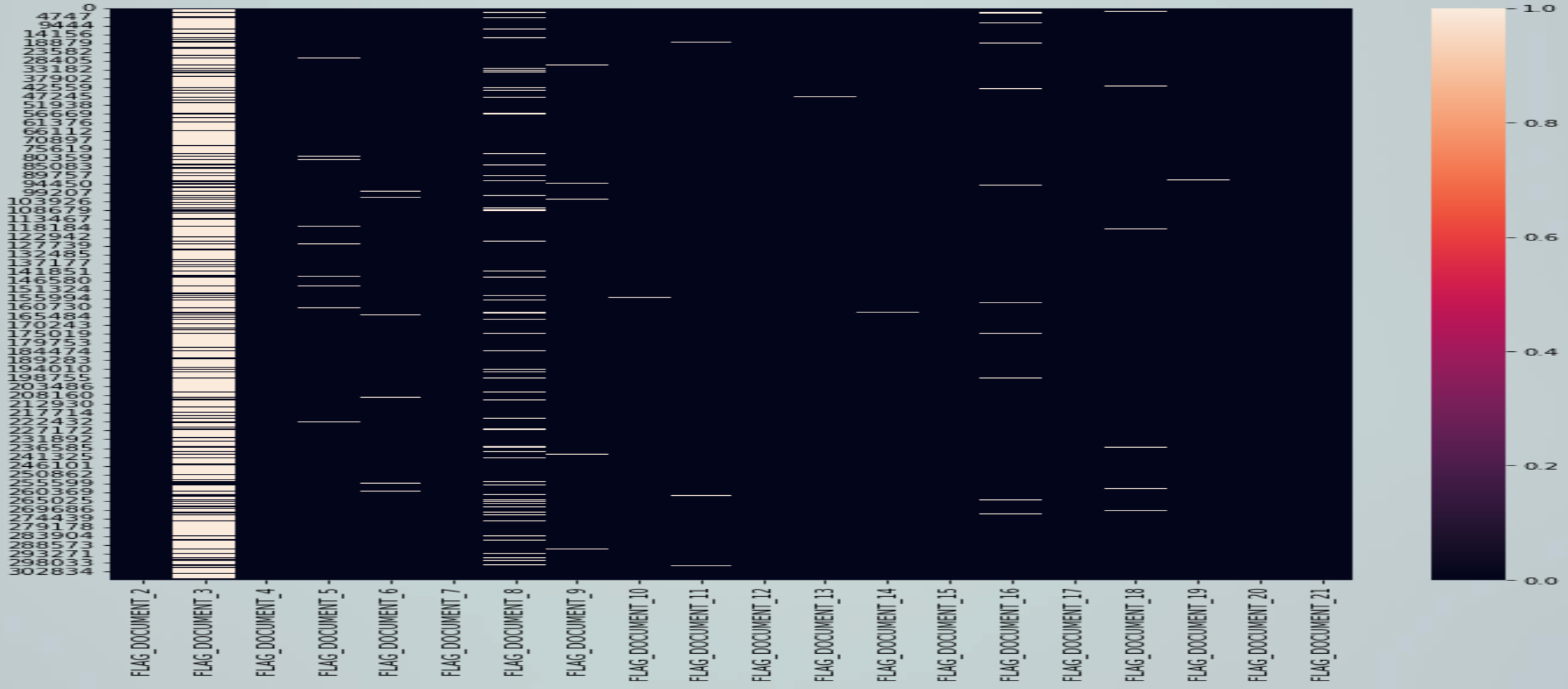
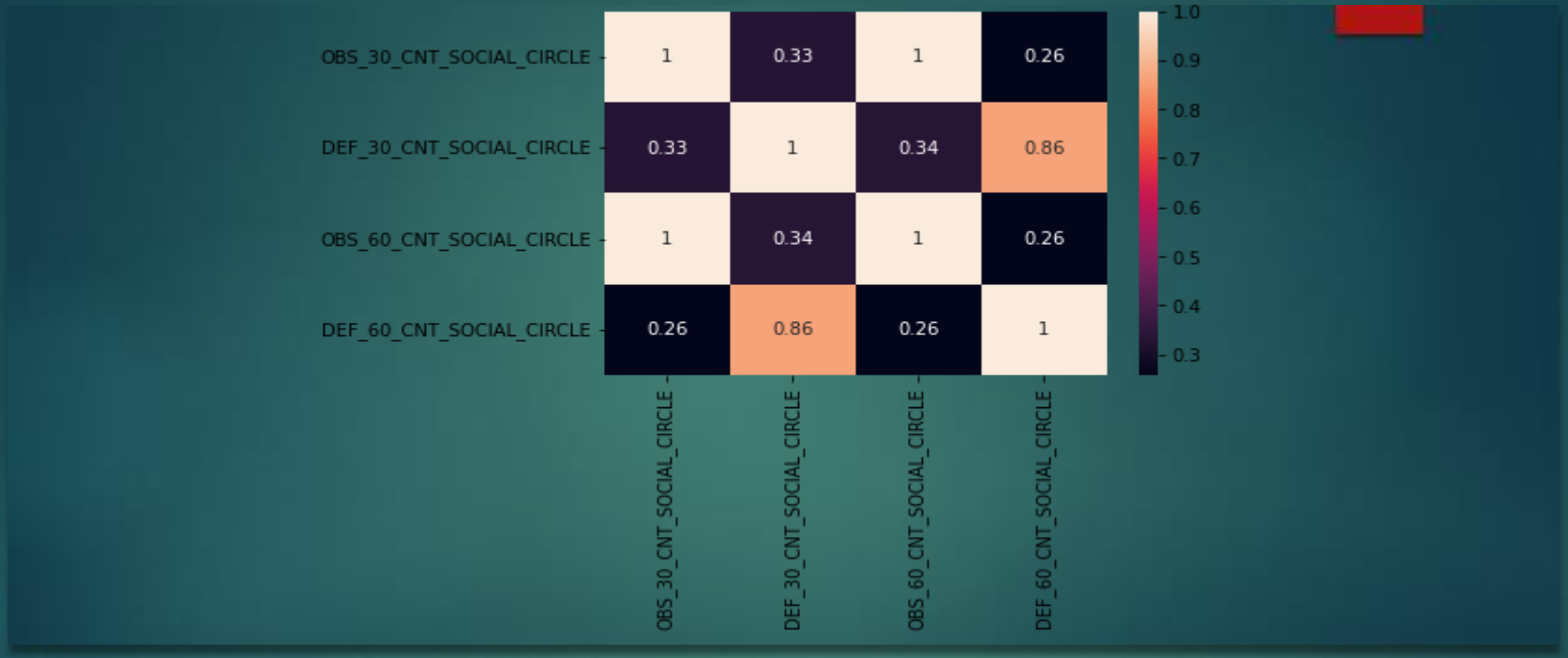
CREDIT LOAN CASE STUDY

BY ISRAR

CORELATION BETWEEN THE FLAG DOCUMENT

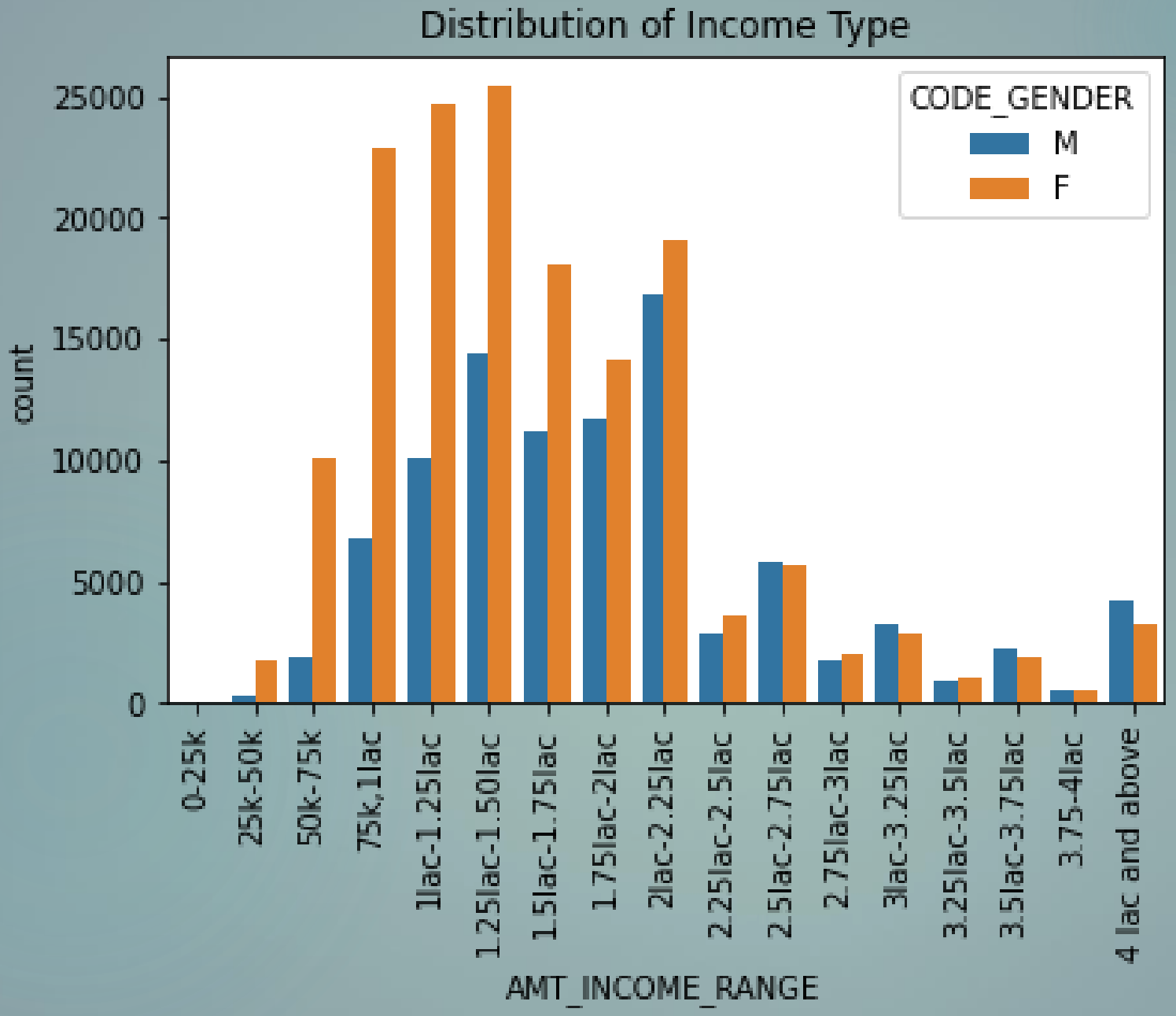


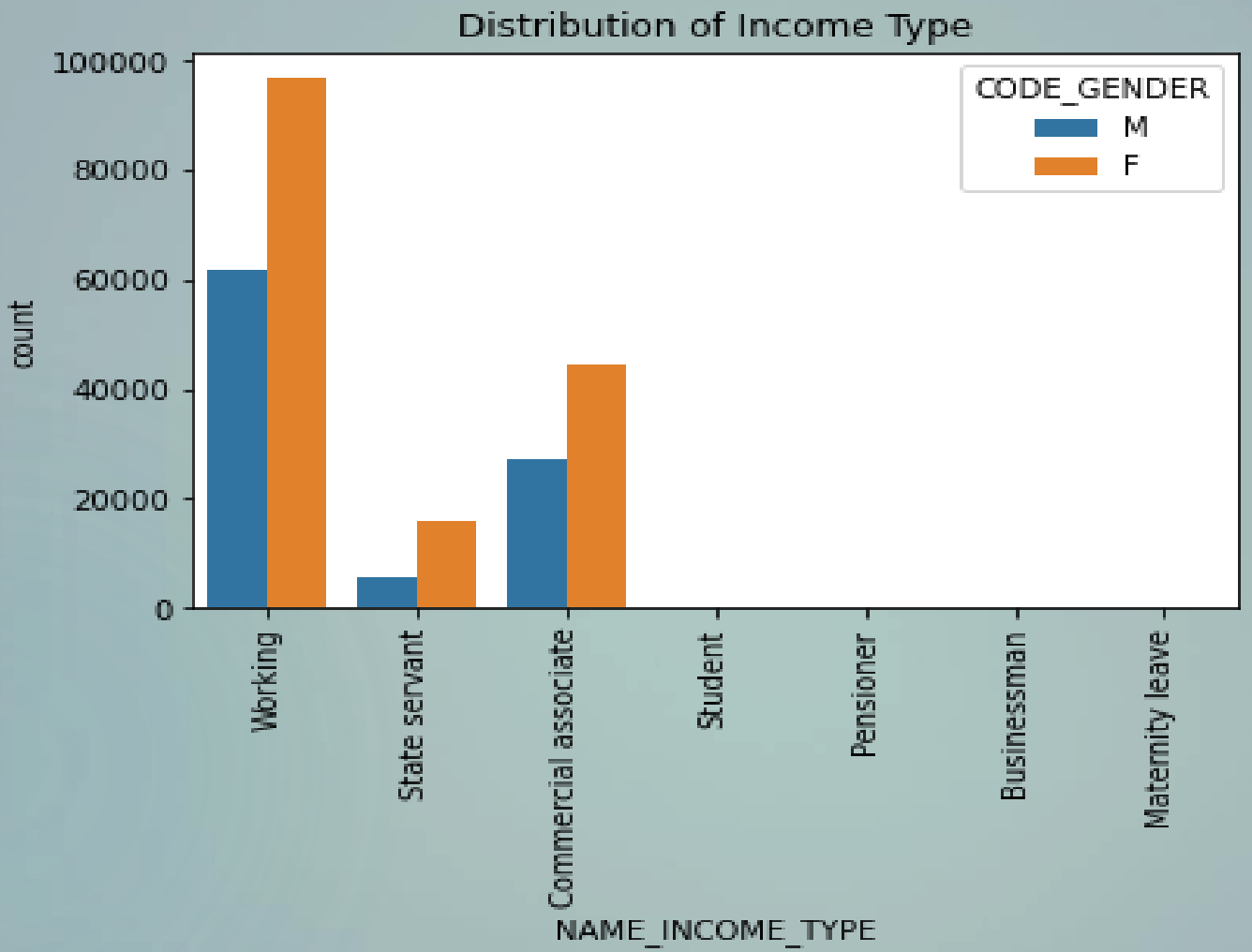


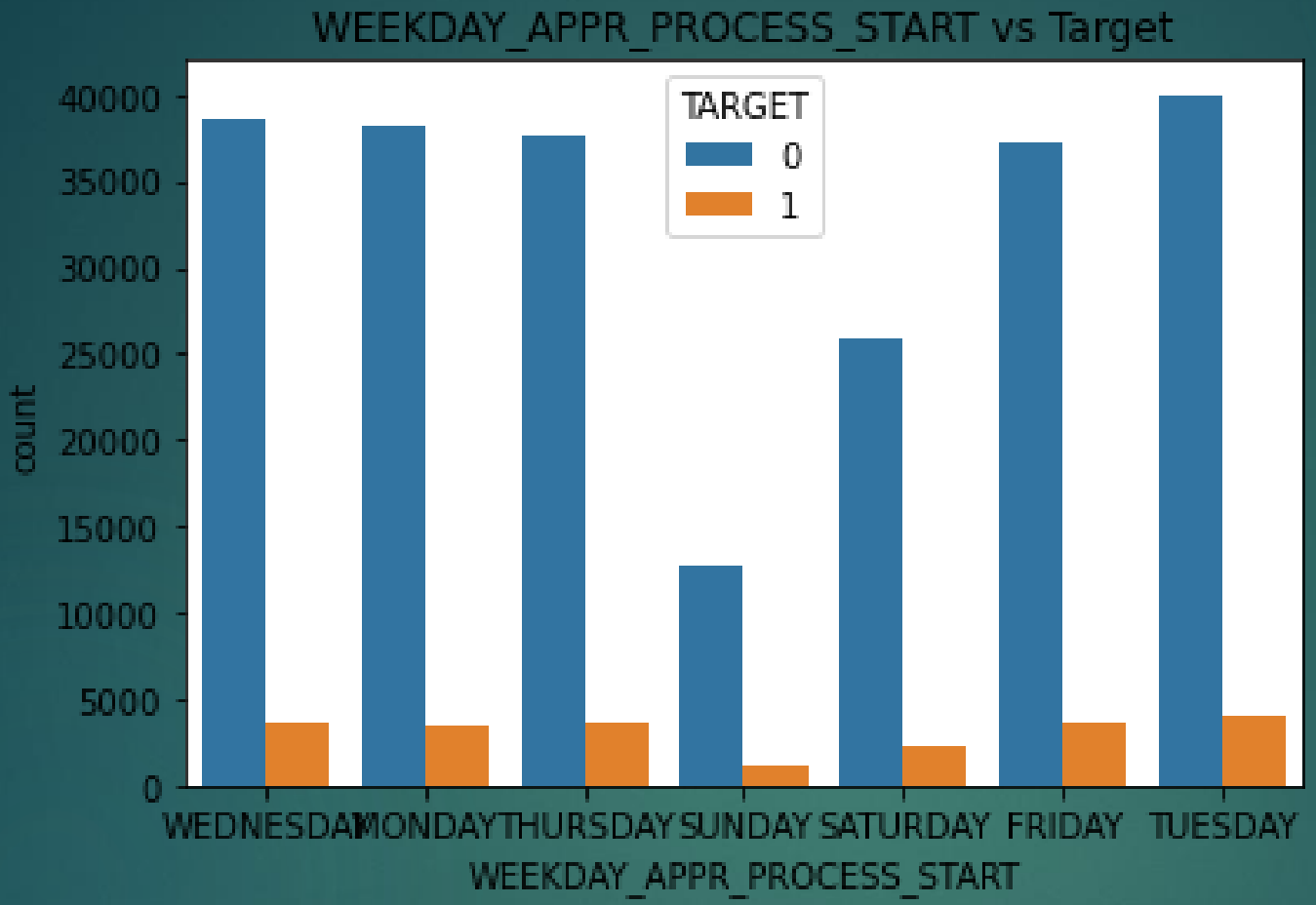
CORELATION BETWEEN SOCIAL CIRCLE

Conclusion: DEF_30_CNT_SOCIAL_CIRCLE and DEF_60_CNT_SOCIAL_CIRCLE are highly corelated. OBS_30_CNT_SOCIAL_CIRCLE and OBS_60_CNT_SOCIAL_CIRCLE are identical columns.

DISTRIBUTION OF NAME INCOME TYPE AND INCOME RANGE WITH RESPECT TO CODE GENDER


Distribution of Income Type
CODE_GENDER
M
F
count
25000
20000
15000
10000
5000
0
0-25k
25k-50k
50k-75k
75k,1lac
1lac-1.25lac
1.25lac-1.50lac
1.5lac-1.75lac
1.75lac-2lac
2lac-2.25lac
2.25lac-2.5lac
2.5lac-2.75lac
2.75lac-3lac
3lac-3.25lac
3.25lac-3.5lac
3.5lac-3.75lac
3.75-4lac
4 lac and above
AMT_INCOME_RANGE

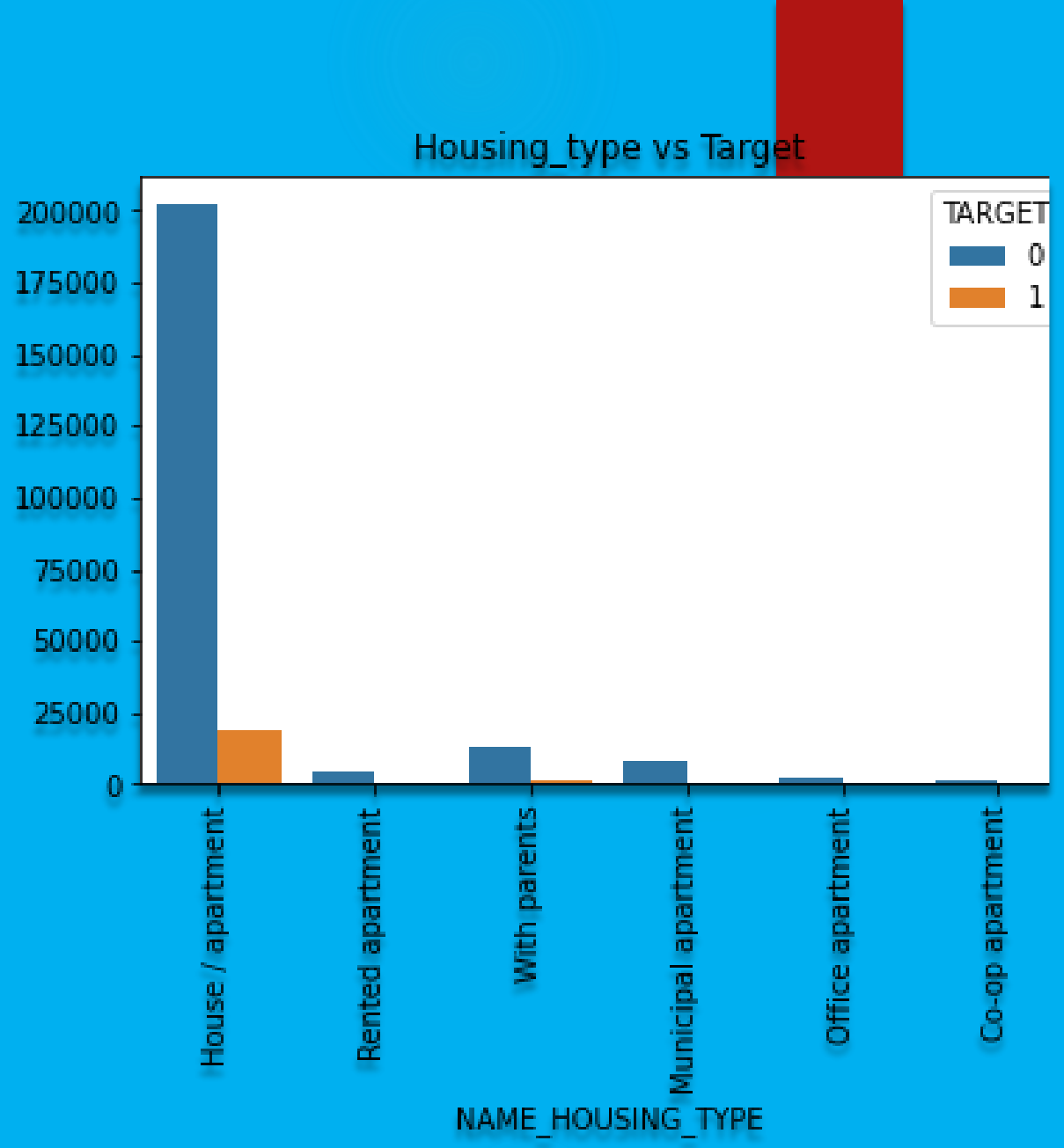

Distribution of Income Type
CODE_GENDER
M
F
100000
80000
60000
40000
20000
0
count
Working
State servant
Commercial associate
Student
Pensioner
Businessman
Maternity leave
NAME_INCOME_TYPE


WEEKDAY_APPR_PROCESS_START vs Target
TARGET
0
1
count
40000
35000
30000
25000
20000
15000
10000
5000
0
WEDNESDAY
MONDAY
THURSDAY
SUNDAY
SATURDAY
FRIDAY
TUESDAY
WEEKDAY_APPR_PROCESS_START

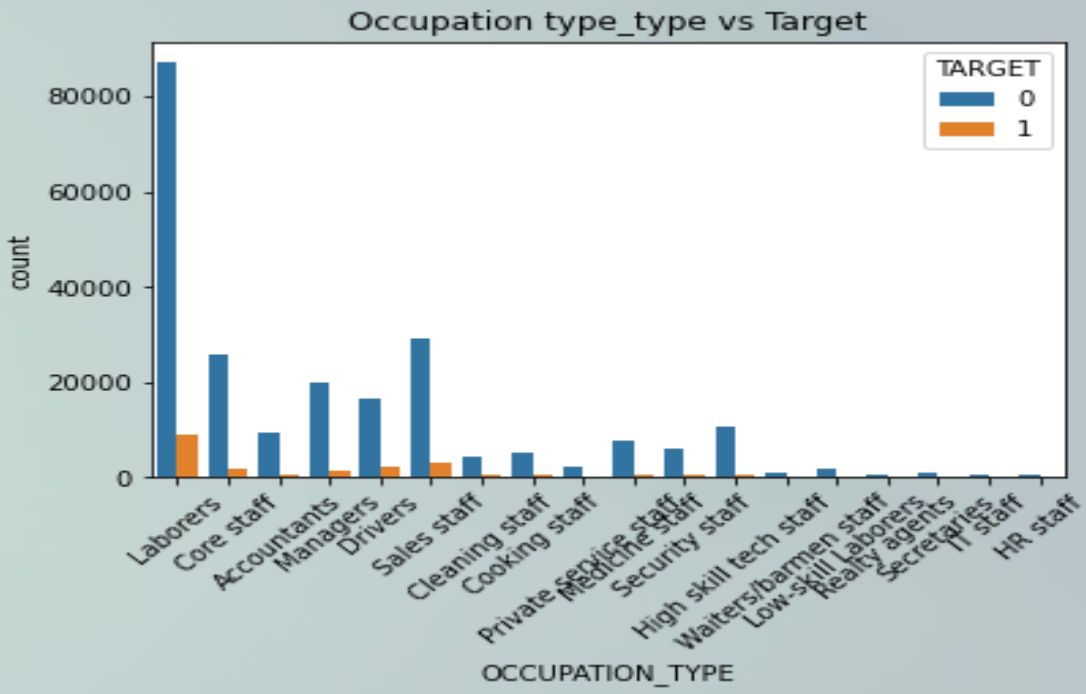
CATAGORICAL ANALYSIS ON TARGET

GRAPH OF HOUSING_TYPE VS TARGET(REPAYER AND DEFAULTER)

CONCLUSION : Most of the person taking loan are living in House/Apartment and majority person living in house/apartment payment on time there are few in percentage people payment with difficulties. Person living in Co-op Apartment taking less amount of loan we can they avoid taking loans



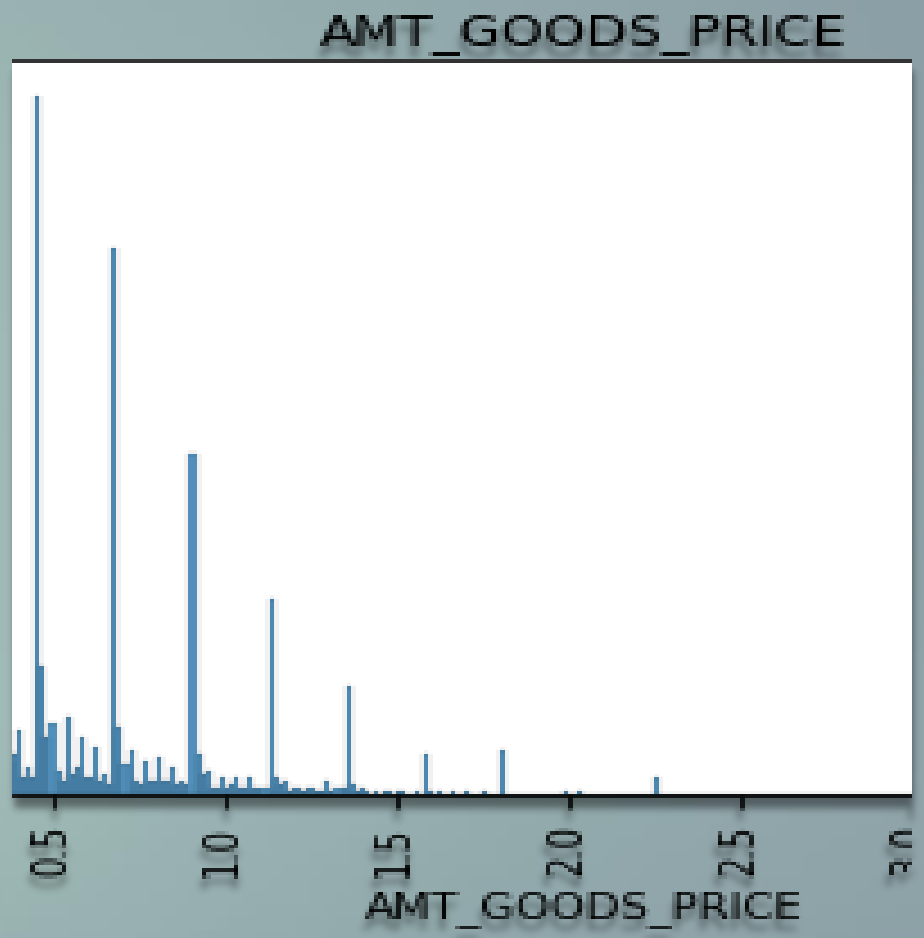
GRAPH OF OCCUPATION TYPE VS TARGET



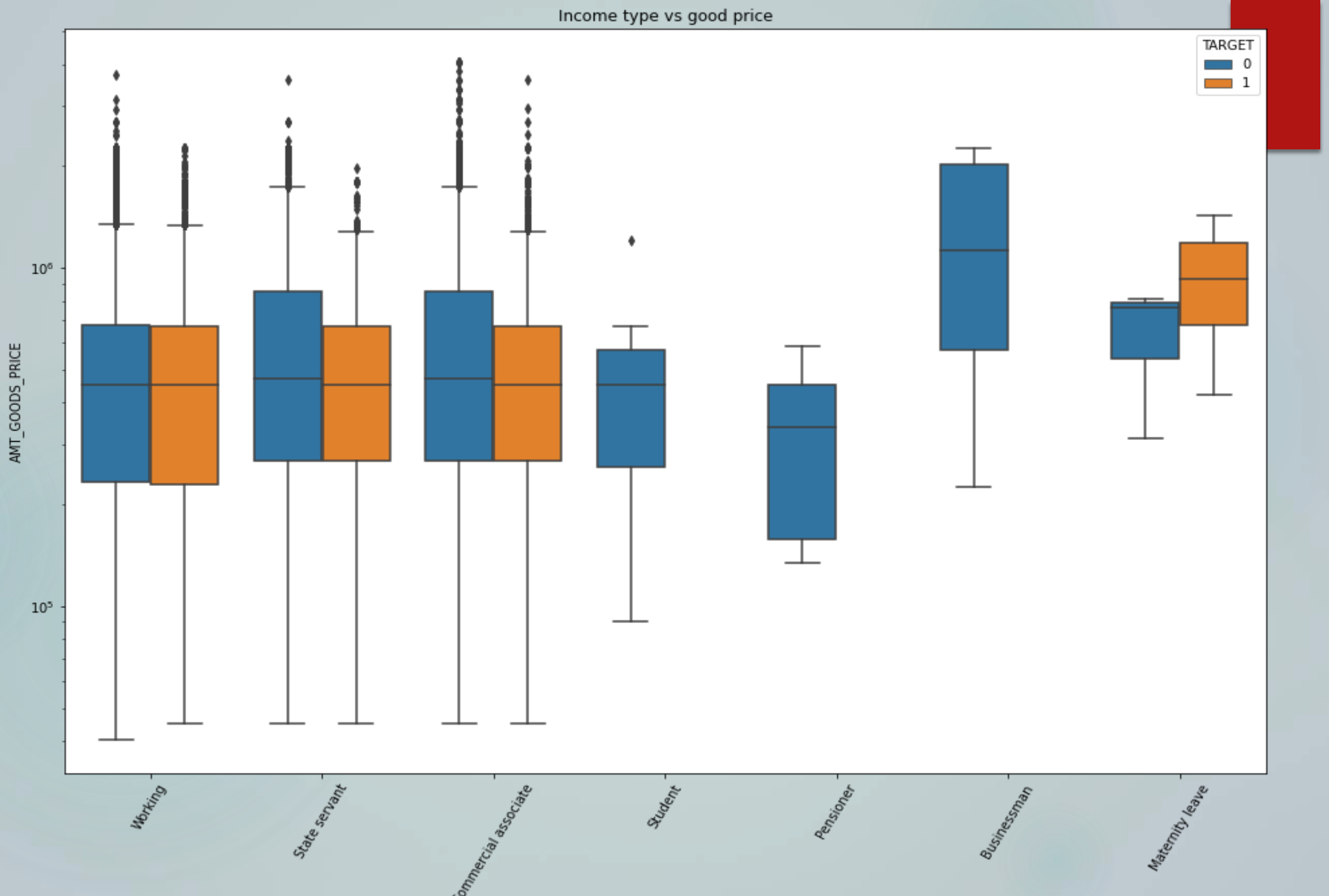
OBSERVATIONS:1.maximum number of loan is taken by people who are from laborers catogory and maximum defaulter tag is also owned by laborers class 2. by seeing above graph we can conclude Acountants are very less defaulters 3.Core staff,Manageres,Drivers,Laborers are safer to give loan because there is least amount of risk on loan

LOANS WERE GIVEN ON THE GOODS PRICES

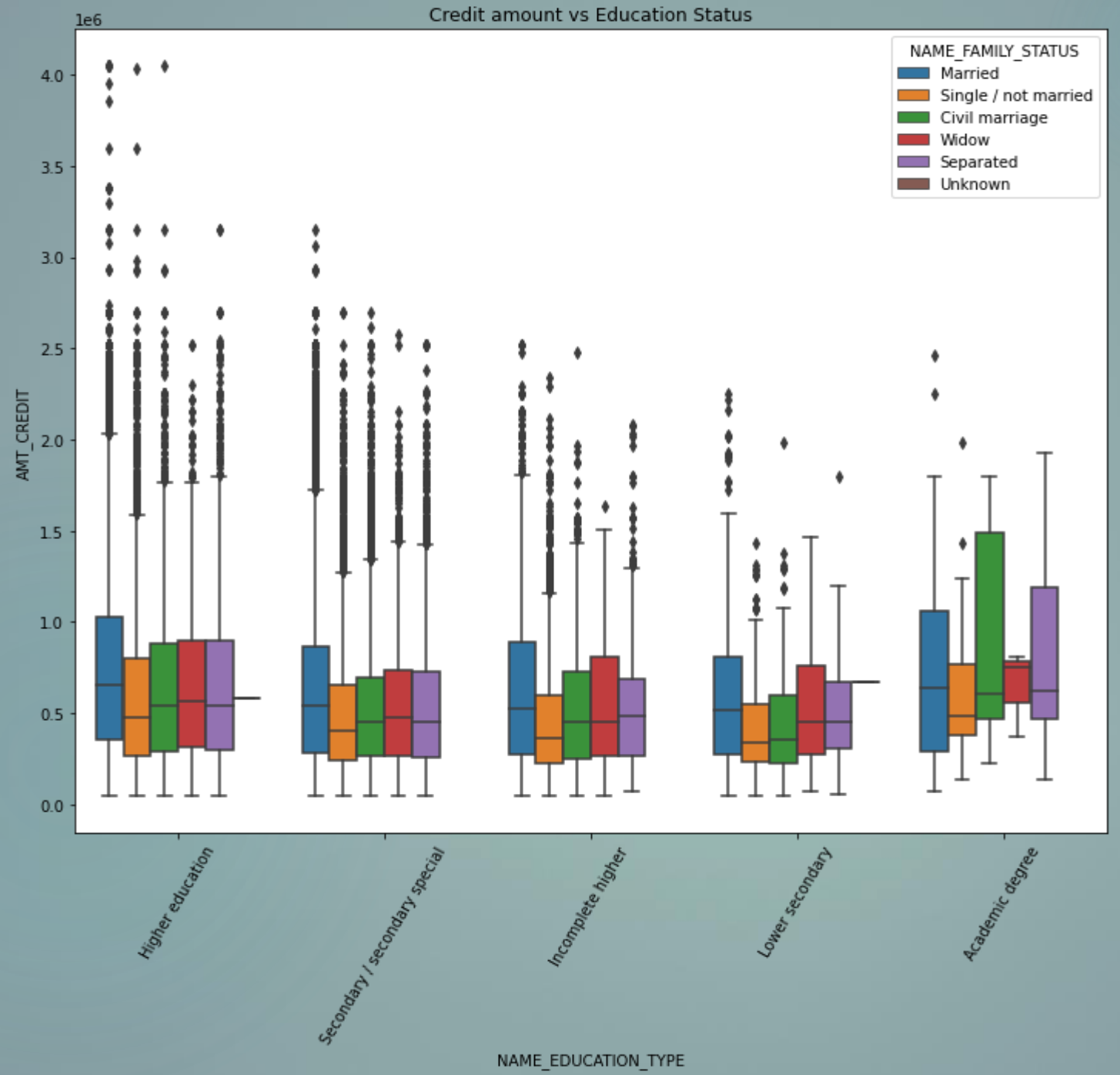
OBSERVATIONS : Maximum no of loans were give on the goods prices which belonging in the range of 0.5 million to 1 million



BIVARIATE ANALYSIS ON CURRENT APPLICATION

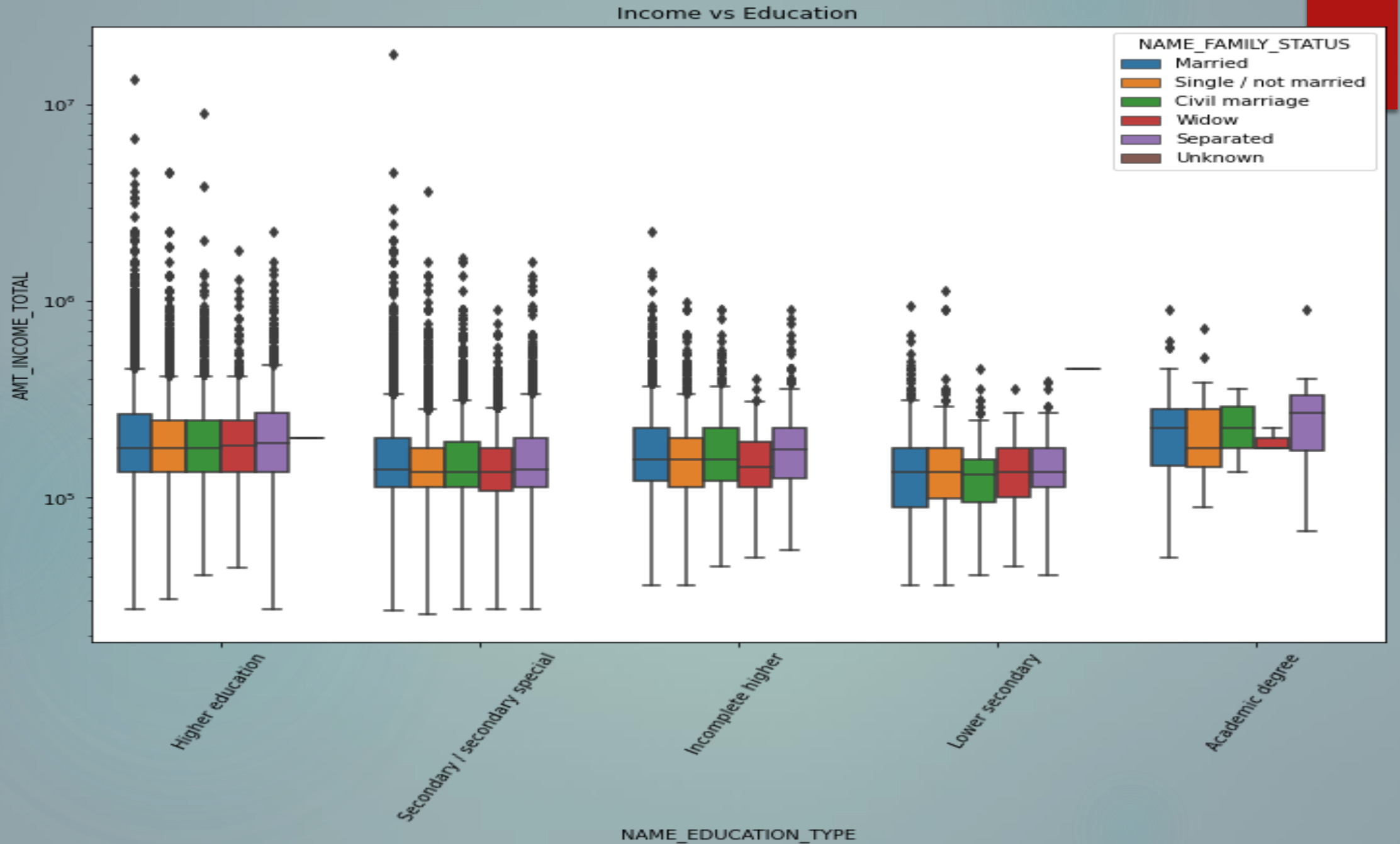

Income type vs good price
TARGET
0
1
AMT_GOODS_PRICE
10^6
10^5
Working
State servant
Commercial associate
Student
Pensioner
Businessman
Maternity leave

CONCLUSION: Clients who are Businessman , Student, and Pensioner do their payment on time


Credit amount vs Education Status
1e6
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
AMT_CREDIT
NAME_FAMILY_STATUS
Married
Single / not married
Civil marriage
Widow
Separated
Unknown
Higher education
Secondary / secondary special
Incomplete higher
Lower secondary
Academic degree
NAME_EDUCATION_TYPE

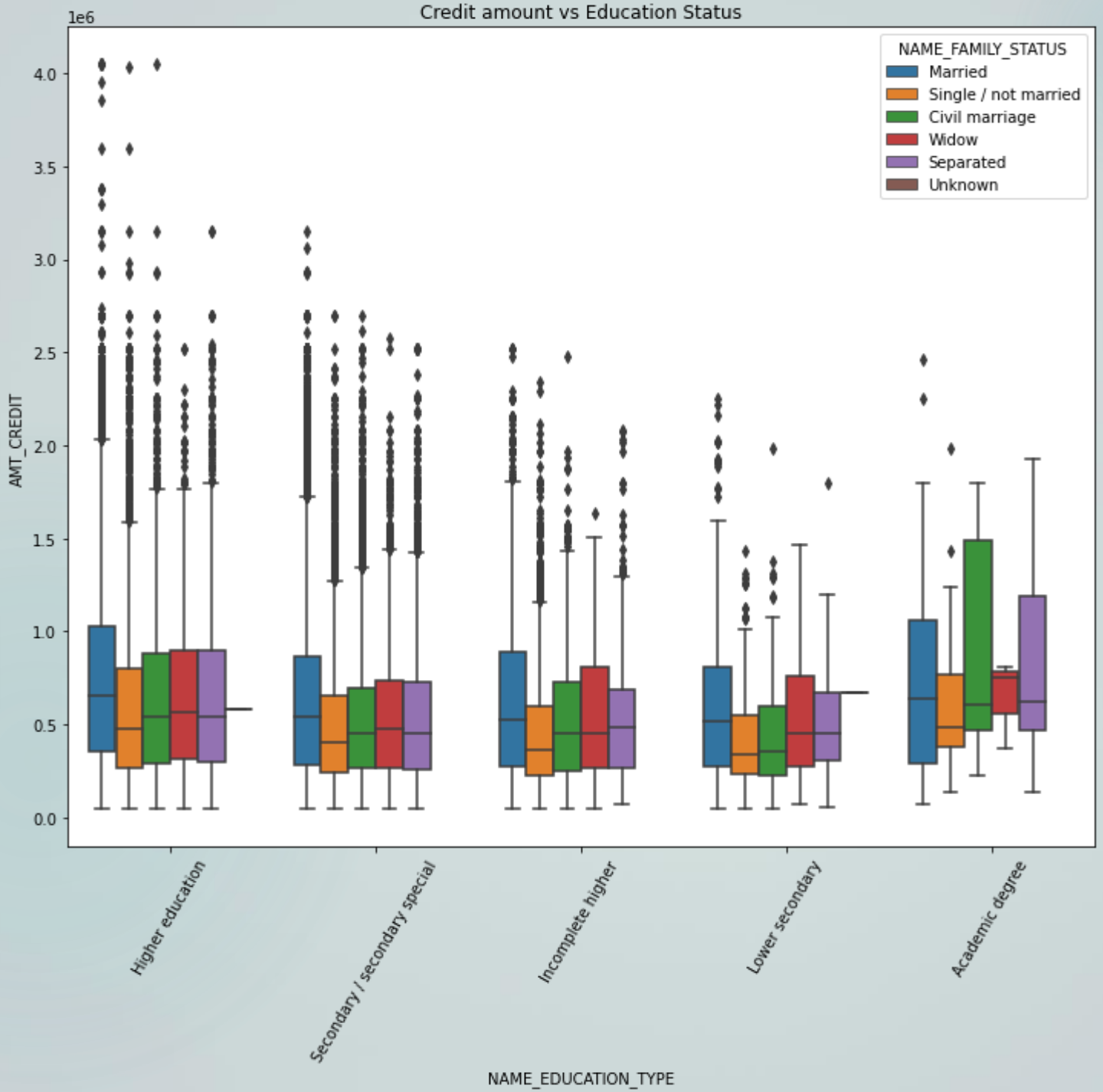
CREDIT AMOUNT VS EDUCATION STATUS

OBSERVATIONS: The two variables for Target0 - non defaulters clients executed. The box plot shows plot the graph between education vs credit amount with hue reference of family status. It shows high credit amount and lower risk for academic degree client with civilian marital status. It will reduce the credit risk. The academic degree separated clients are having upperwhisker


Income vs Education
NAME_FAMILY_STATUS
Married
Single / not married
Civil marriage
Widow
Separated
Unknown
AMT_INCOME_TOTAL
10^7
10^6
10^5
Higher education
Secondary / secondary special
Incomplete higher
Lower secondary
Academic degree
NAME_EDUCATION_TYPE

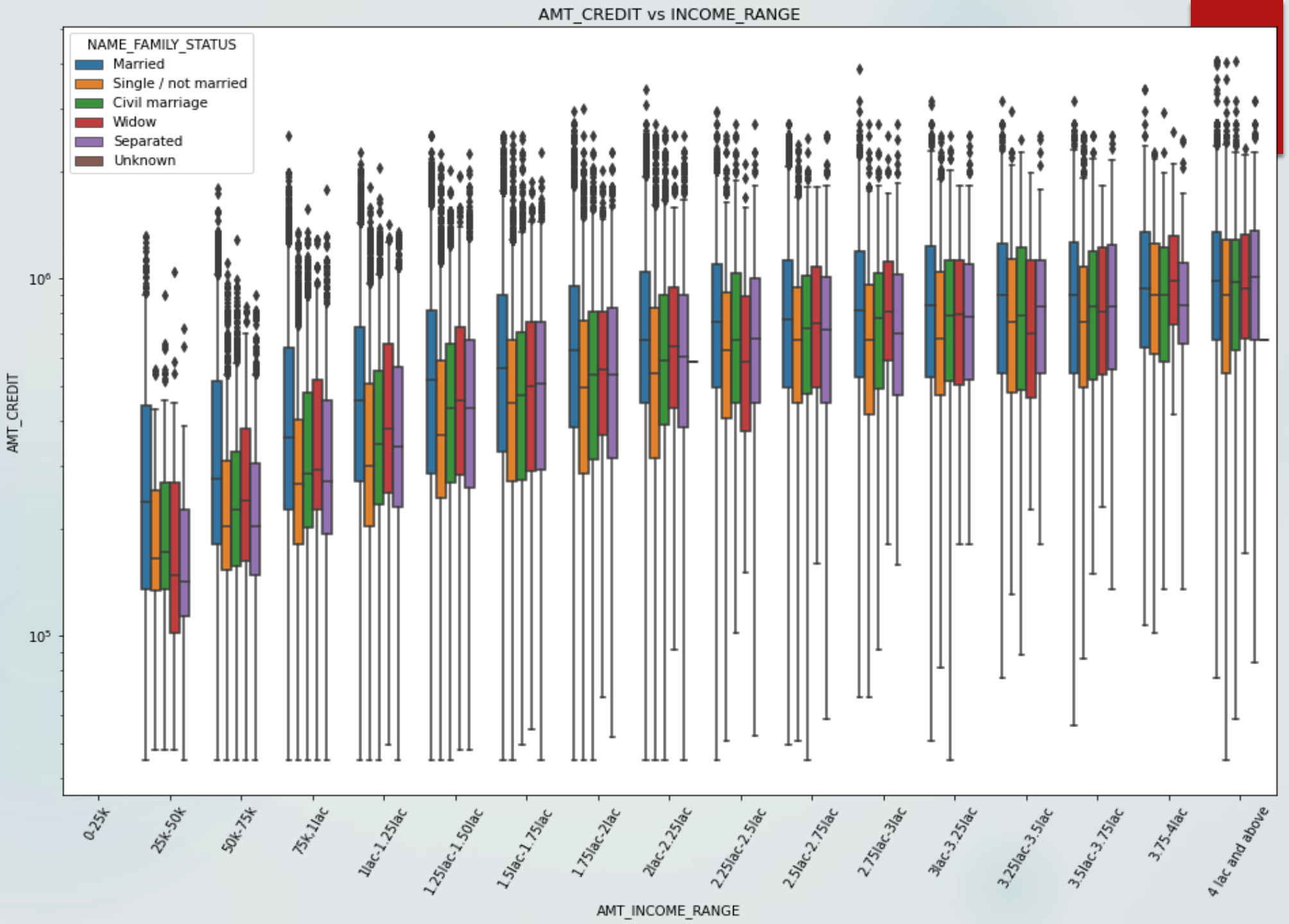
BIVARIATE ANALYSIS ONNAME EDUCATION TYPE VS TOTAL INCOME FOR NON-DEFAULTER

OBSERVATION: THE EDUCATION VS INCOME BIVARIATE ANALYSIS SHOWS THAT THE ACADEMIC DEGREE MARRIED AND CIVIL MARRIED CLIENTS ARE HAVING HIGHER INCOME STATURE WITH LOWER RISK


Credit amount vs Education Status
1e6
AMT_CREDIT
NAME_FAMILY_STATUS
Married
Single / not married
Civil marriage
Widow
Separated
Unknown
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Higher education
Secondary / secondary special
Incomplete higher
Lower secondary
Academic degree
NAME_EDUCATION_TYPE

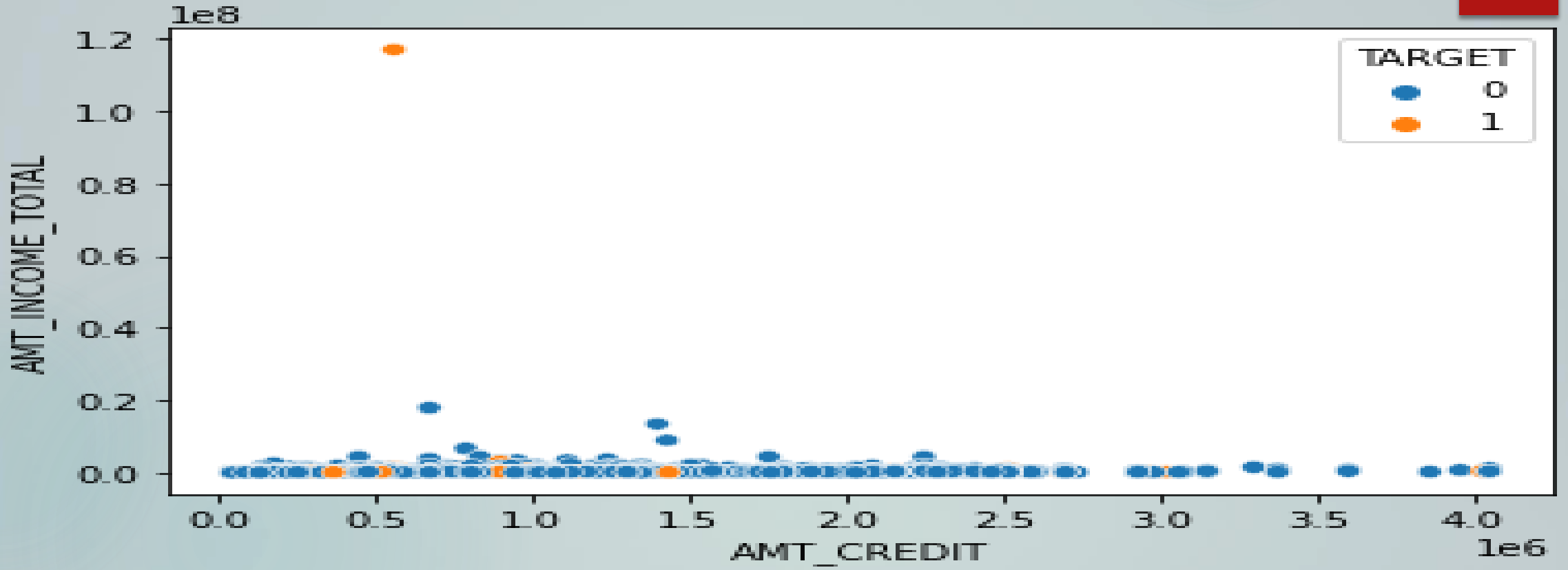
BIVARIATE ANALYSIS OF EDUCATION TYPE VS CREDIT AMOUNT FOR NON DEFAULTER

OBSERVATIONS: The box plot shows plot the graph between education vs credit amount with hue reference of family status. It shows high credit amount and lower risk for academic degree client with civilian marital status. It will reduce the credit risk. The academic degree separated clients are having upperwhisker.

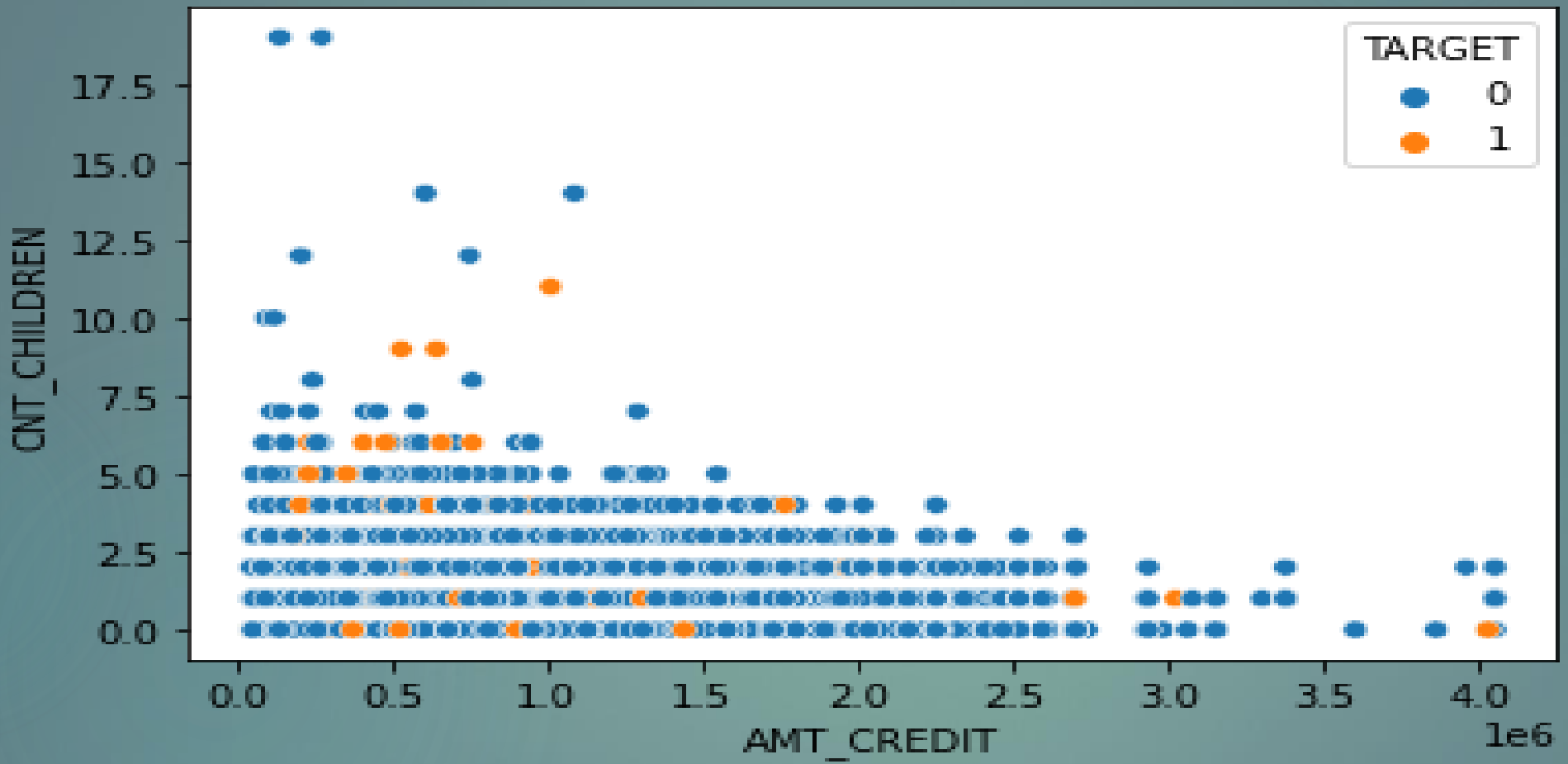

AMT_CREDIT vs INCOME_RANGE
NAME_FAMILY_STATUS
Married
Single / not married
Civil marriage
Widow
Separated
Unknown
AMT_CREDIT
10^6
10^5
0-25k
25k-50k
50k-75k
75k-1lac
1lac-1.25lac
1.25lac-1.50lac
1.5lac-1.75lac
1.75lac-2lac
2lac-2.25lac
2.25lac-2.5lac
2.5lac-2.75lac
2.75lac-3lac
3lac-3.25lac
3.25lac-3.5lac
3.5lac-3.75lac
3.75-4lac
4 lac and above
AMT_INCOME_RANGE

BIVARIATE ANALYSIS ON INCOME_CREDIT VS INCOME_RANGE FOR NON-DEFAULTER

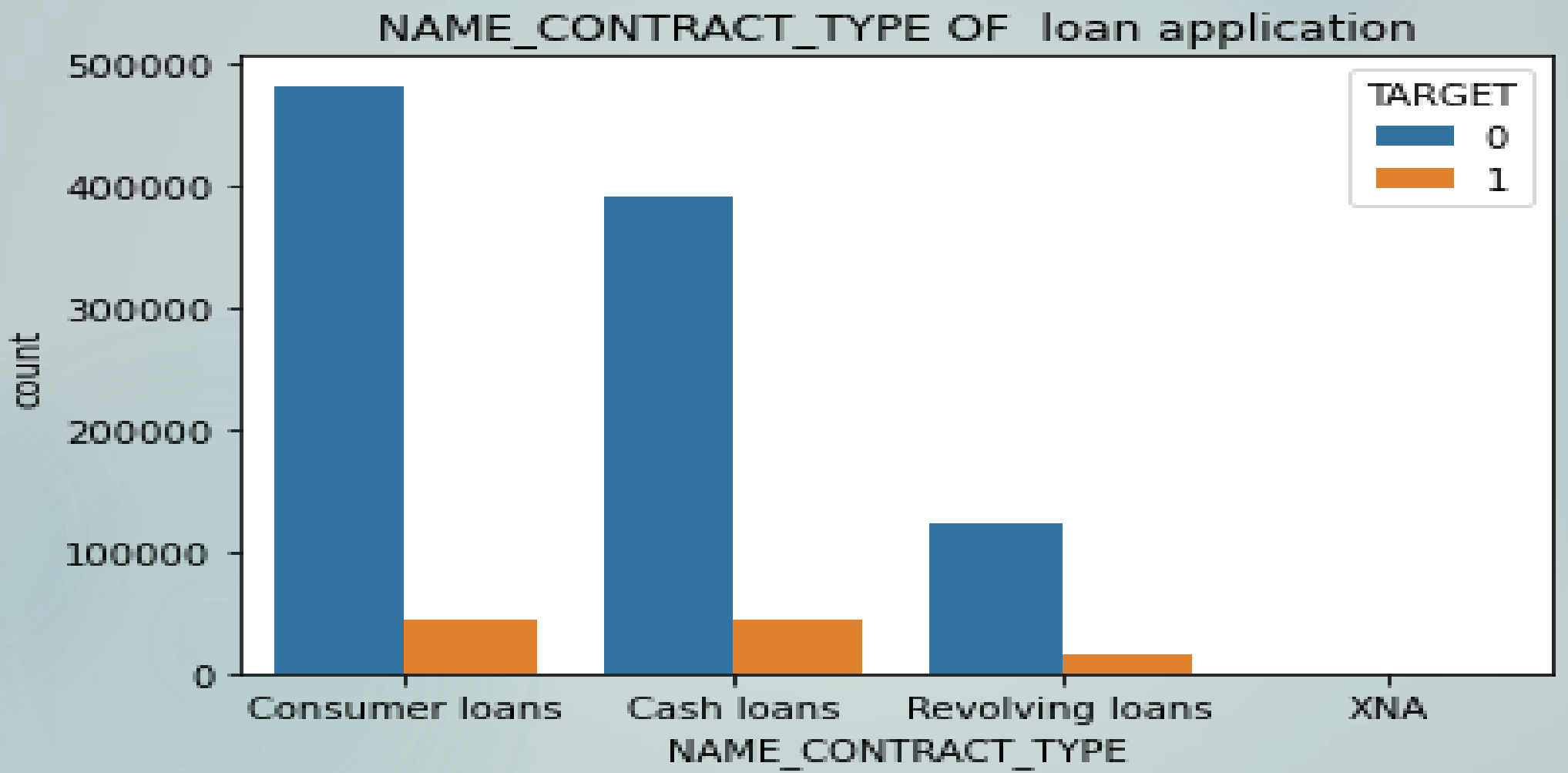
CONCLUSION : The Target0 non defaulters whose income within the range of 4.5 lac - 4.75 lac civil marriage clients used to get more credit amount. Hence, its essential to check the risk factors associated with it. Further loan credit may make them defaulters.


1e8
1.2
1.0
0.8
0.6
0.4
0.2
0.0
AMT_INCOME_TOTAL
TARGET
0
1
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
1e6
AMT_CREDIT

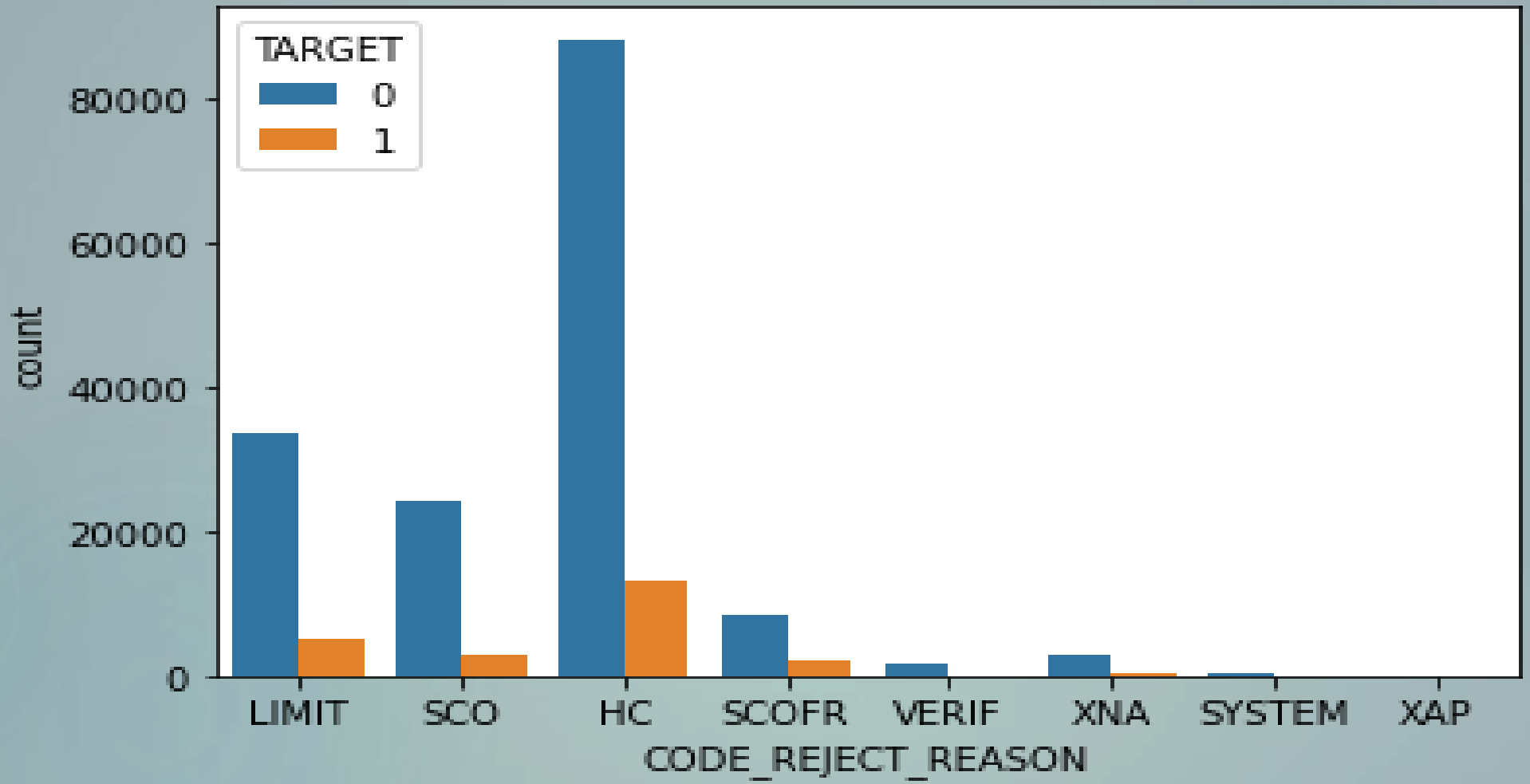
CONCLUSION:1.people who are earning less than a million are most likely to take the loan 2. people who are taking less than 1.5 credit loan there is a chances of defaulter but after credit 1.5 no one is in defaulter catagory 3. we can target income below 1 million and credit loan greater than 1.5 million


TARGET
0
1
CNT_CHILDREN
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
AMT_CREDIT
1e6

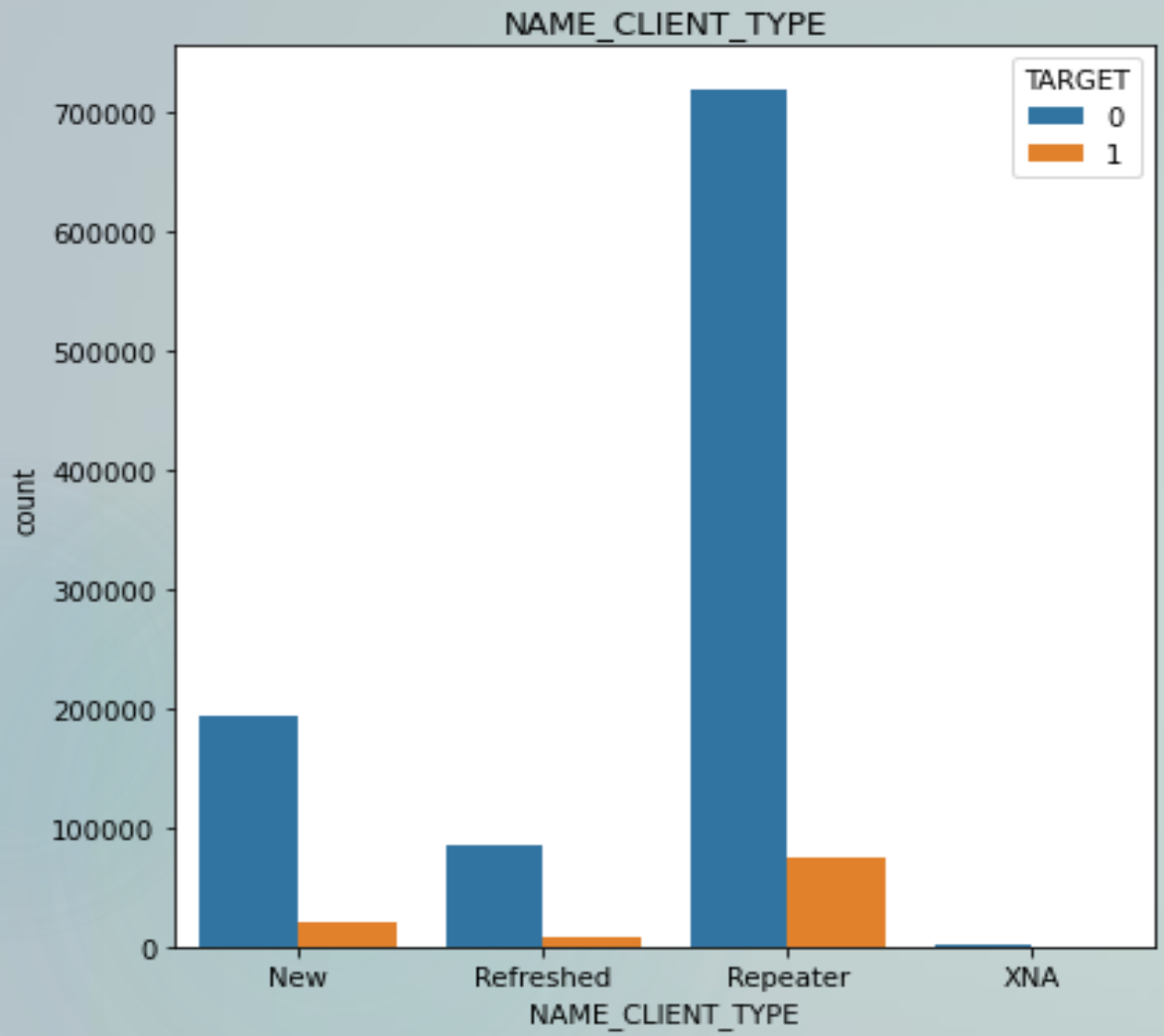
CONCLUSION:1.People having zero children and amount credit less than 1.5 million they turned out to be in defaulter and after credit amount greater than 1.5 million the chances of non-defaulter increases 2.people having children less than 5 are safer to give loans

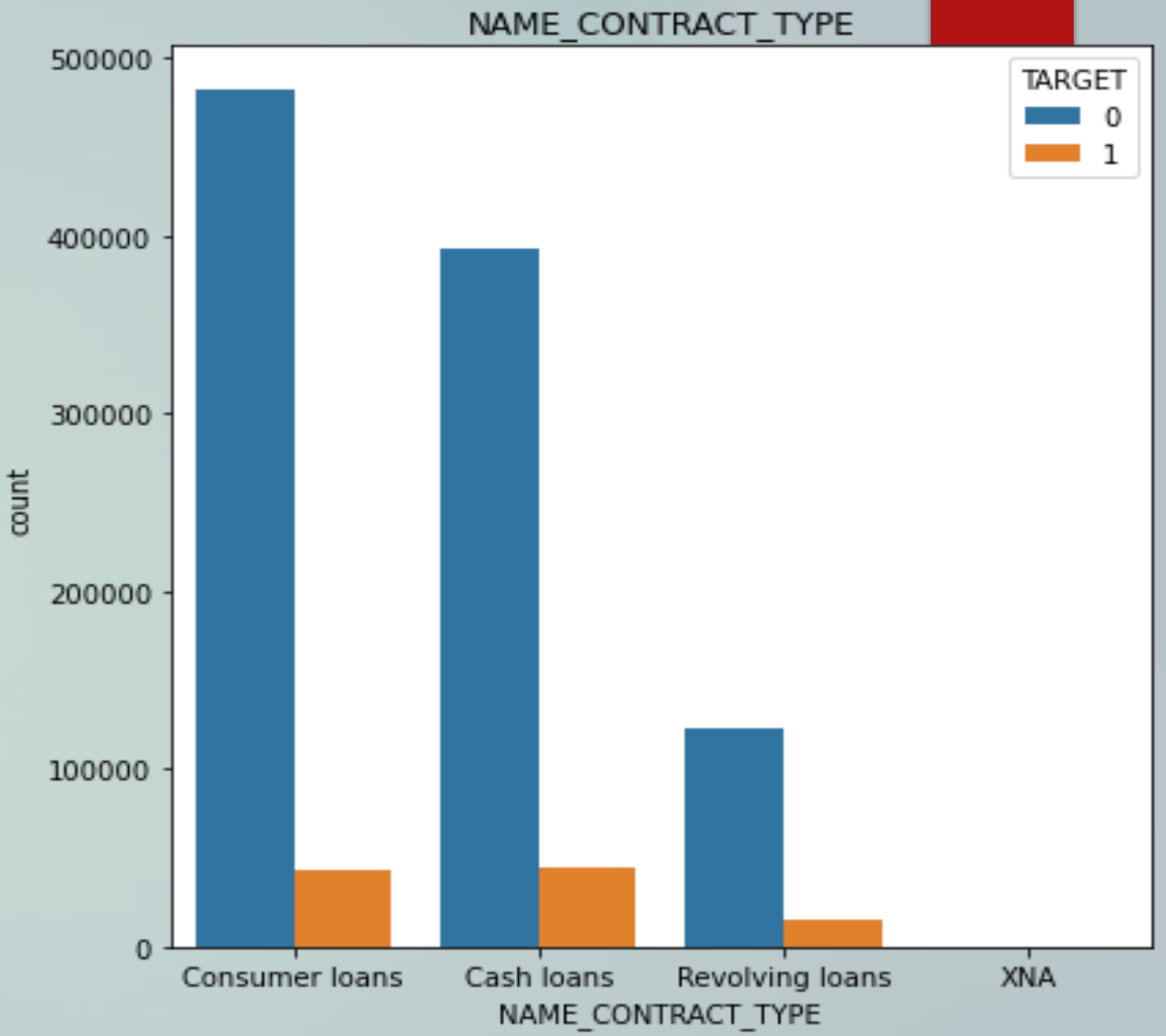

NAME_CONTRACT_TYPE OF loan application
500000
400000
300000
200000
100000
0
count
TARGET
0
1
Consumer loans
Cash loans
Revolving loans
XNA
NAME_CONTRACT_TYPE

OBSERVATIONS: Highest number of loans were applied for Consumer loans And cash loans are also applied in huge number followed by consumer loan


TARGET
0
1
80000
60000
40000
20000
0
count
LIMIT
SCO
HC
SCOFR
VERIF
XNA
SYSTEM
XAP
CODE_REJECT_REASON

CONCLUSION: The most common reason for loan rejection are 'HC','LIMIT','SCO','SCOFR'

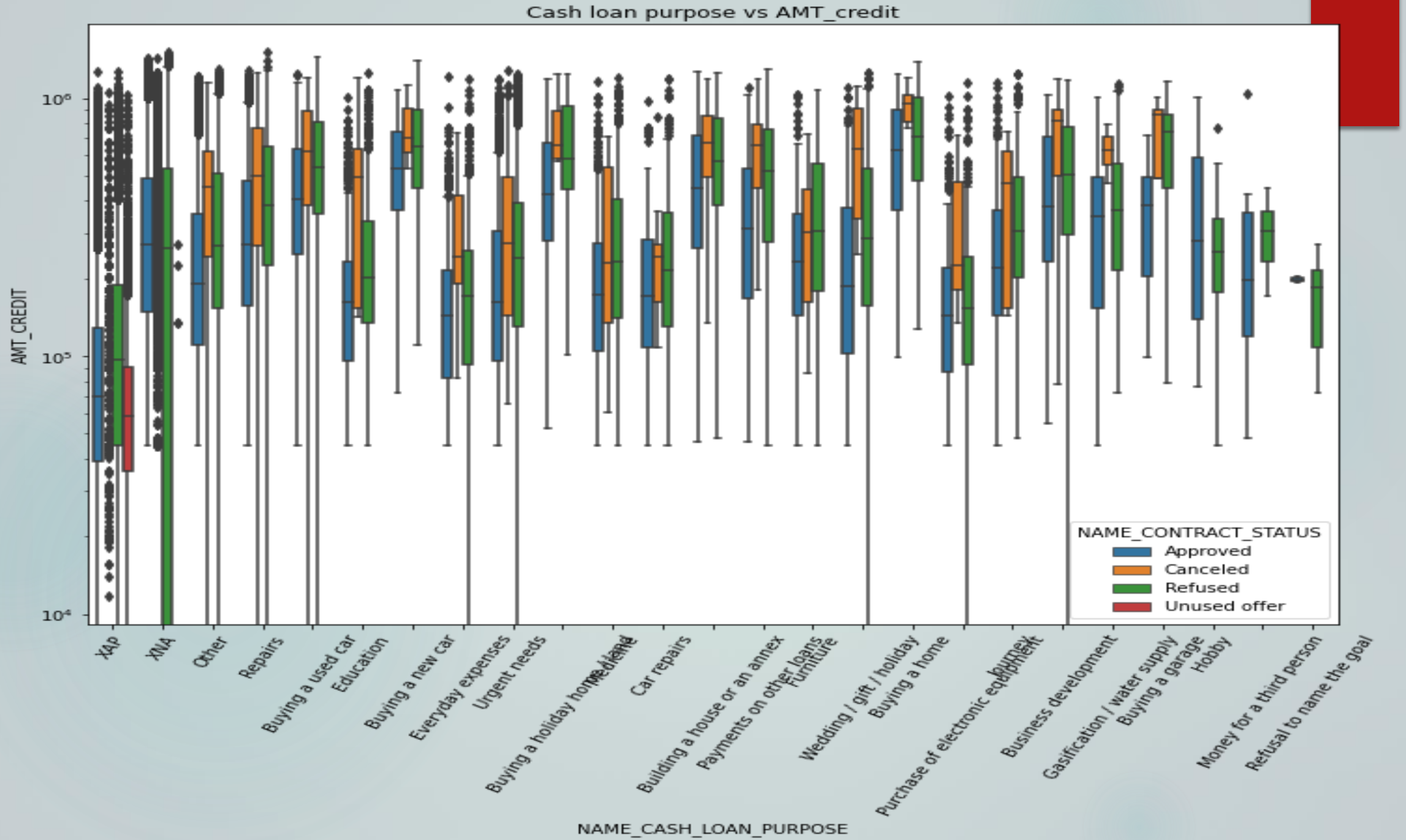

NAME_CLIENT_TYPE
TARGET
0
1
700000
600000
500000
400000
300000
200000
100000
0
count
New
Refreshed
Repeater
XNA
NAME_CLIENT_TYPE


NAME_CONTRACT_TYPE
TARGET
0
1
500000
400000
300000
200000
100000
0
count
Consumer loans
Cash loans
Revolving loans
XNA
NAME_CONTRACT_TYPE

CONCLUSION:

1.Most of the applicants who are applying for loans are repeaters

2.Highest number of loans were applied for Consumer loans And cash loans are also applied in huge number followed by consumer loan


Cash loan purpose vs AMT_credit
AMT_CREDIT
10^6
10^5
10^4
NAME_CONTRACT_STATUS
Approved
Canceled
Refused
Unused offer
XAP
XNA
Other
Repairs
Buying a used car
Education
Buying a new car
Everyday expenses
Urgent needs
Buying a holiday home
Car repairs
Building a house or an annex
Payments on other loans
Furniture
Wedding / gift / holiday
Buying a home
Purchase of electronic equipment
Business development
Gasification / water supply
Buying a garage
Hobby
Money for a third person
Refusal to name the goal
NAME_CASH_LOAN_PURPOSE

CONCLUSIONS:

1.Loan purpose has high number of unknown values i.e (XAP,XNA)

2. Loan taken for for the purpose of repair looks to have highest default rate

3. Huge number of application have been rejected by bank which are applied for repair and others we can conclude from this repair considered as high risk factor.

THANK YOU