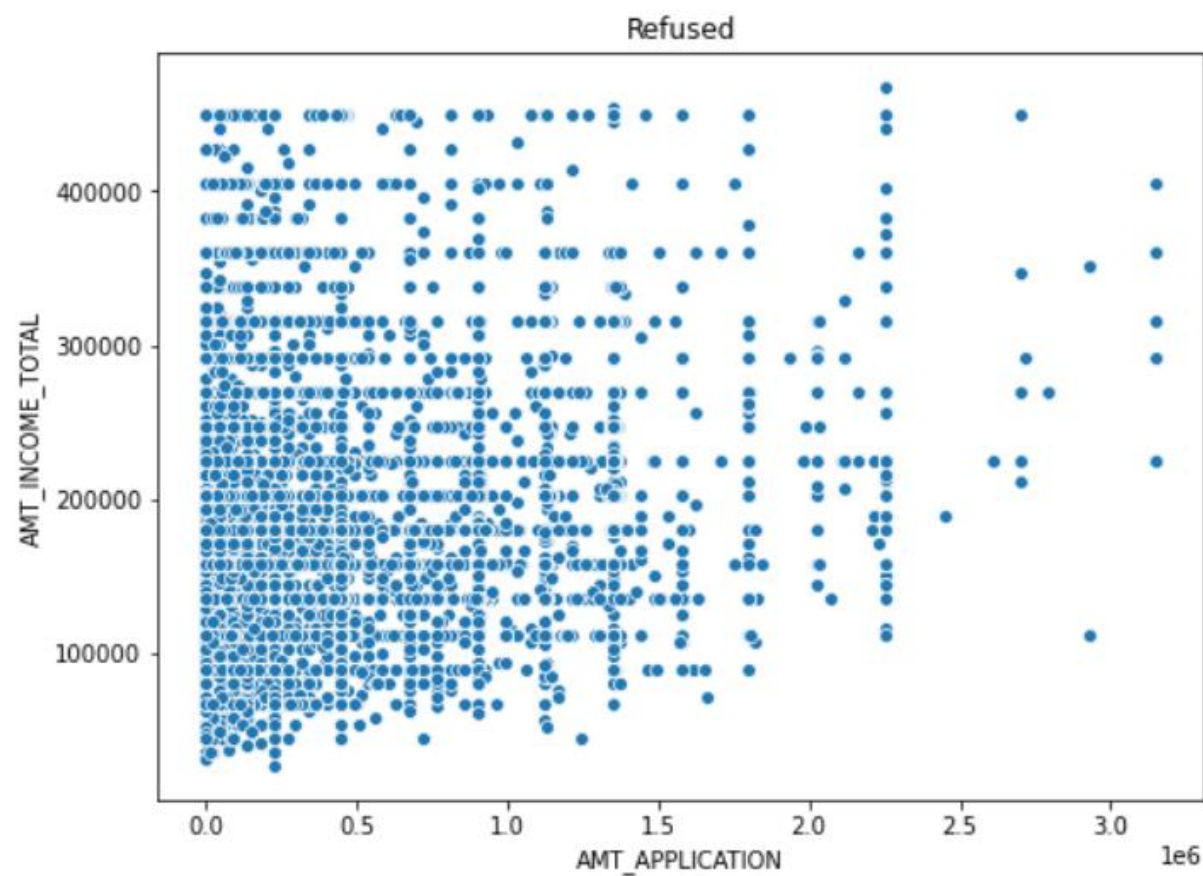
INCOME vs CREDIT for Defaulters



Lower density of defaults where income is higher than 300k or credit is lower than 200k.



Defaulters are less if price of good is upto 500k and amount credit is also less than 500k



THANK YOU!

