

Credit EDA Case Study

STORYTELLER-
MEHA RUSIA

Business Understanding Problem Statement-

- This will ensure that the applicants capable of repaying the loan are not rejected.

Risk Analysis-

- If the applicant is likely to repay the loan, then not approving the loan results in a loss of business.
- If the applicant is not likely to repay the loan i.e. he/she is likely to default, then approving the loan may lead to a financial loss for the company.

Loan Decision-

- Approved
- canceled
- Refused
- Unused Offer

Business Objectives-

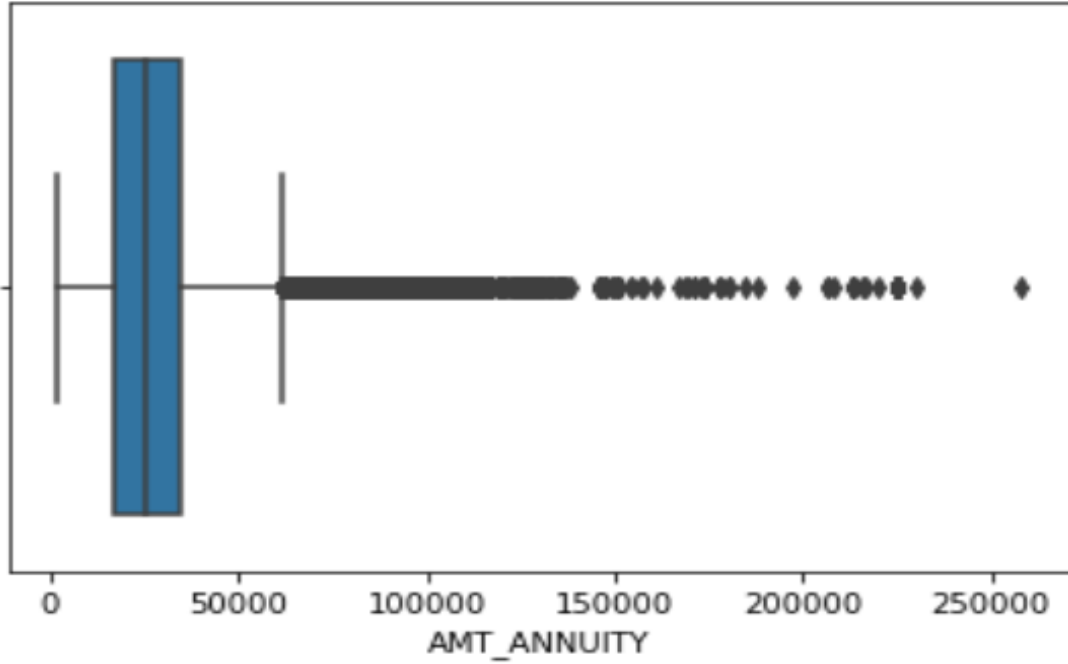
If a customer has difficulty paying their installment which may be used for taking actions such as-

- Denying loan
- Reducing the amount of loan
- landing at a higher interest rate.

This will ensure that the consumers capable of replaying the loan are not rejected.

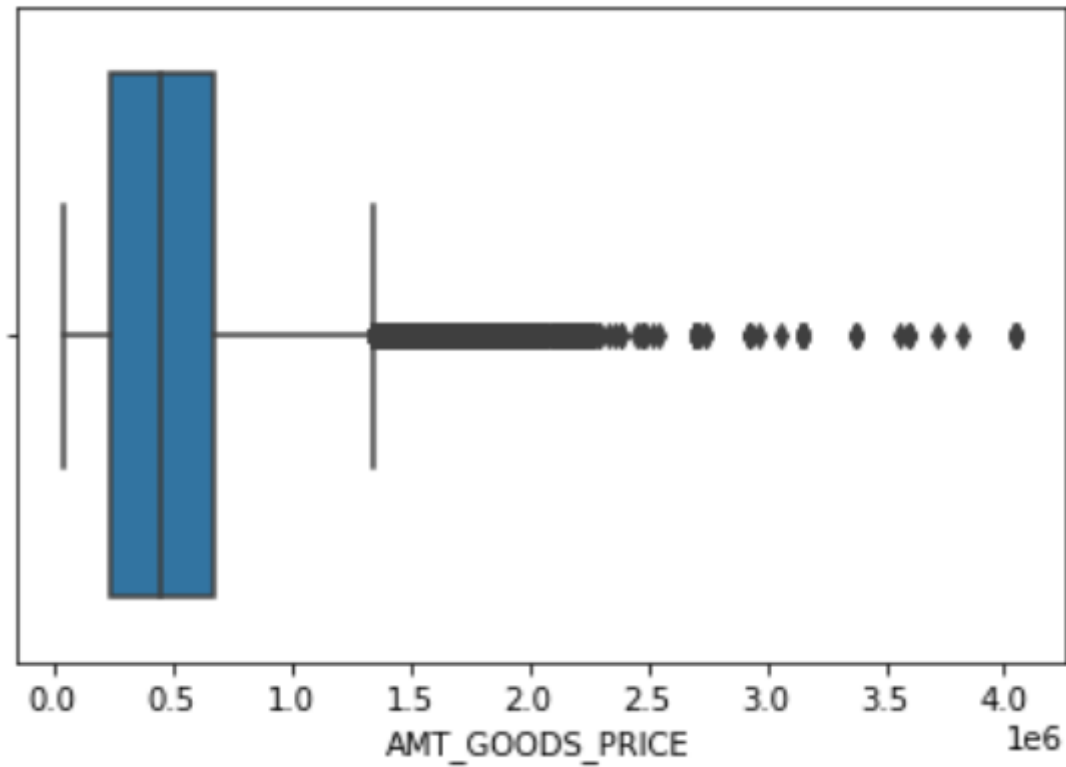
Outliers-

AMT_ANNUIITY-



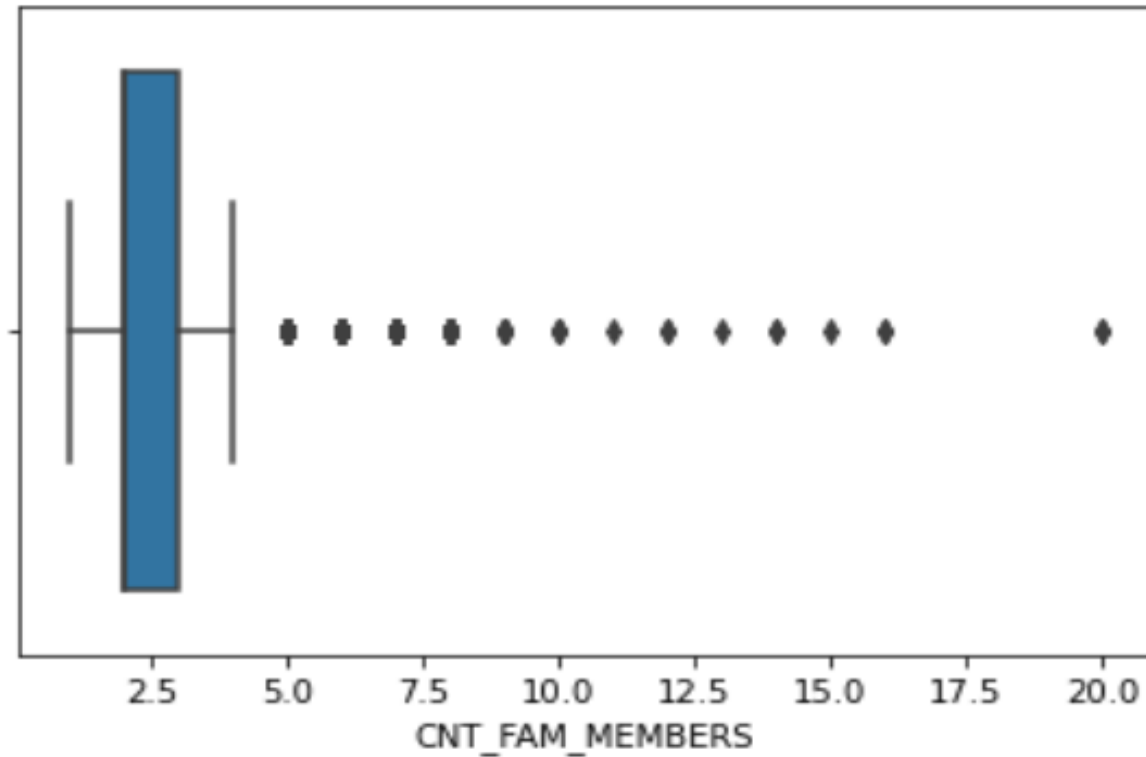
- AMT_ANNUIITY- Loan annuity
- There are lots of outliers are present

AMT_GOODS_PRICE

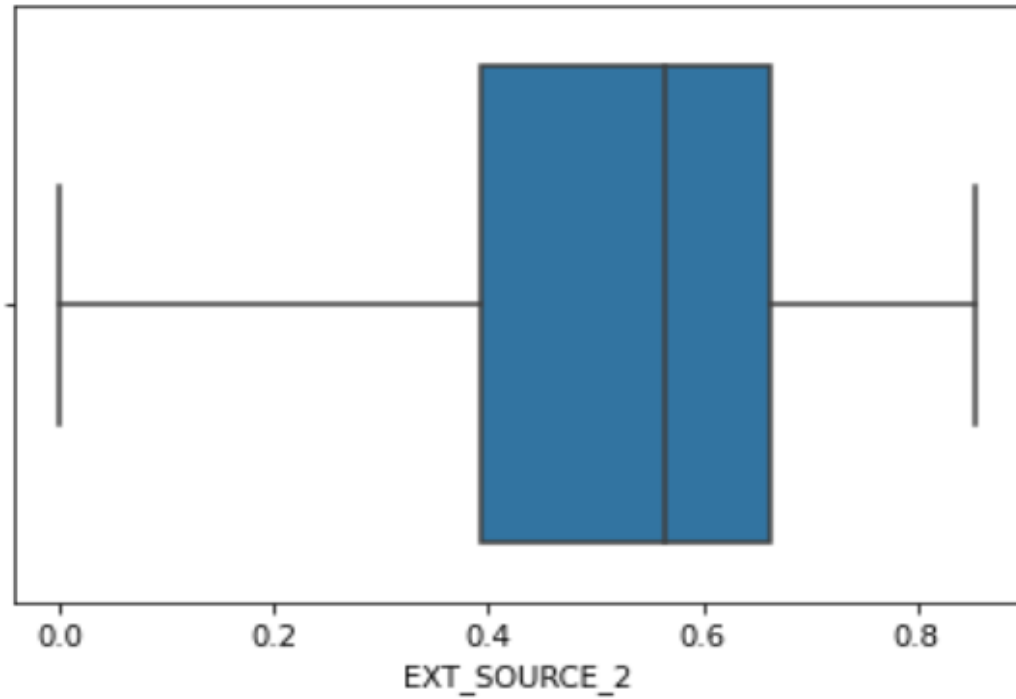


- AMT_GOODS_PRICE- For consumer loans, it is the price of the goods for which the loan is given
- lots of outliers are present here.

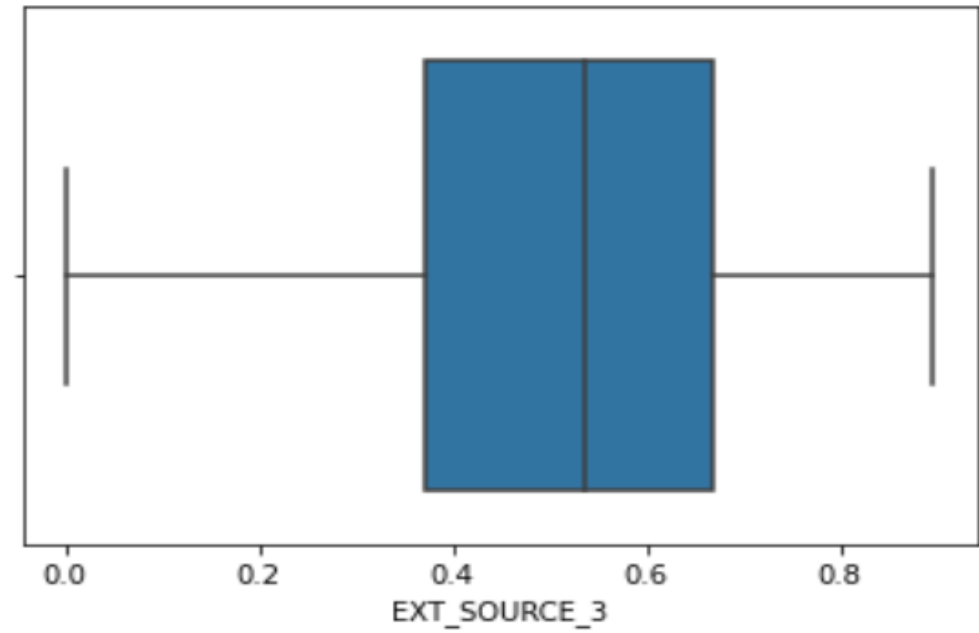
CNT_FAM_MEMBERS



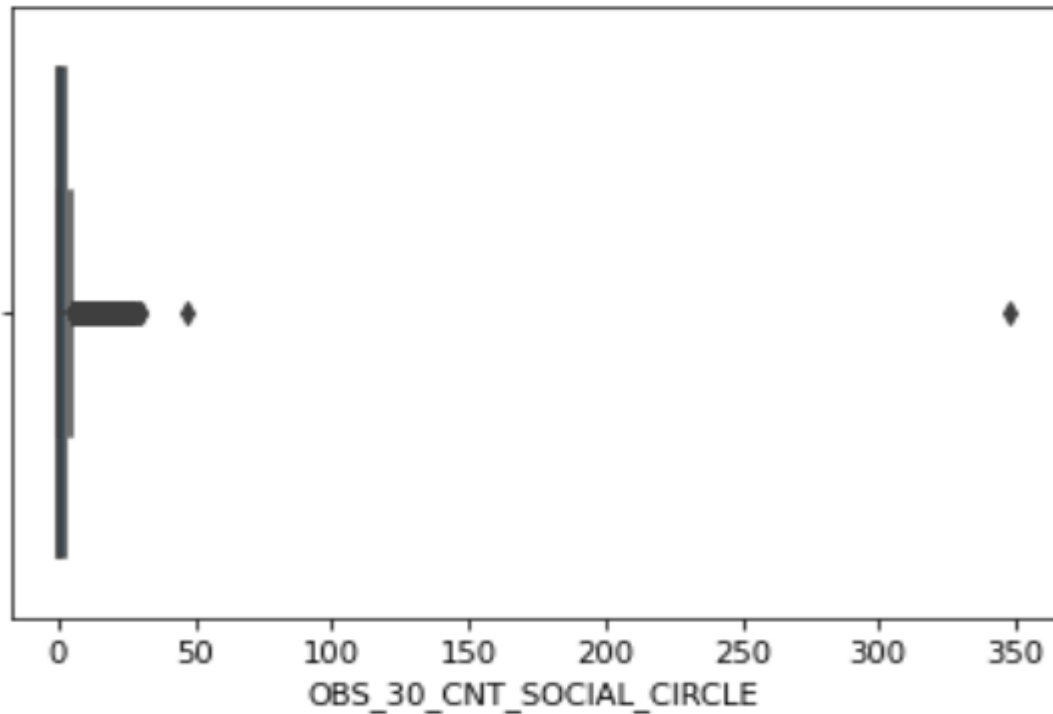
- CNT_FAM_MEMBERS – How many family members does a client have.
- There are some clients which has a large number of family members 5-20 but other lies between 1-3



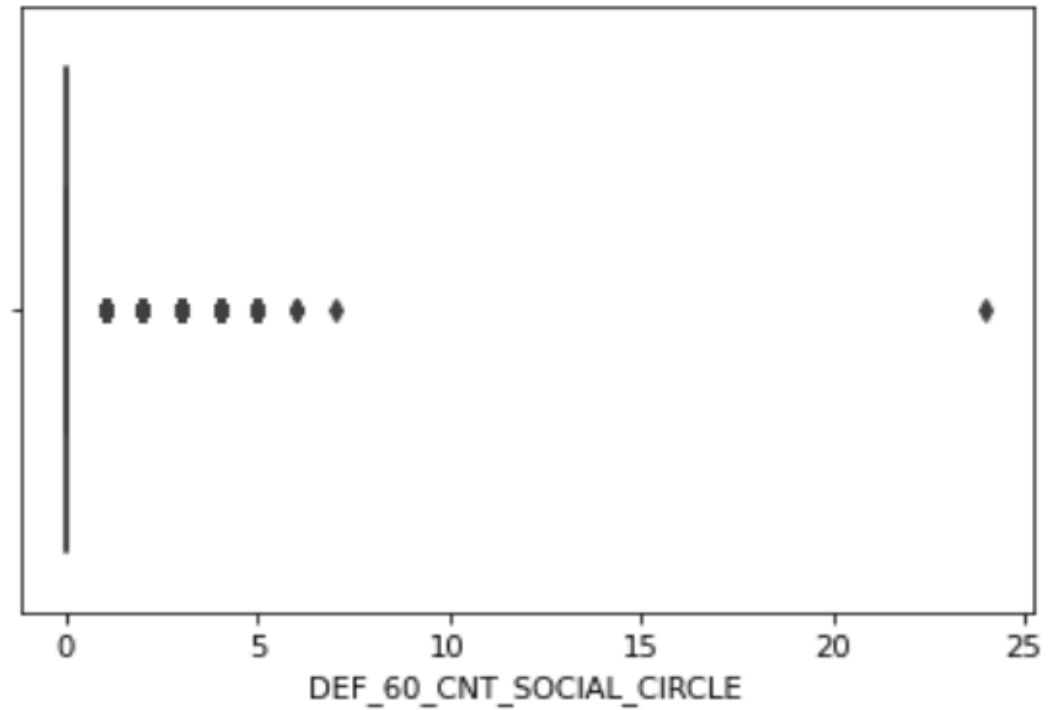
EXT_SOURCE_2- Normalized score from external data source



EXT_SOURCE_3- Normalized score from external data source



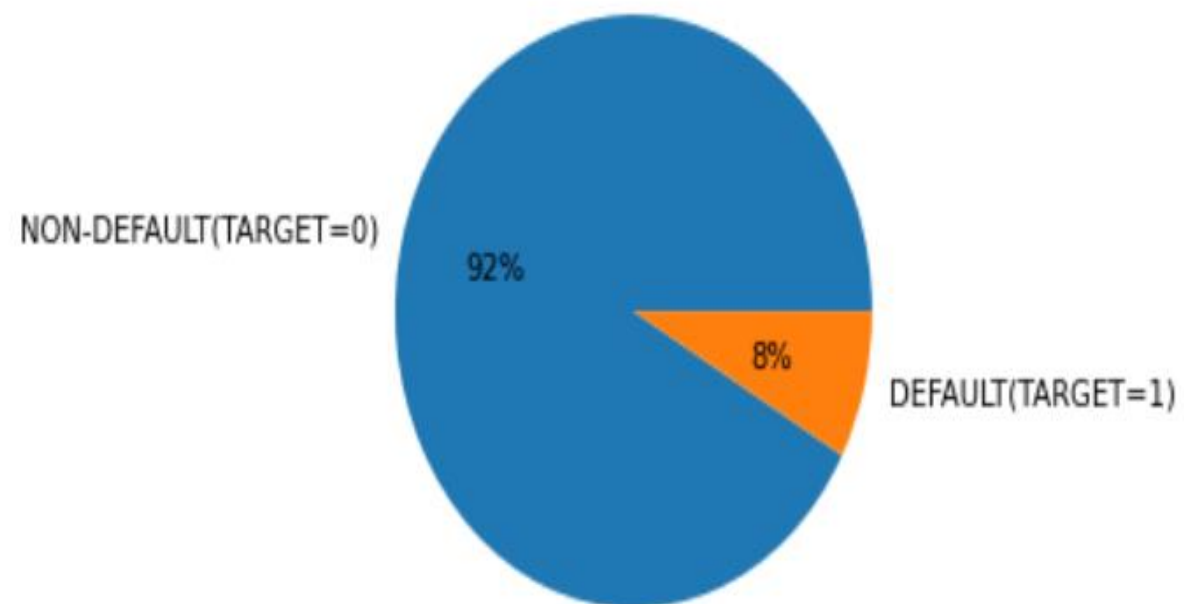
OBS_30_CNT_SOCIAL_CIRCLE -How many observations of client's social surroundings with observable 30 DPD (days past due) default



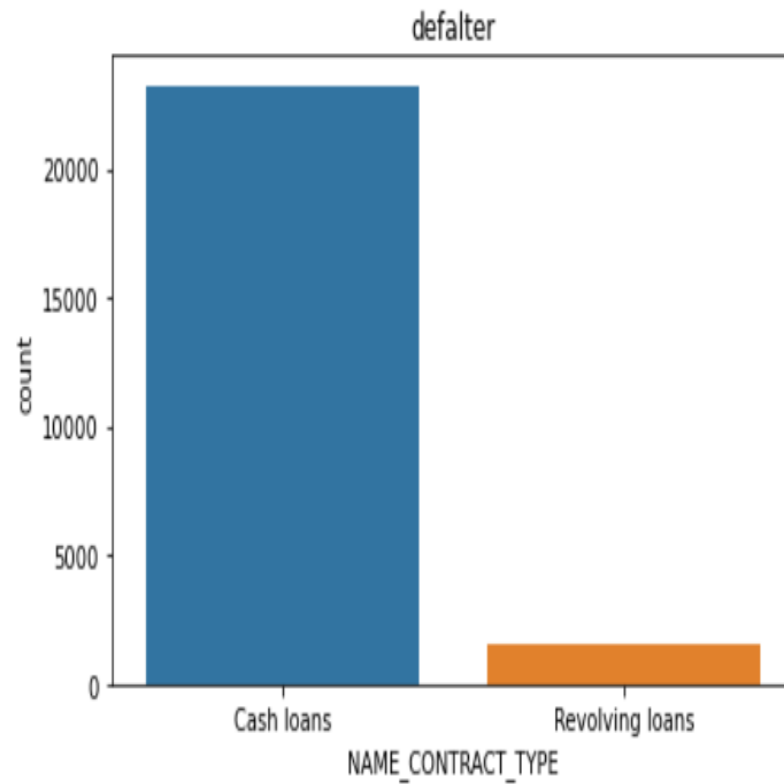
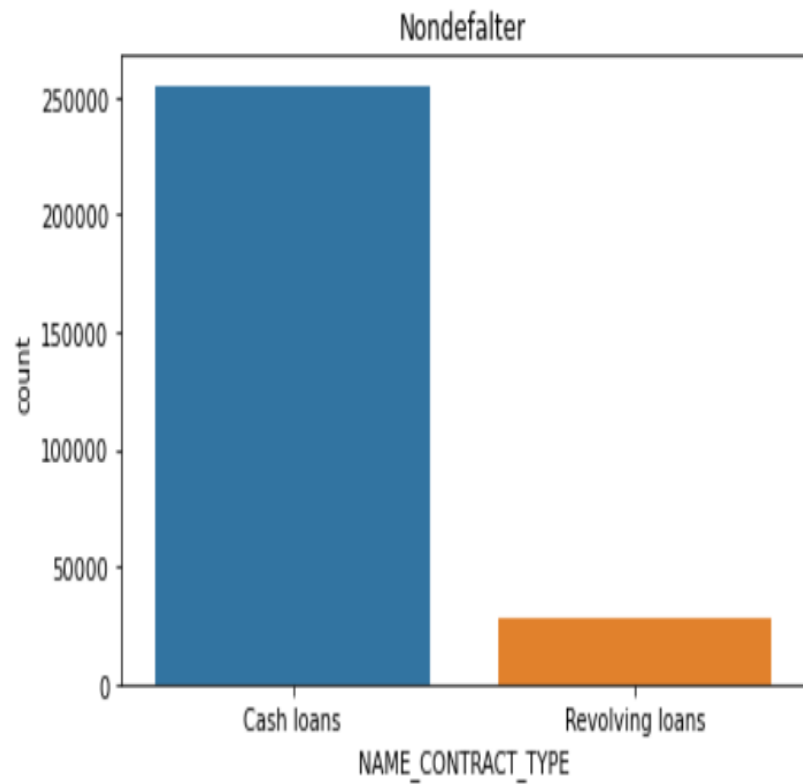
DEF_60_CNT_SOCIAL_CIRCLE- How many observation of client's social surroundings defaulted on 60 (days past due) DPD

TARGET

- Here 92% are non-defaulter and 8% are defaulter.

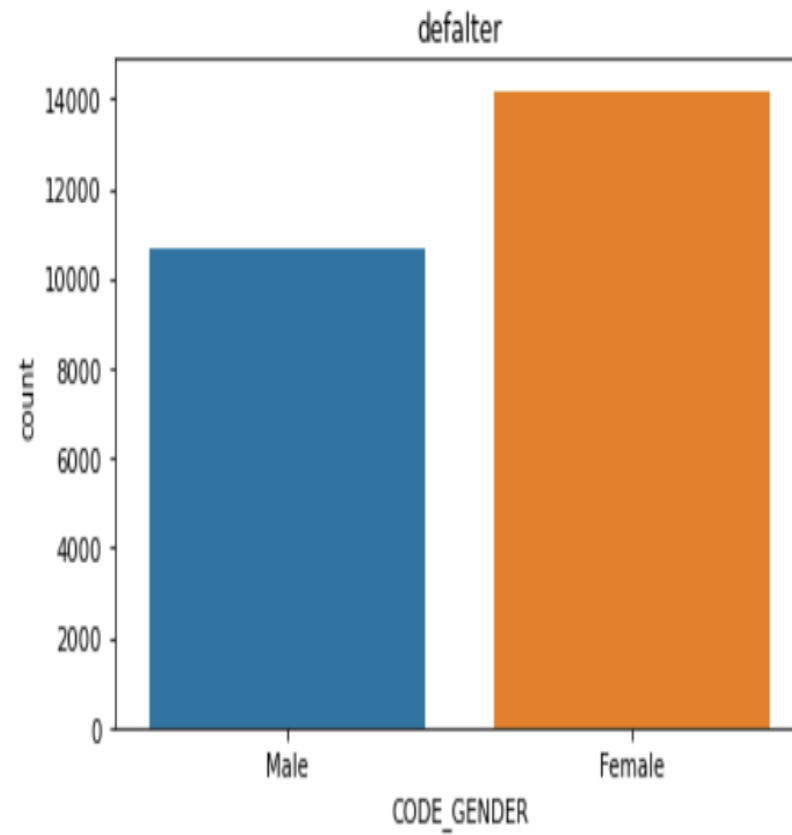
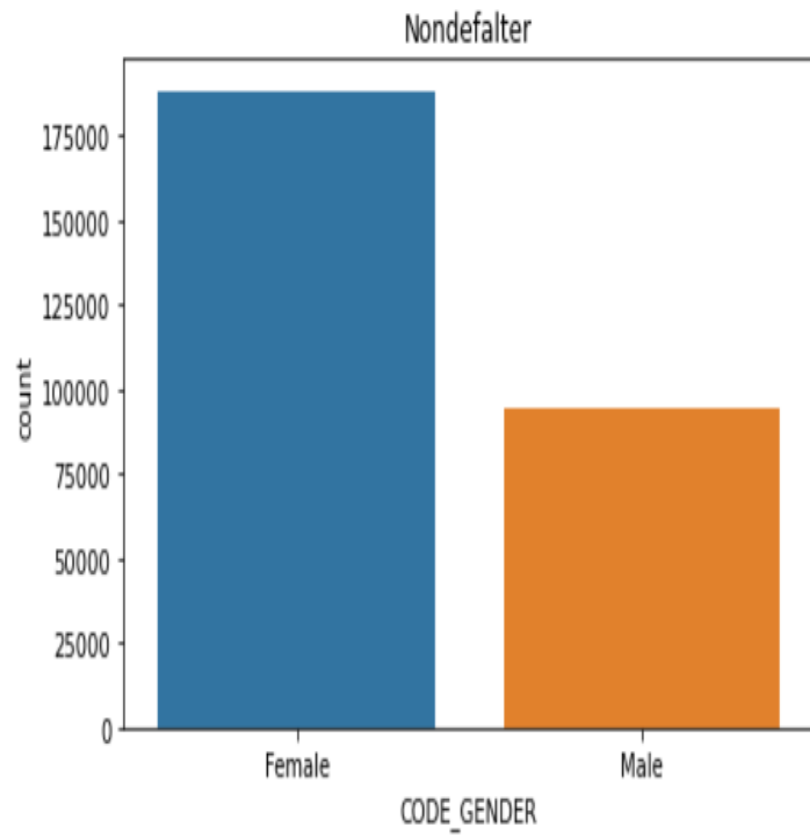


Segmented Univariate analysis

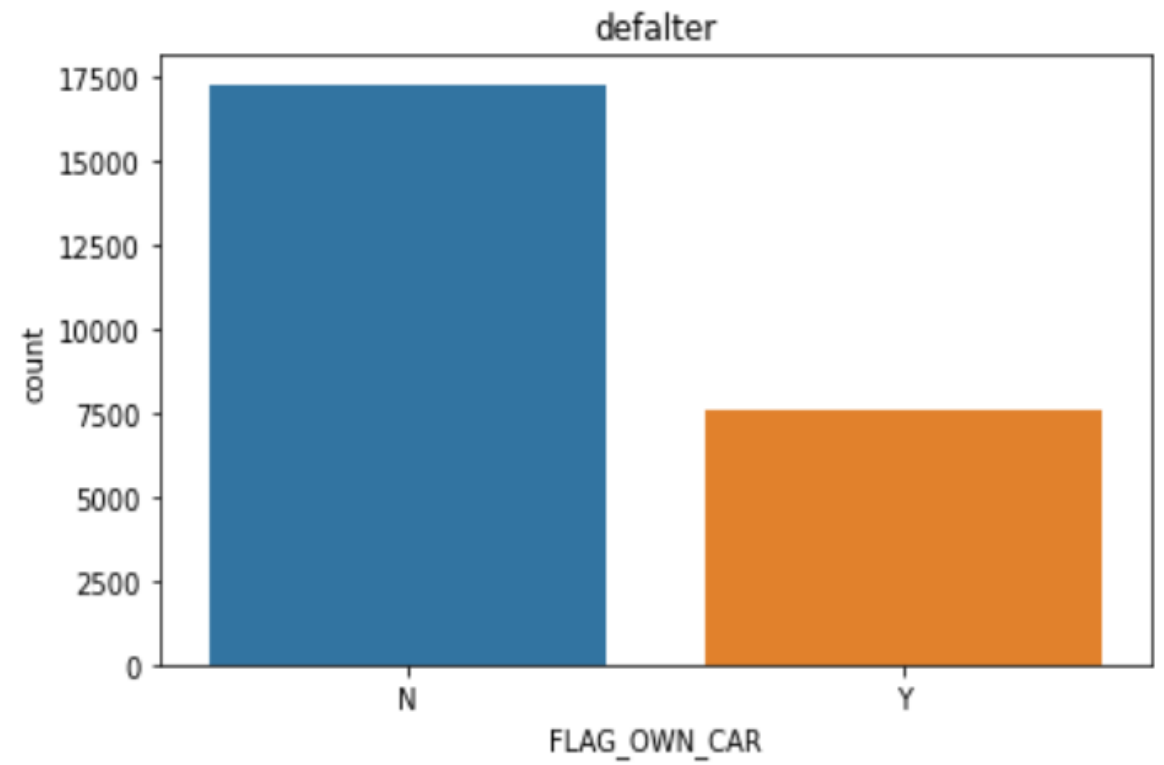
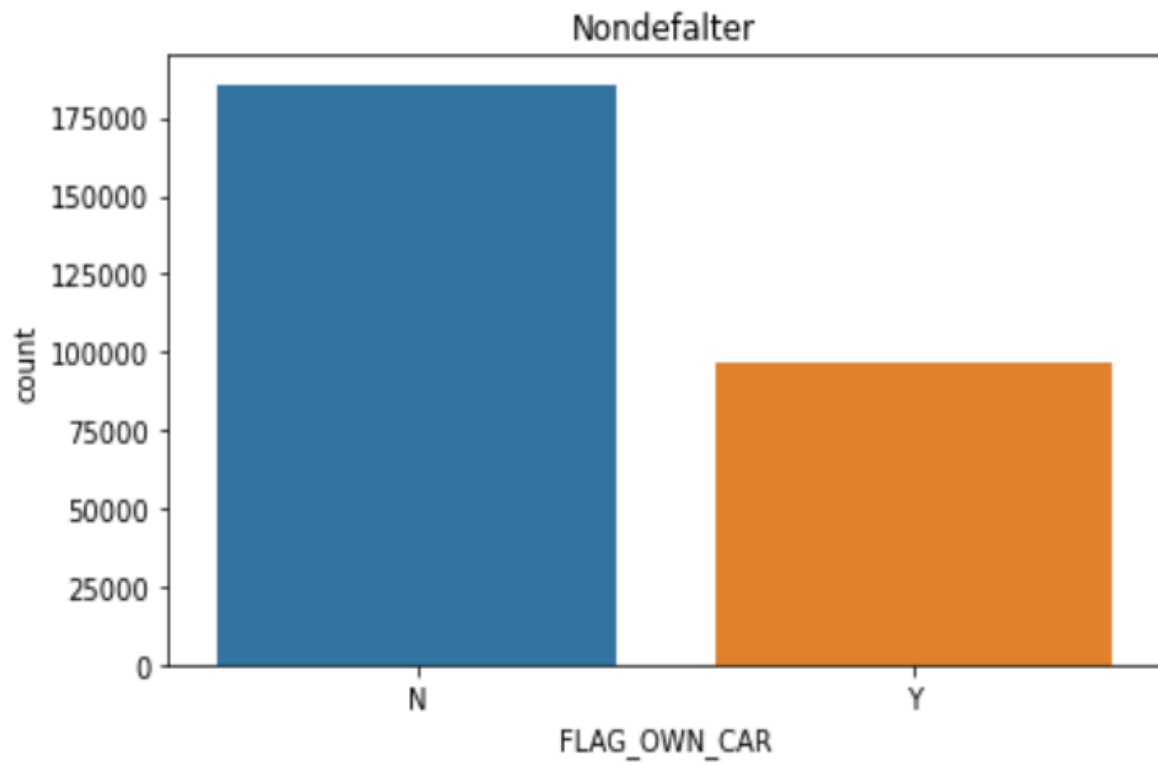


- Both Nondefaulters and defaulters opt for cash loans very less number of people go with revolving loans.

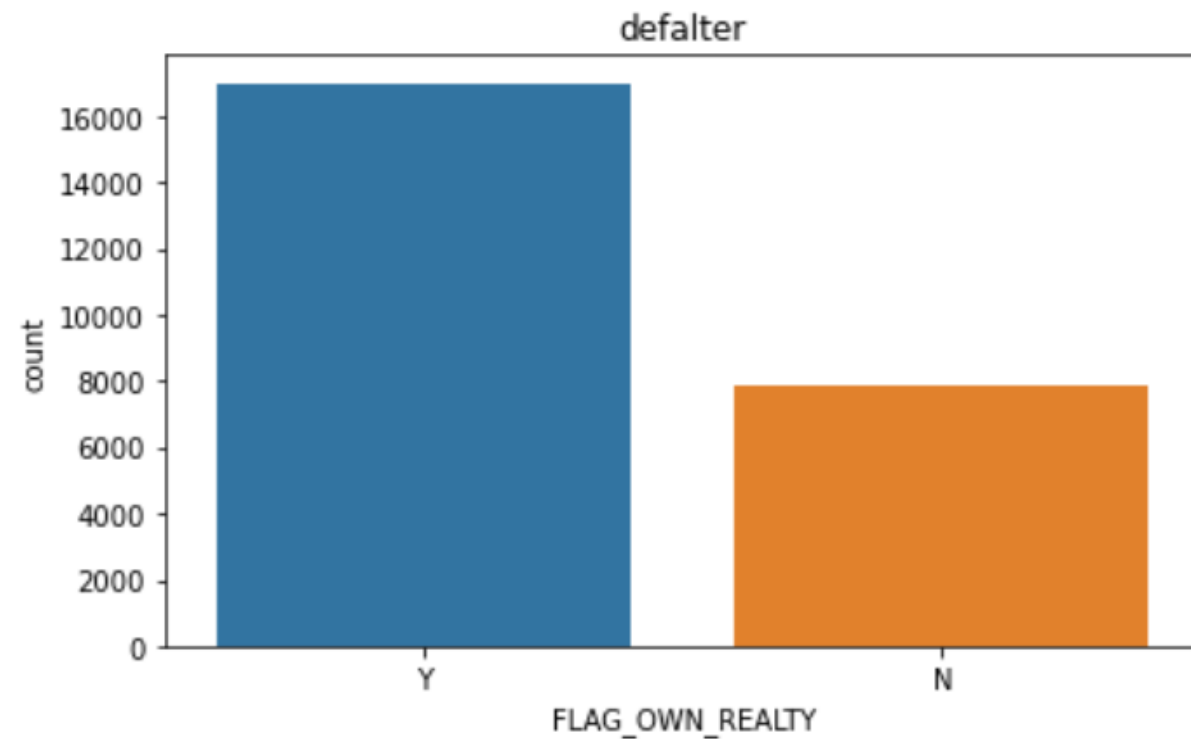
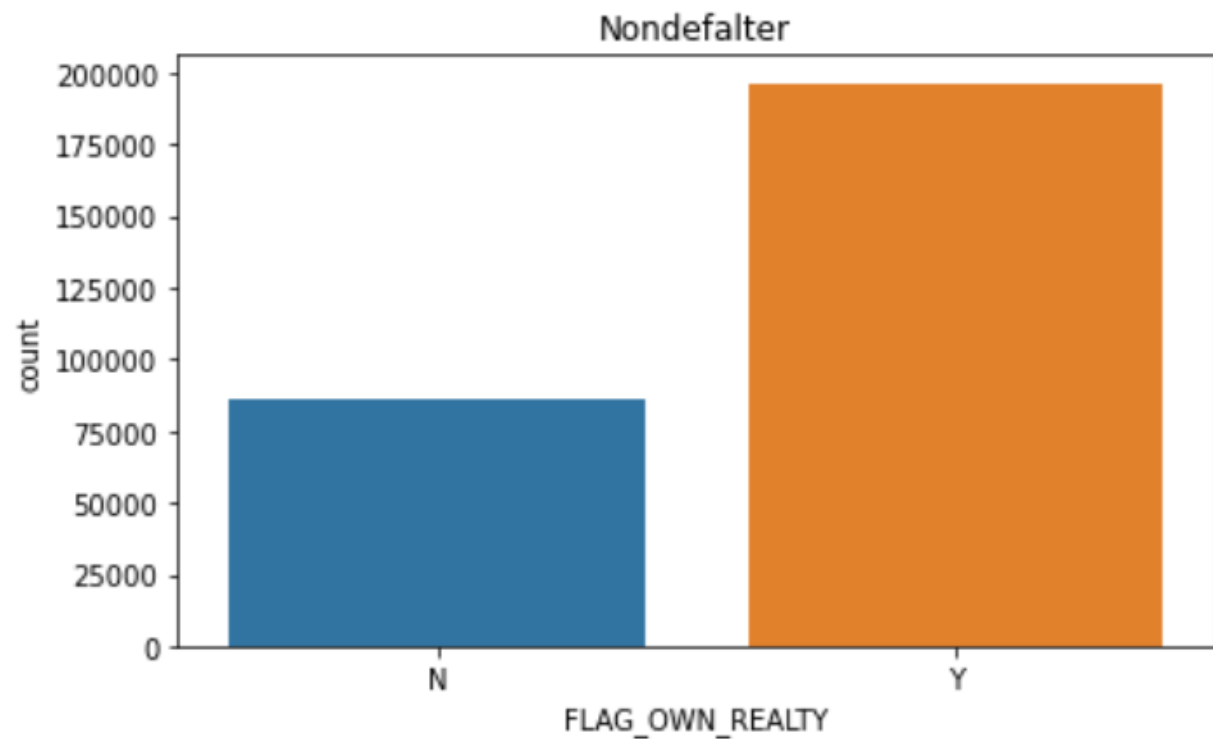
CODE_GENDER



- AS We can see Female is taking more loan to compare to male

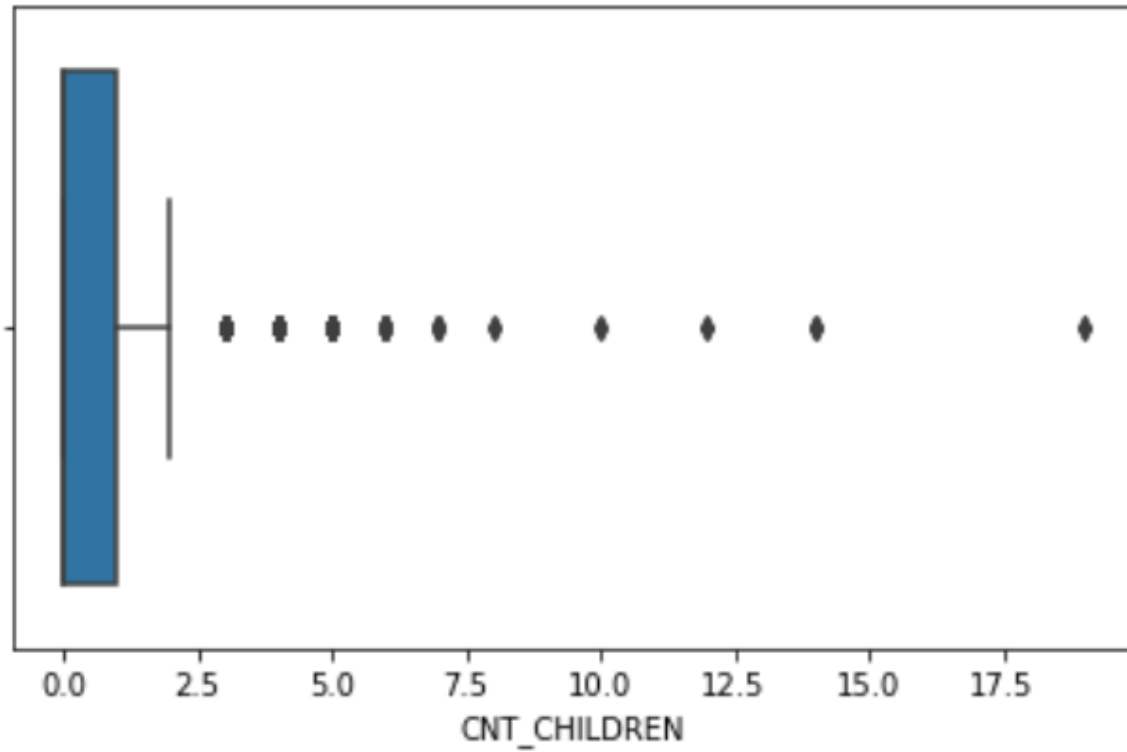


- Most of the applicants do not have a car.

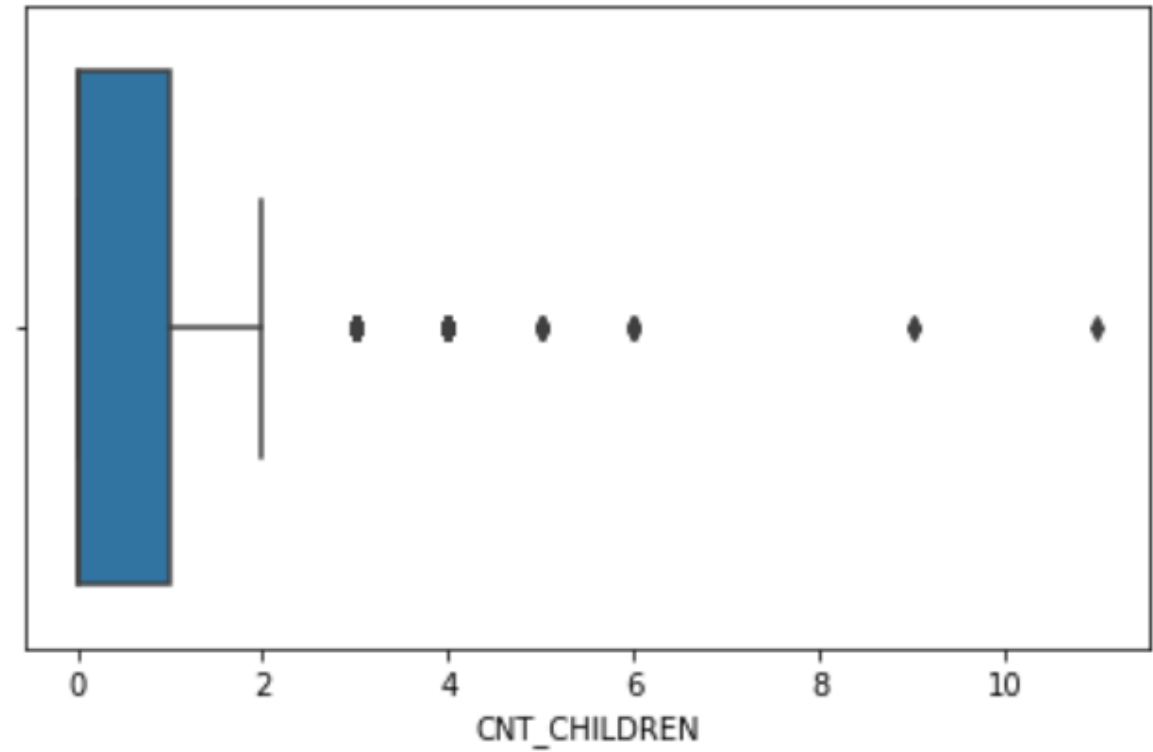


Even defalter and non-defalter own flat or house but defalter who does not have flat or any reality is more risker.

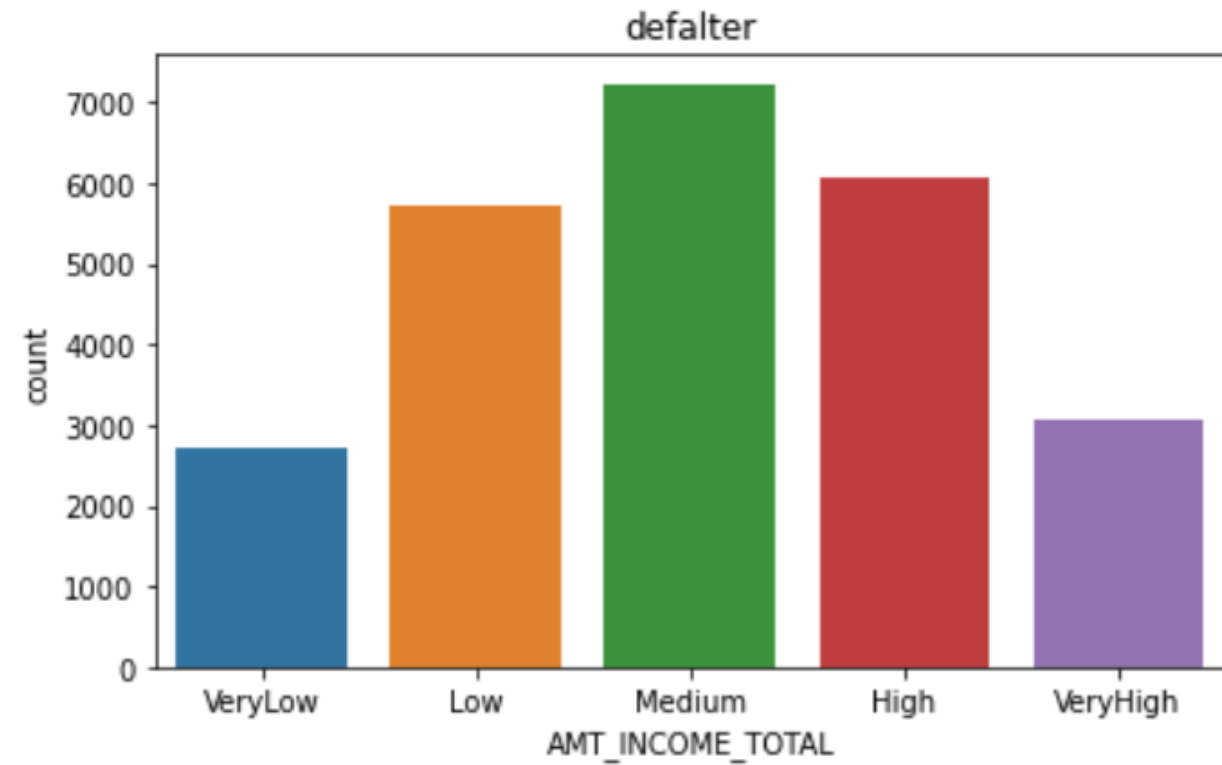
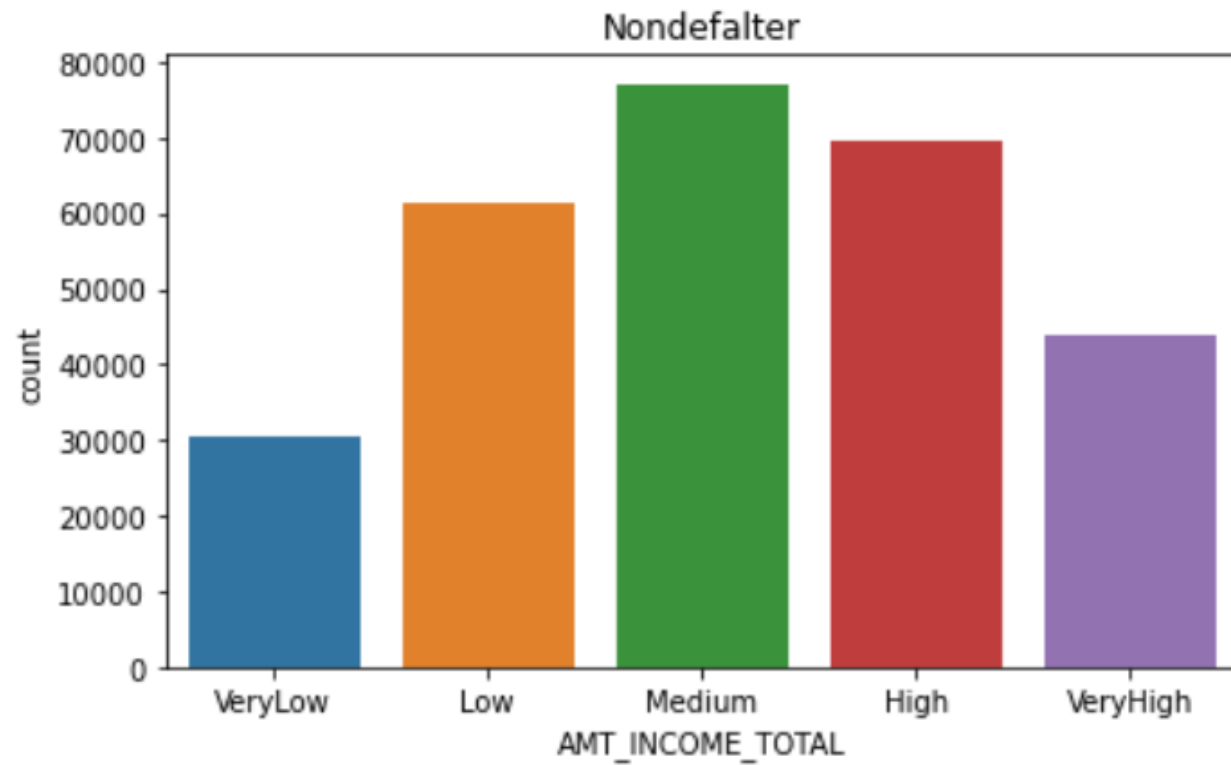
Nondefalter



defalter

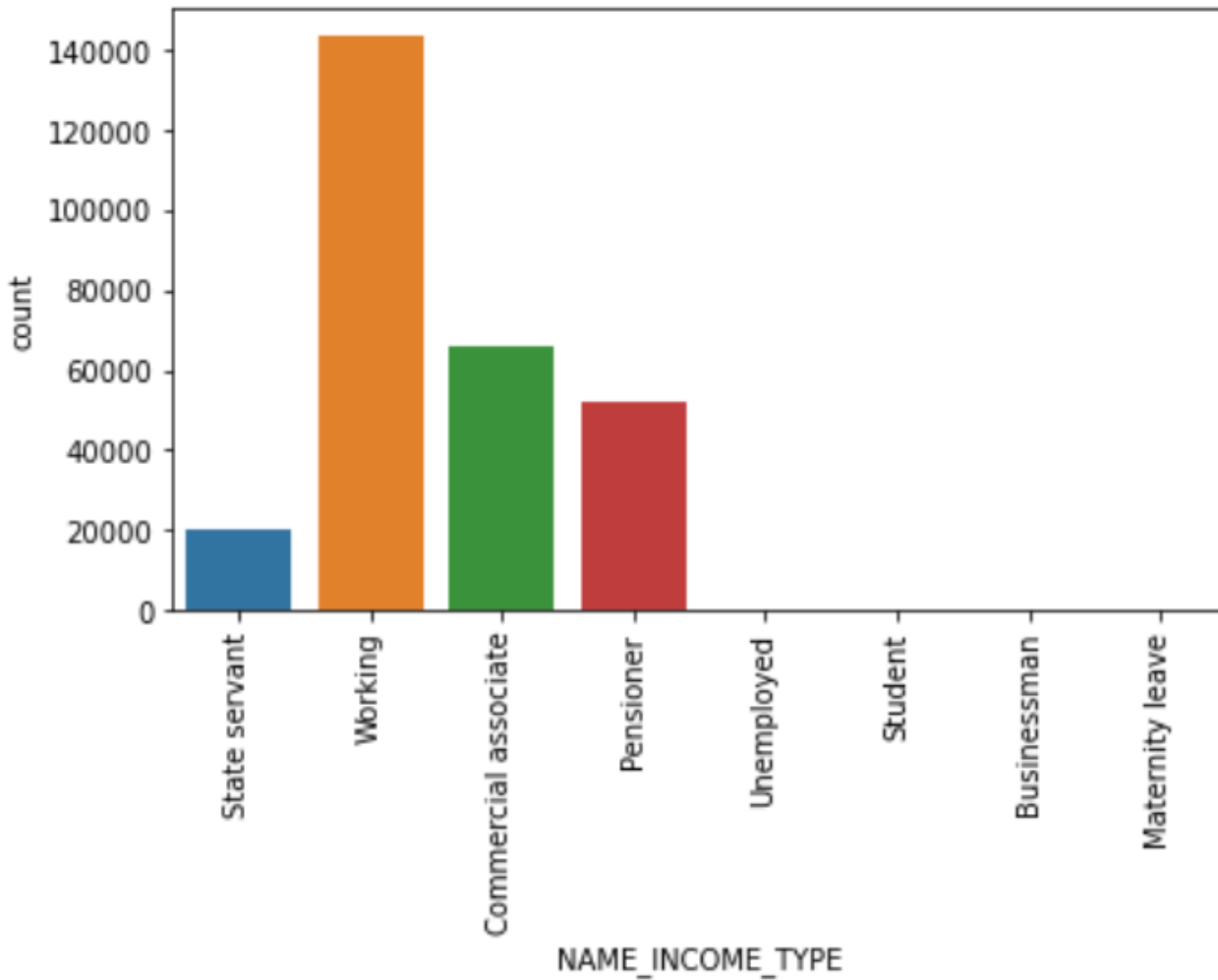


- Some clients having 5- 18 children Bank should consider a number of family members before giving loans.

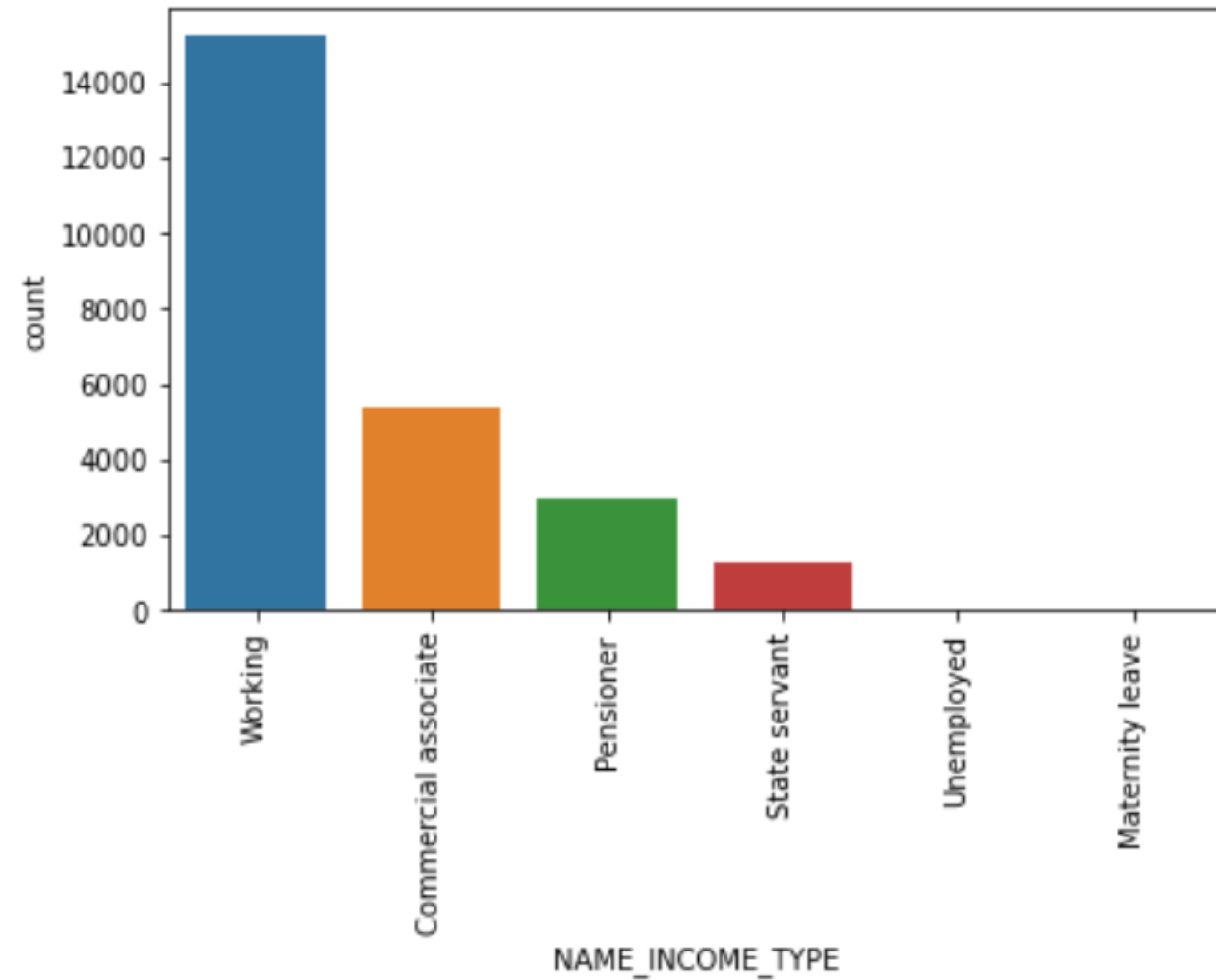


Even defaulter are having very low income bank if client having low income and not having any reality than it would be risk for bank.

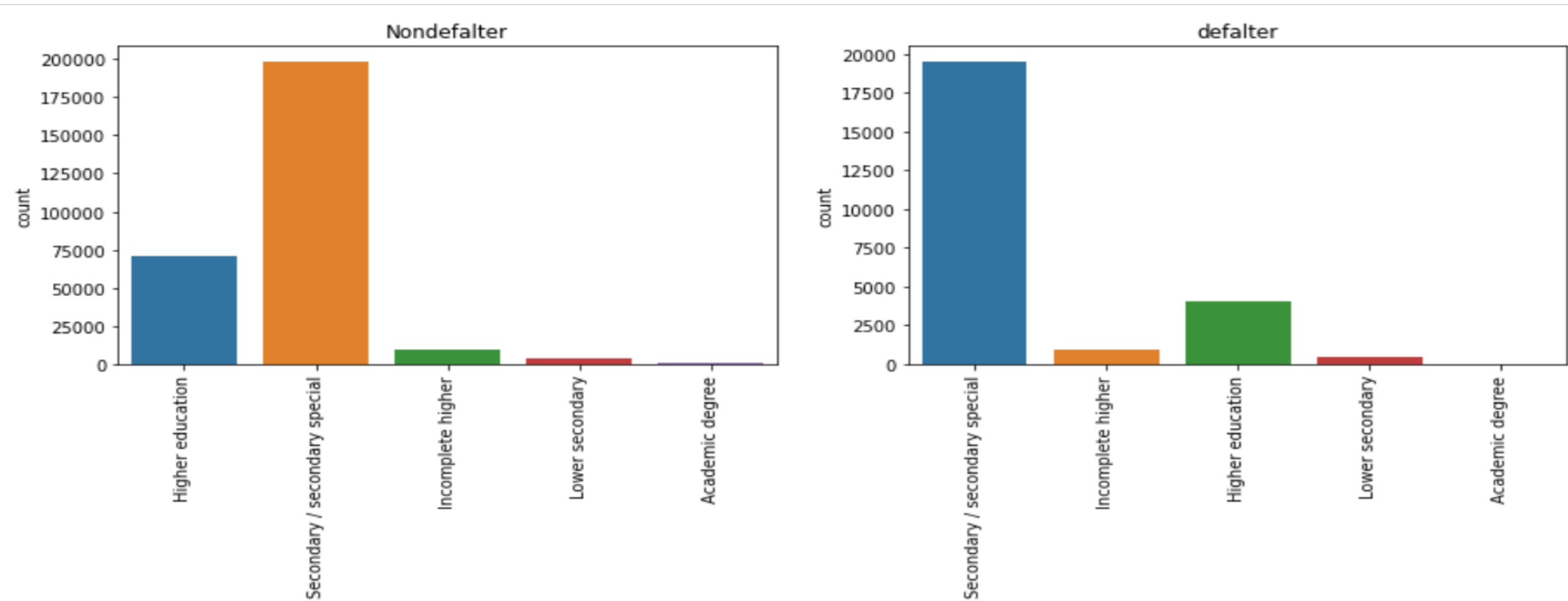
Nondefalter



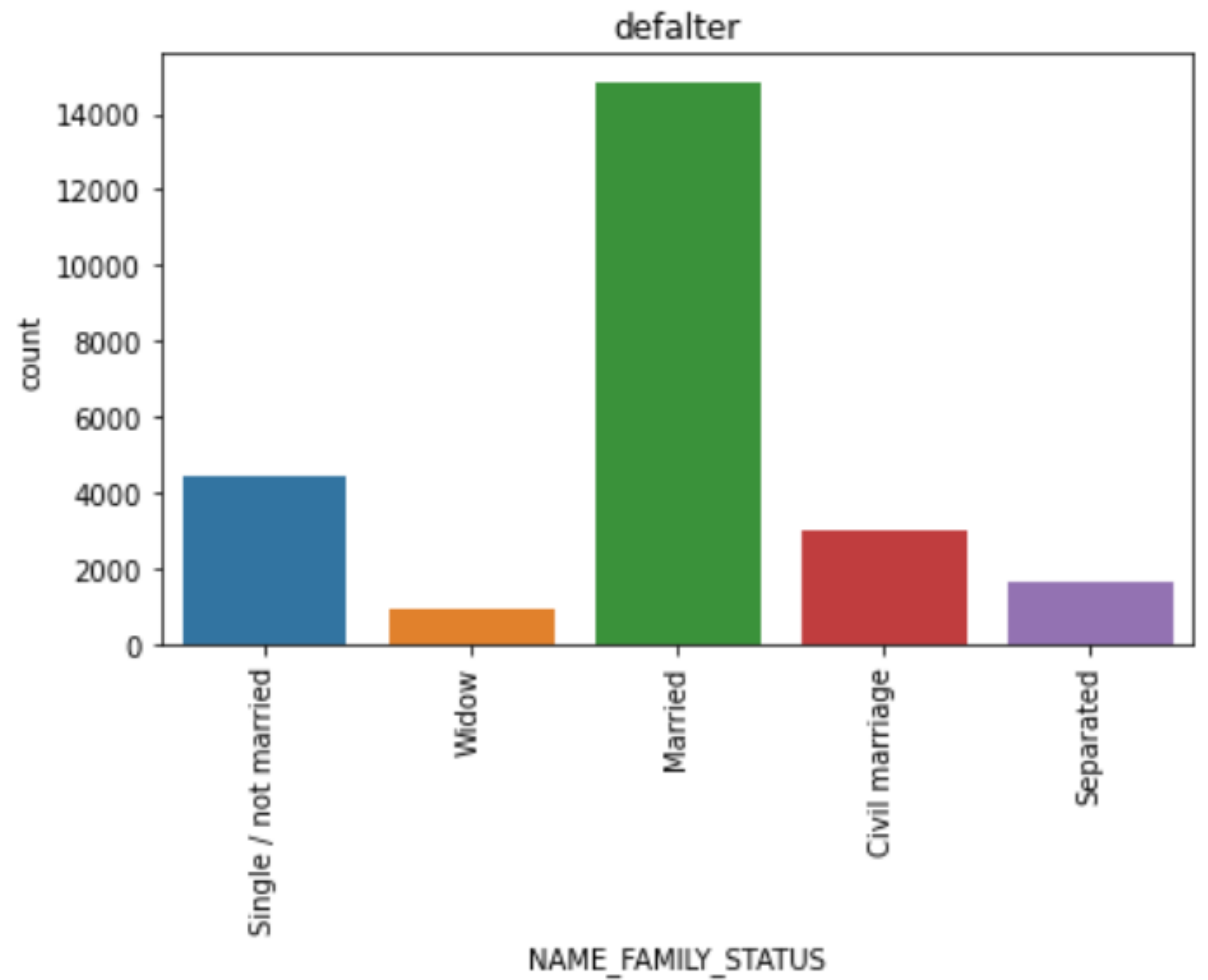
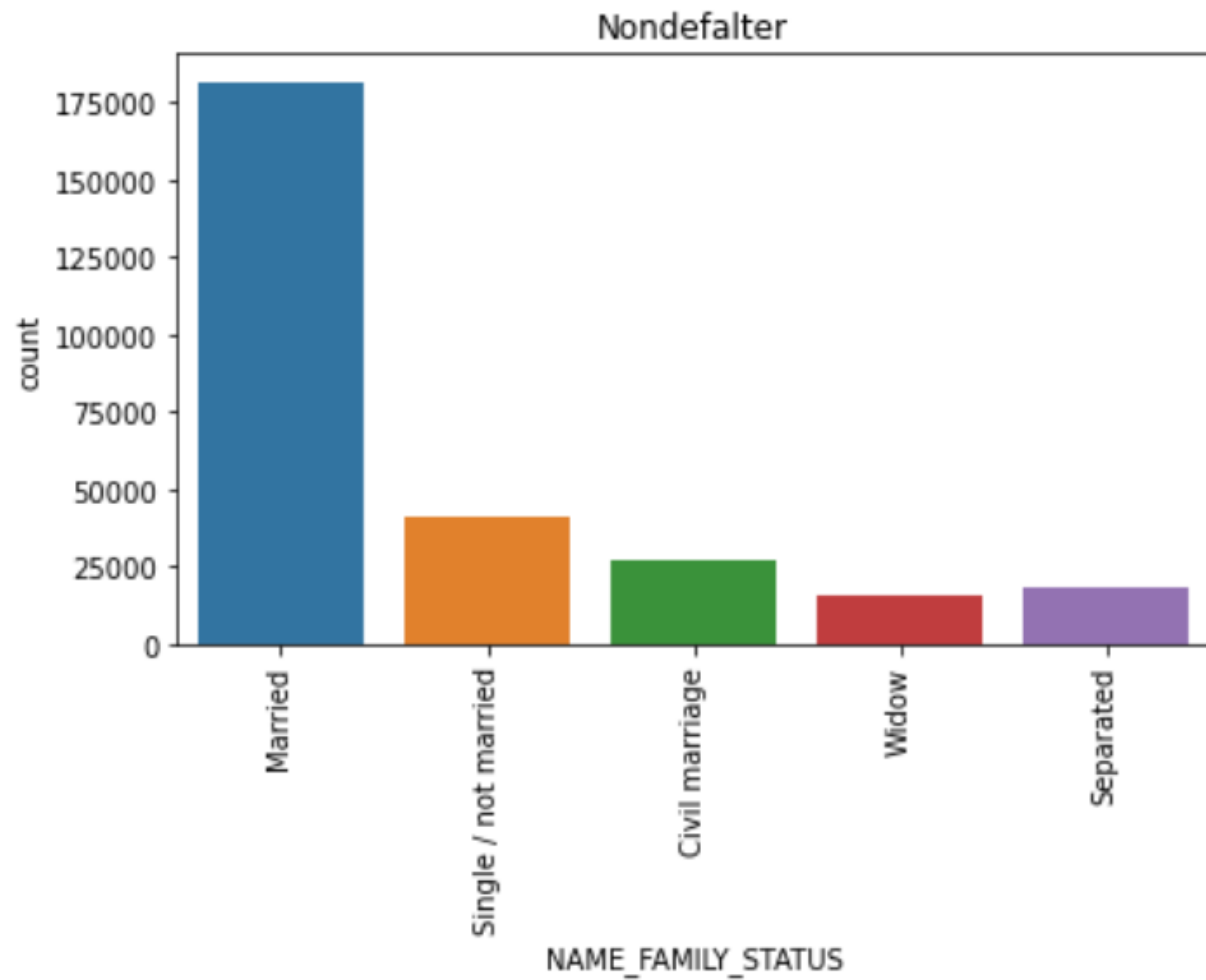
defalter



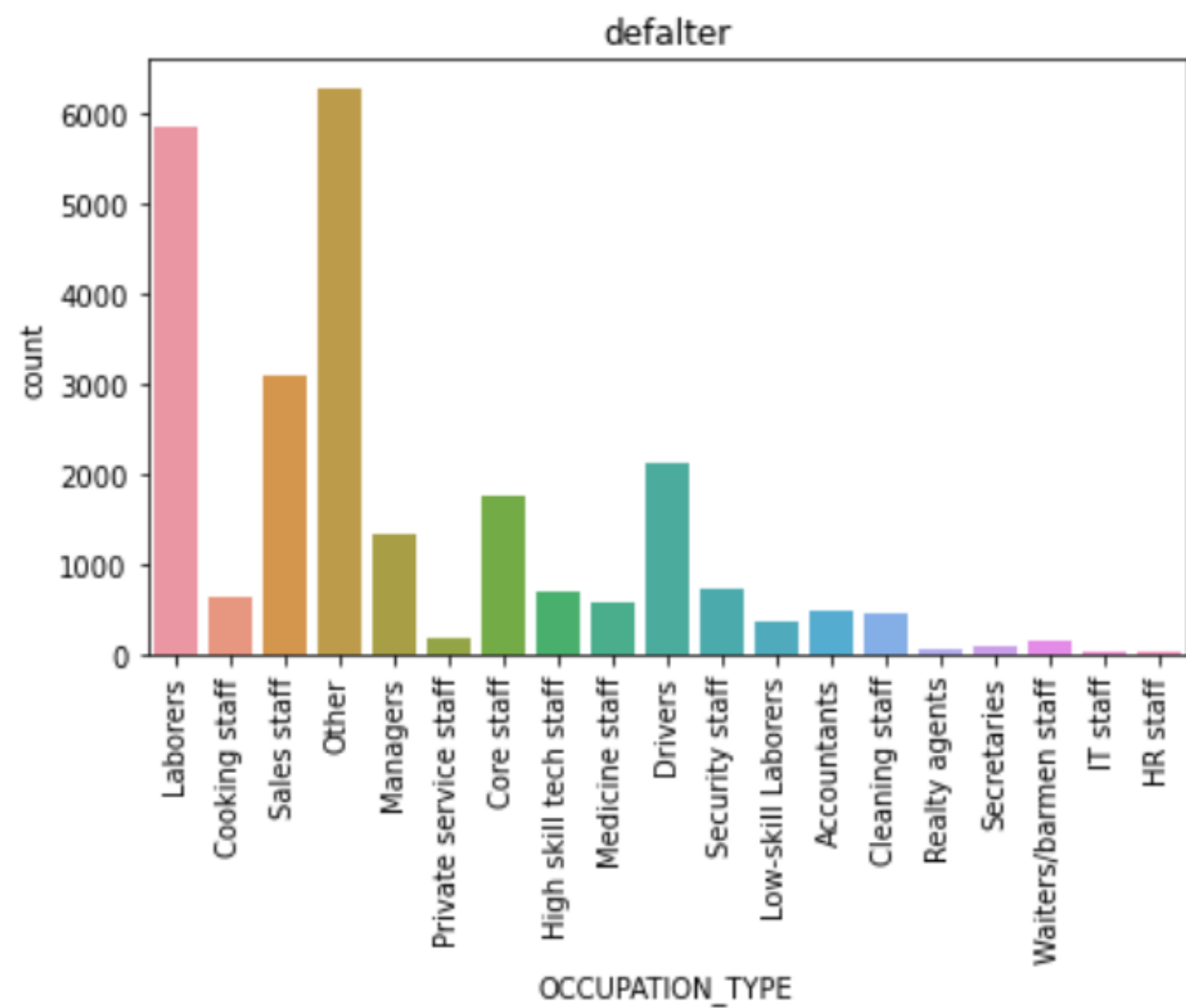
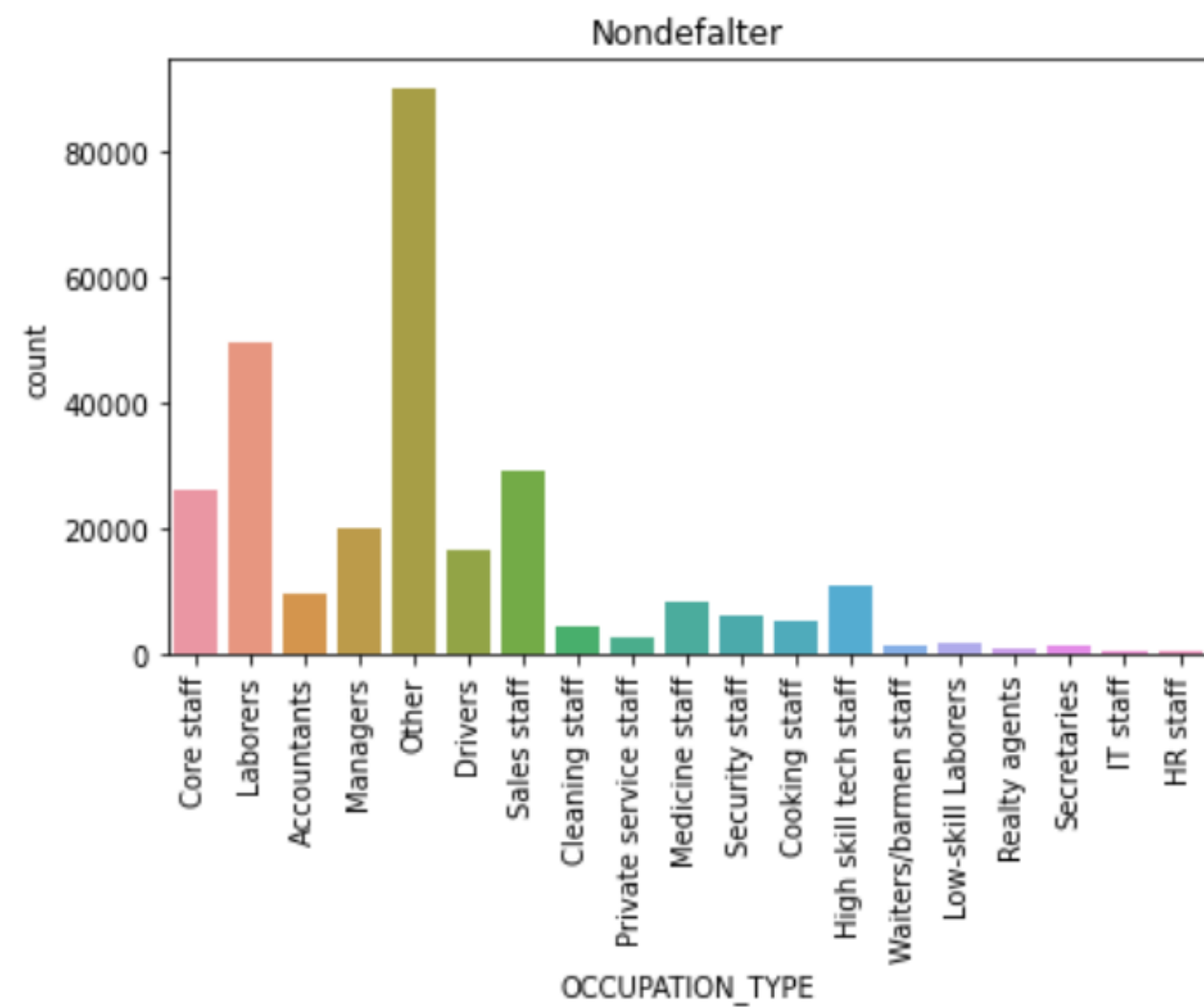
Bank does not provide loan to students
unemployed maternity leave and businessman.



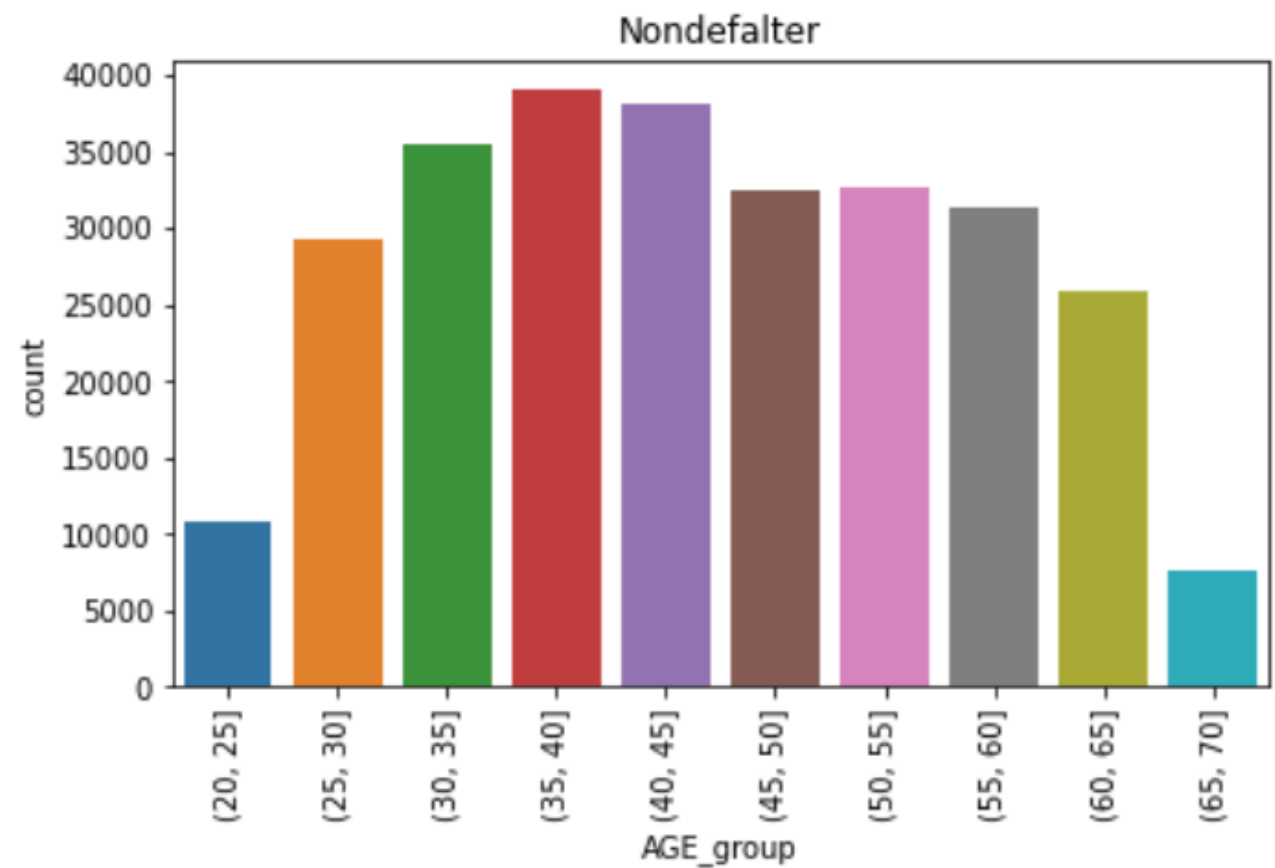
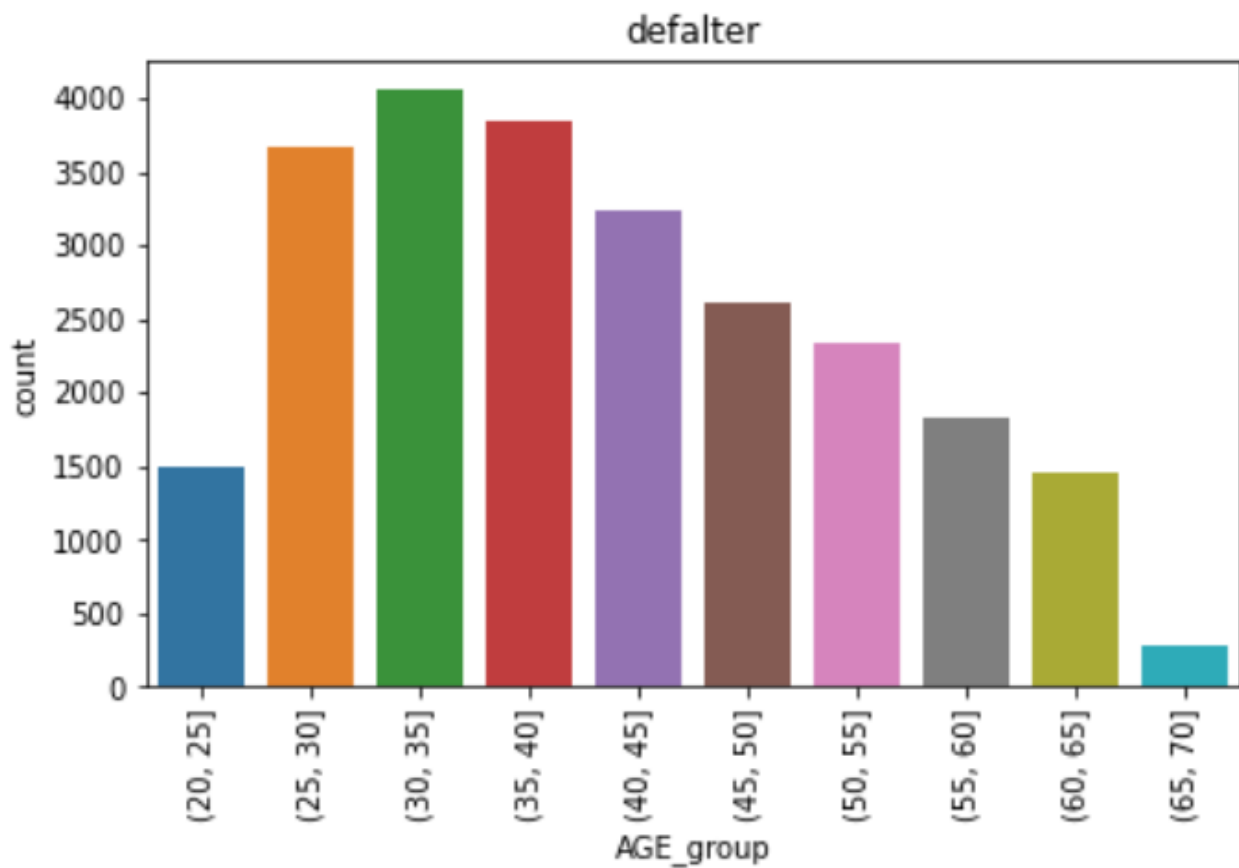
Mostly Secondary/secondary special apply for loans but there is an interesting fact Academic degree holder is non-defaulters.



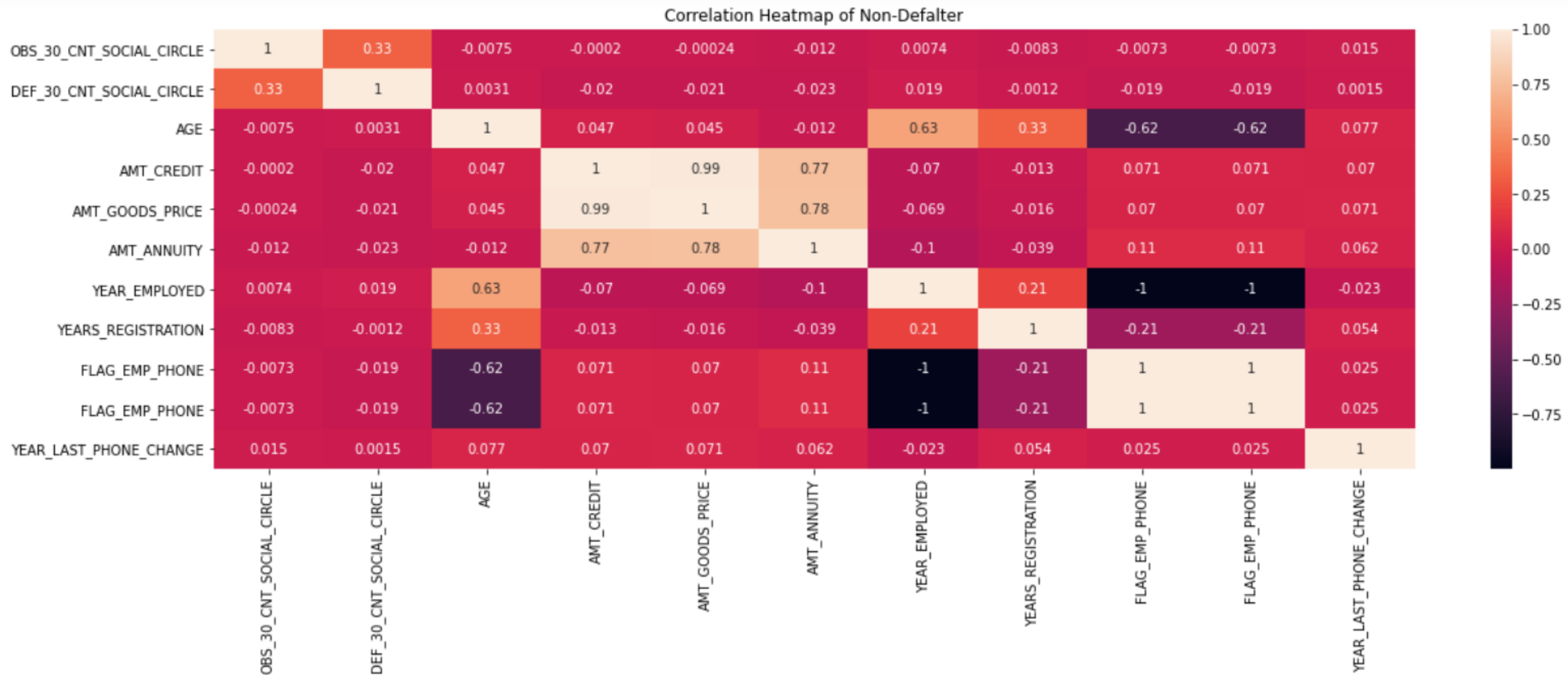
Most of the loan that applied is married



If we see defaulters we can observe Laborers's state staff and others are more defaulters.



Age 25 – 40 is more defalter

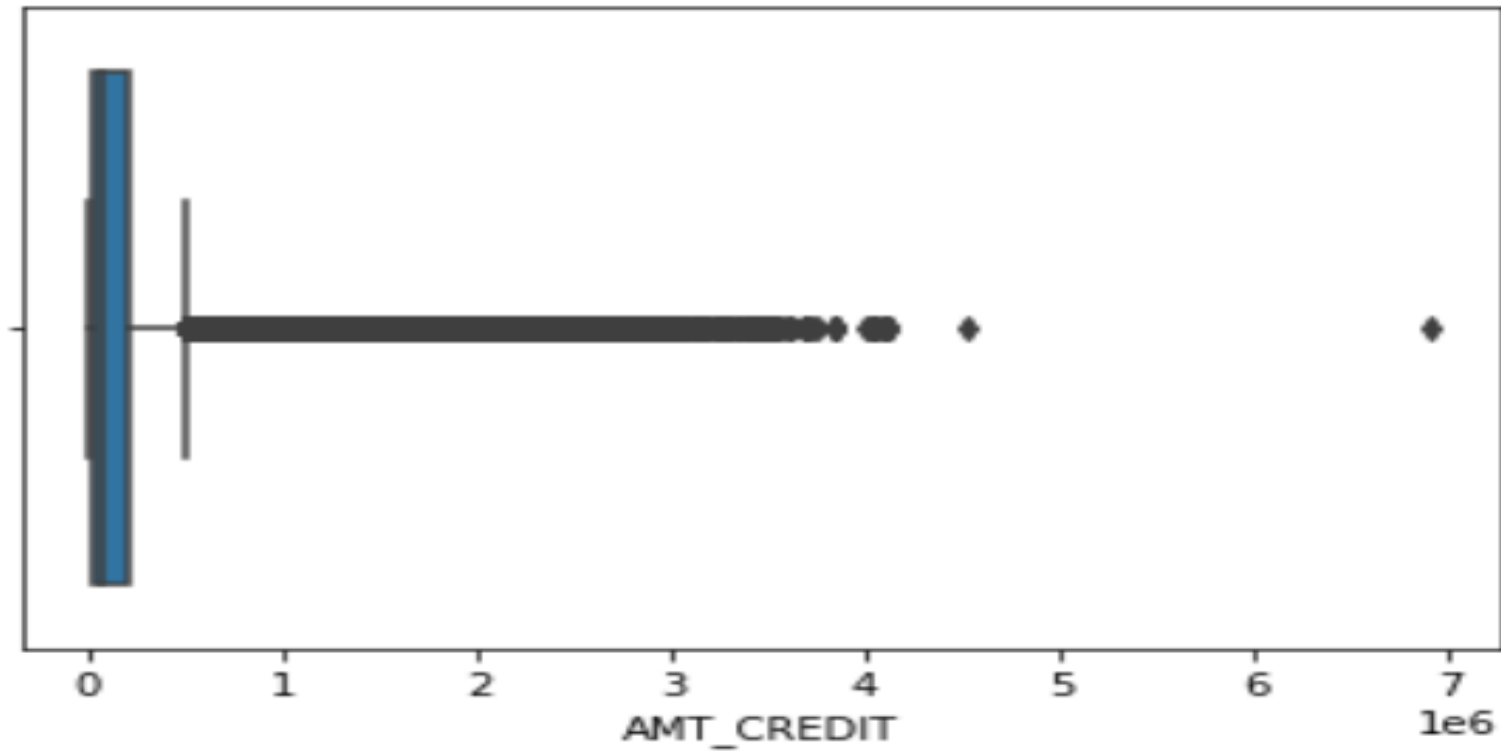


- -1 indicates a perfectly negative linear correlation between two variables.
- 0 indicates no linear correlation between two variables.
- 1 indicates a perfectly positive linear correlation between two variables.

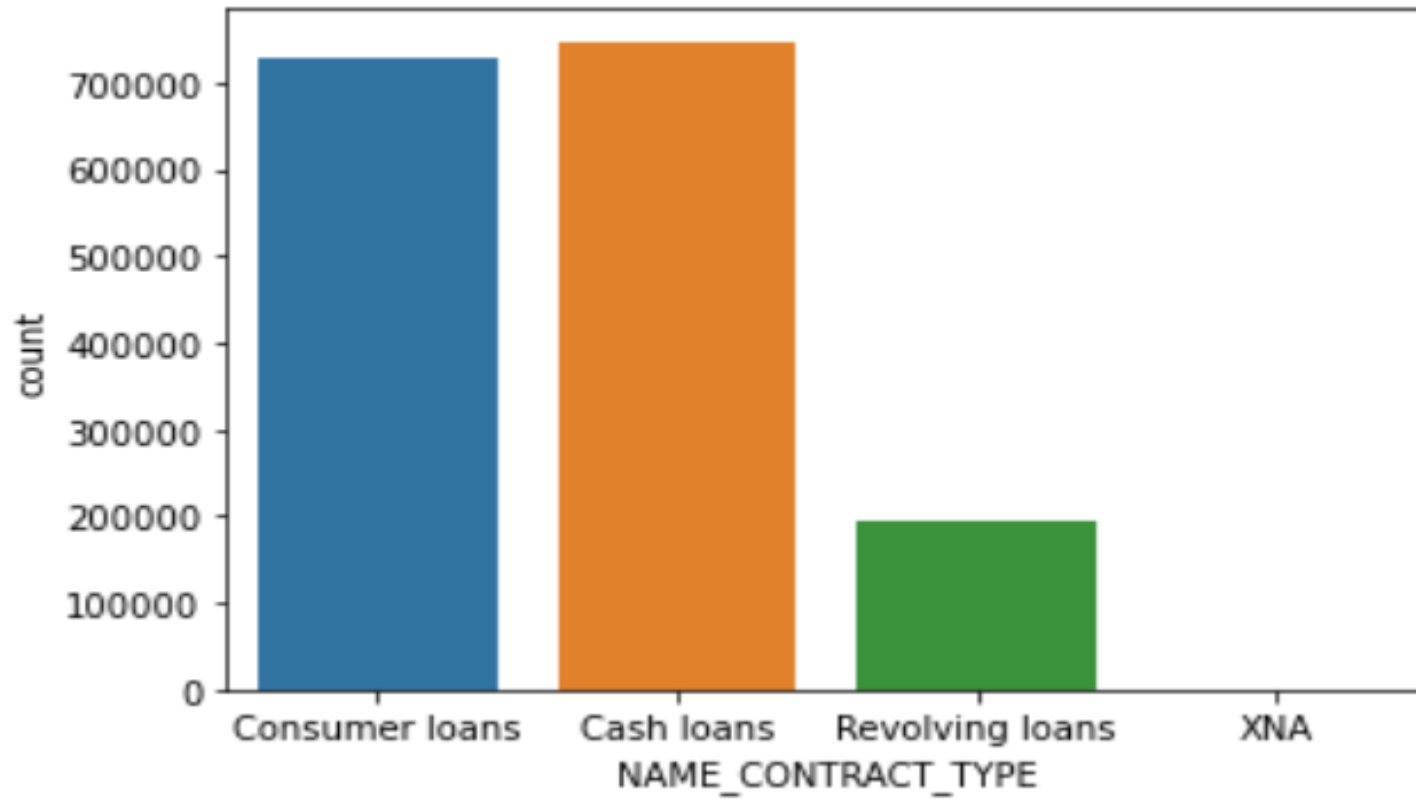


Correlation Heatmap for defaulters

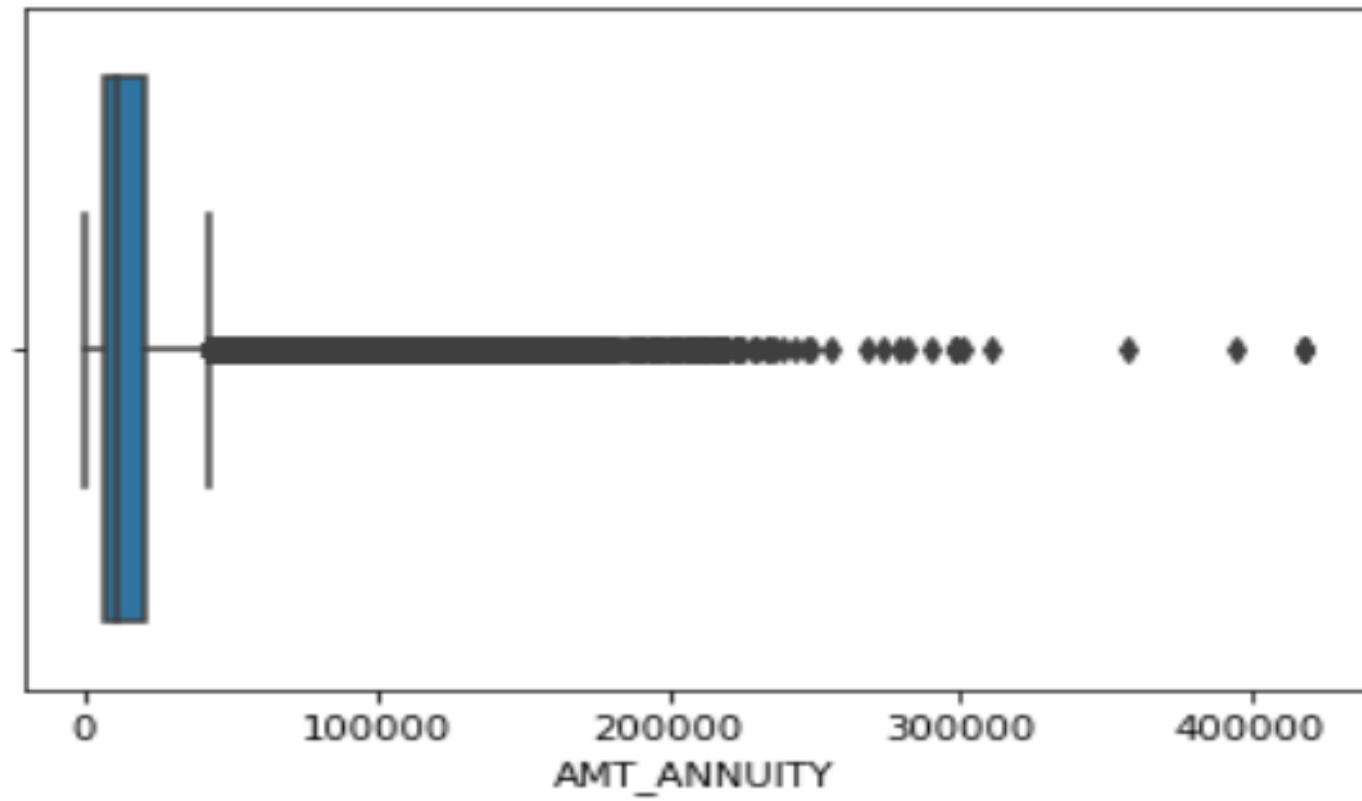
Previous Application Analysis



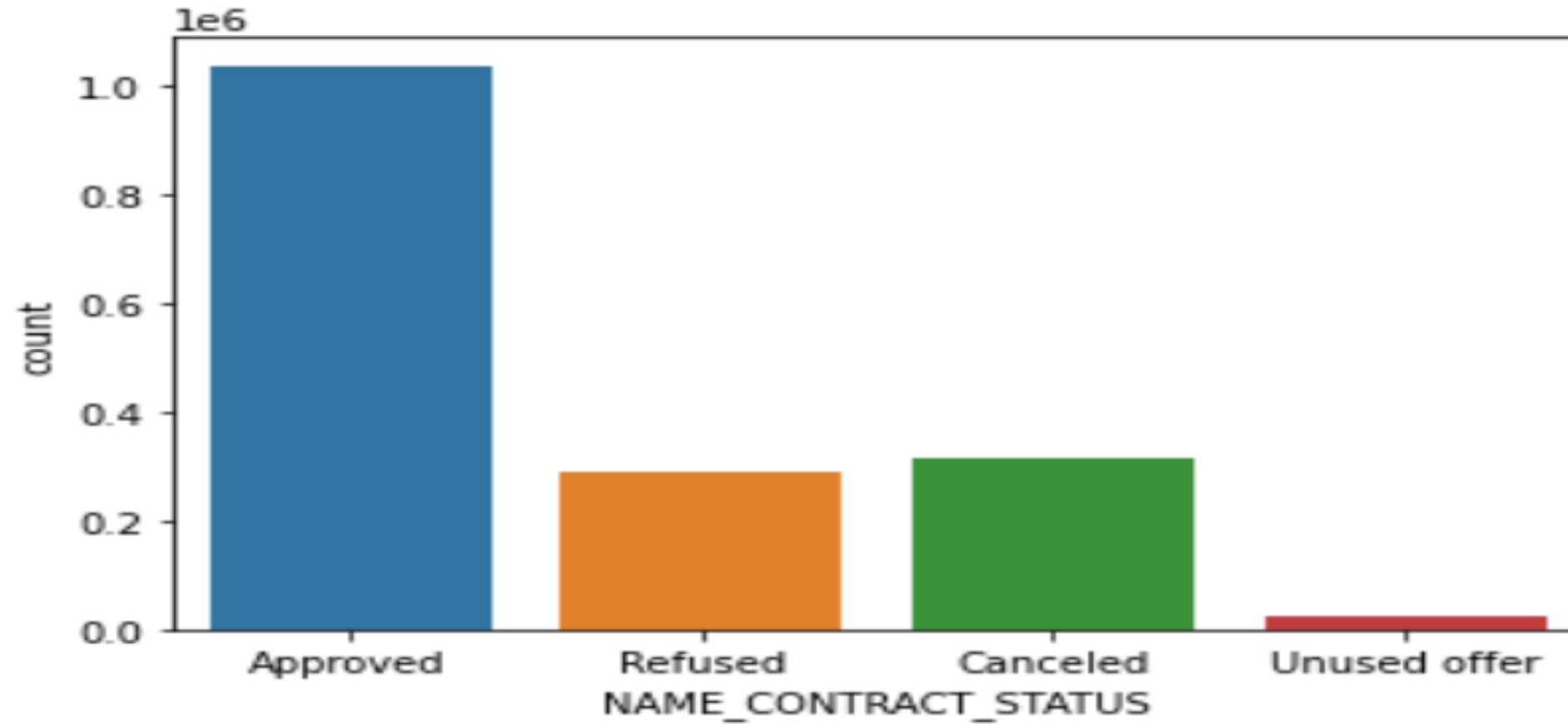
NAME_CONTRACT_TYPE



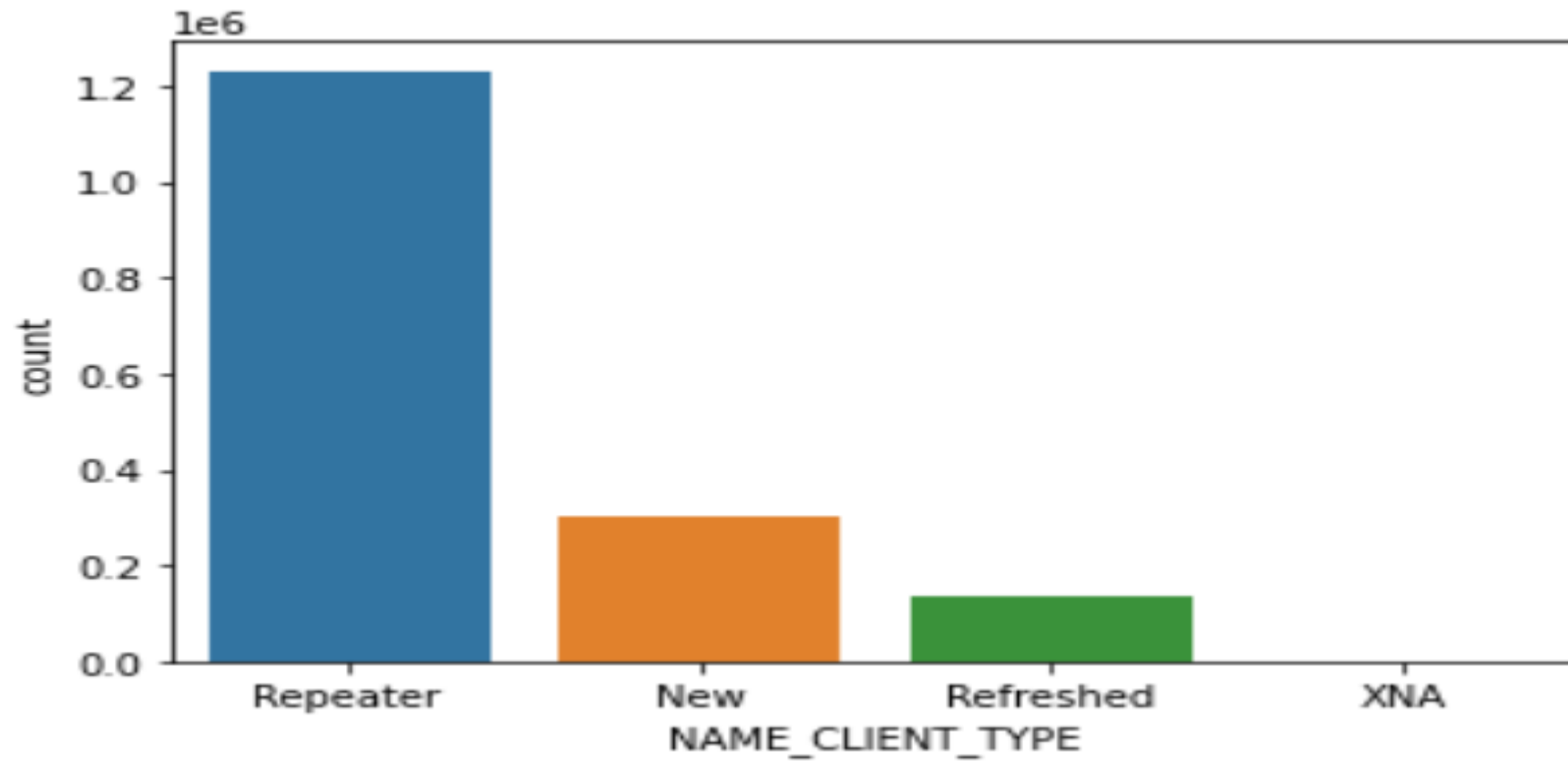
AMT_ANNUTY



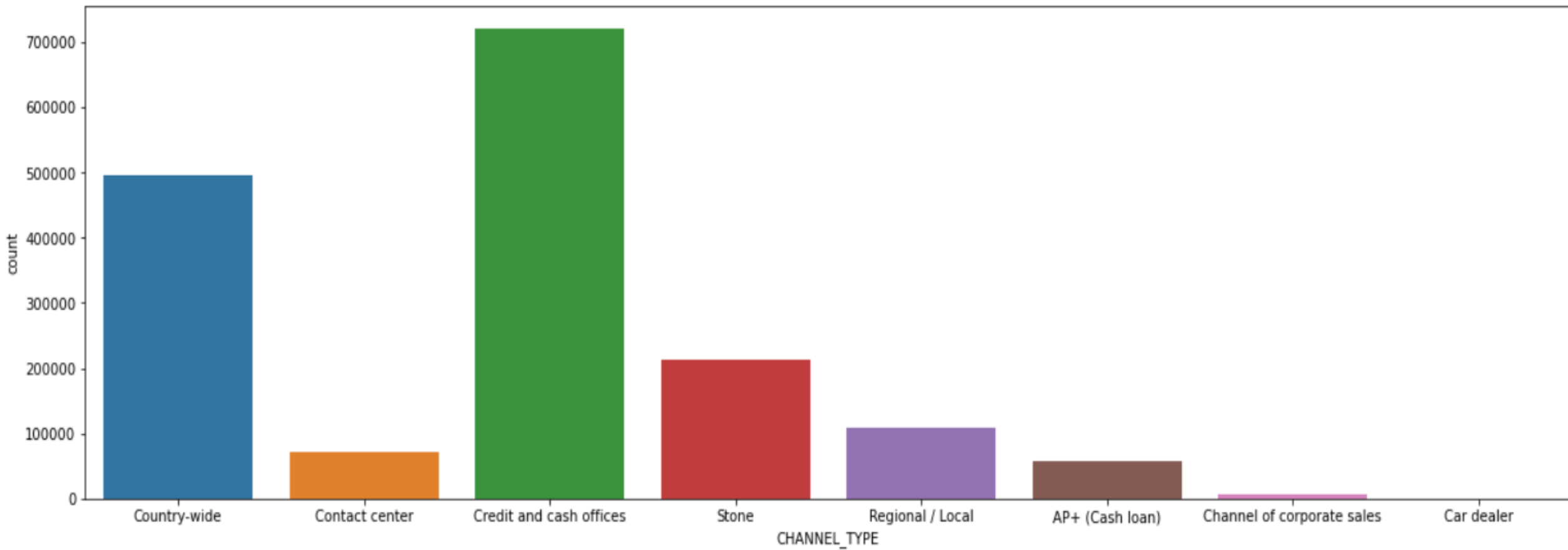
NAME_CONTRACT_STATUS



NAME_CLIENT_TYPE



CHANNEL_TYPE



CONCLUSION-

- Most client opt for cash Loan even A good number of client went for consumer loans.
- AMT_ANNUITY and AMT_CREDIT have lots of outliers.
- Bank approve large number of loans.
- Bank Provide more loans to his repeated customers and new and refresher is in very less numbers.
- most of the bank acquired the client with the cash and credit offices and country wide on the previous application
- CNT_PAYMENT has lots of outliers.
- Bank provides middle and high intrest rate but there is large number of NULL value present bank should keep data.
- ON the basis of previous credit bank cacle and refused most of the loans only 15% is approved.
- The bank give more loan to Female

CONCLUSION-

- Bank lends more money to good amount of its cash.
- Bank also having large number Repeater clients.
- There are some clients which has a large number of family members 5-20 but other lies between 1-3
- Here 92% are non-defaulter and 8% are defaulter.
- Most of the applicants do not have a car.
- Even defaulter and non-defaulter own flat or house but defaulter who does not have flat or any reality is more risker.
- Some clients having 5- 18 children Bank should consider a number of family members before giving loans.

Conclusion-

- Even defaulters are having a very low-income bank if clients have low income and do not have any reality then it would be a risk for the bank.
- Bank does not provide loans to students, unemployed, maternity leave, and businessmen.
- Most of the loan that apply is married.
- Age 25 – 40 is more defaulter.