

# **CREDIT EDA CASE STUDY**

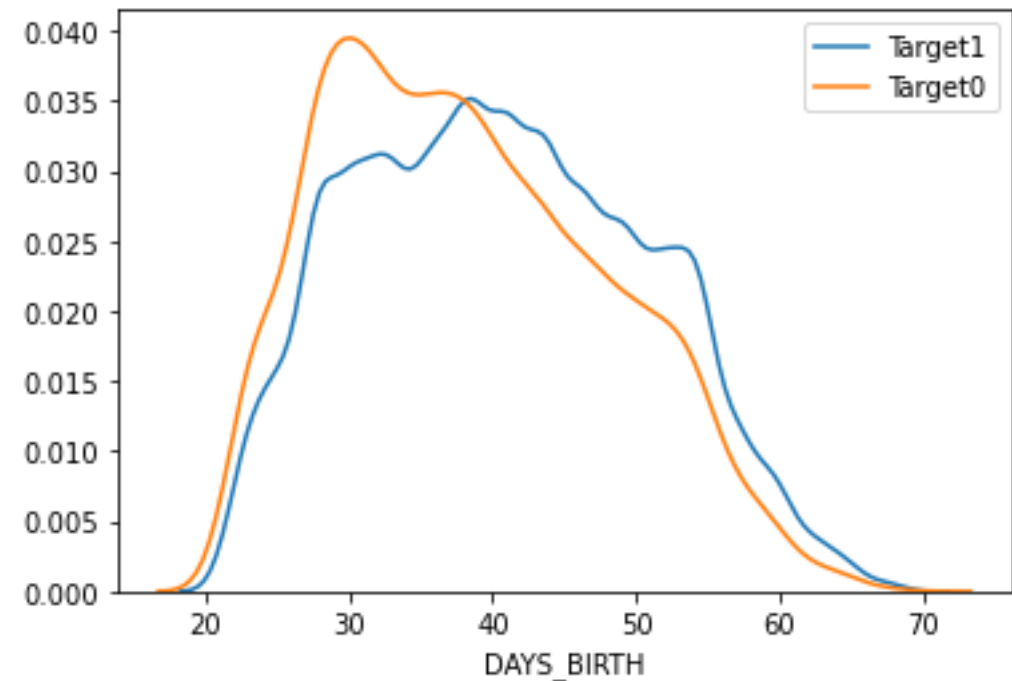
By – Jayita Barman and Suryadevi Kalimuthu



# UNIVARIATE ANALYSIS

- DISTRIBUTION OF AGE FOR TARGET-0 & TARGET-1

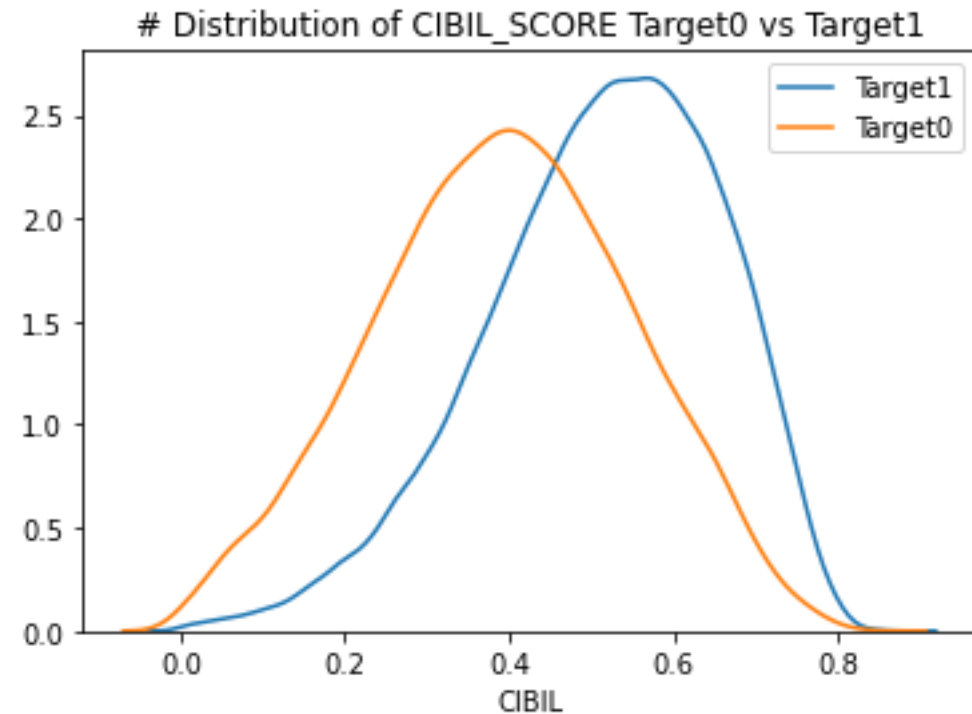
Age falls in range 28 to 35 does not have any payment difficulty whereas the age range 40 to 45 have payment difficulty. Hence the targeted age customers are between the range 28 to 35.



## DISTRIBUTION OF AMOUNT CREDITED, CIBIL\_SCORE TARGET0 & TARGET1

Applicants with and without payment difficulties have normalized Cibil score.

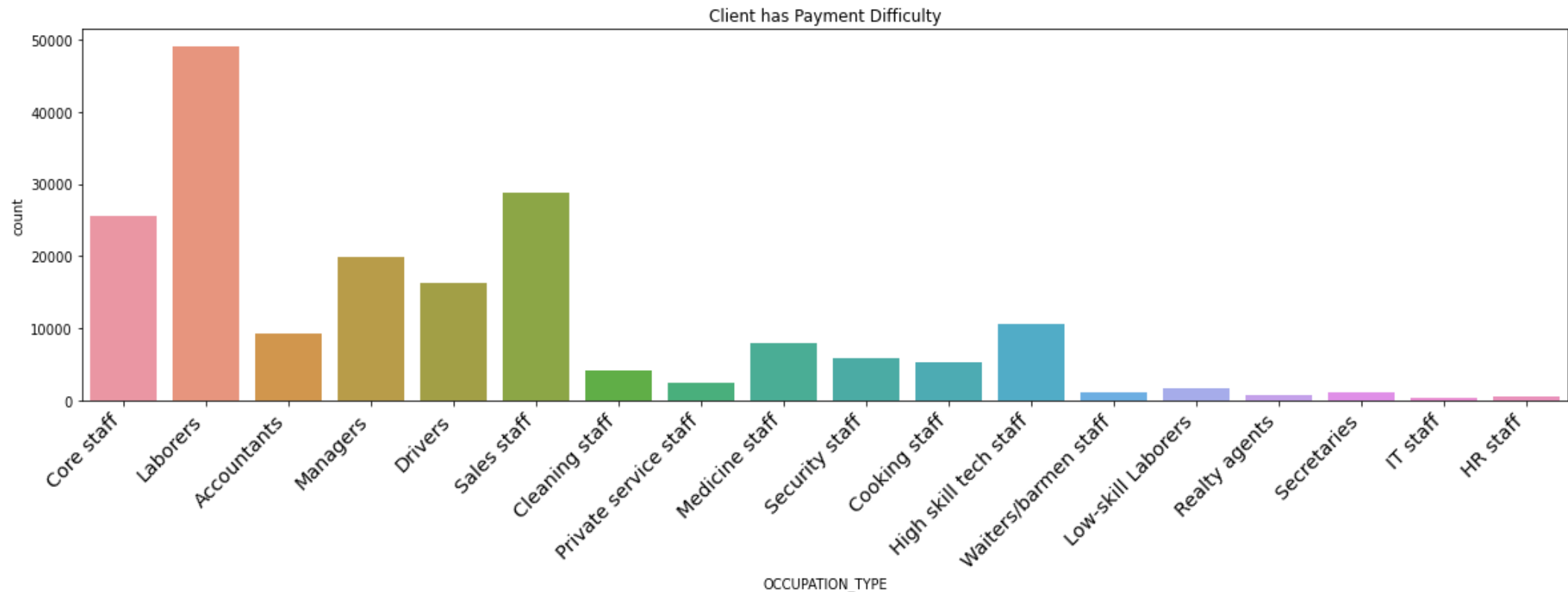
Applicants with range 0.3 to 0.5 seems to have lesser payment difficulty whereas applicants with range 0.5 to 0.7 score have more payment difficulty.



## DISTRIBUTION OF OCCUPATION\_TYPE OF TARGET1

### Conclusion:

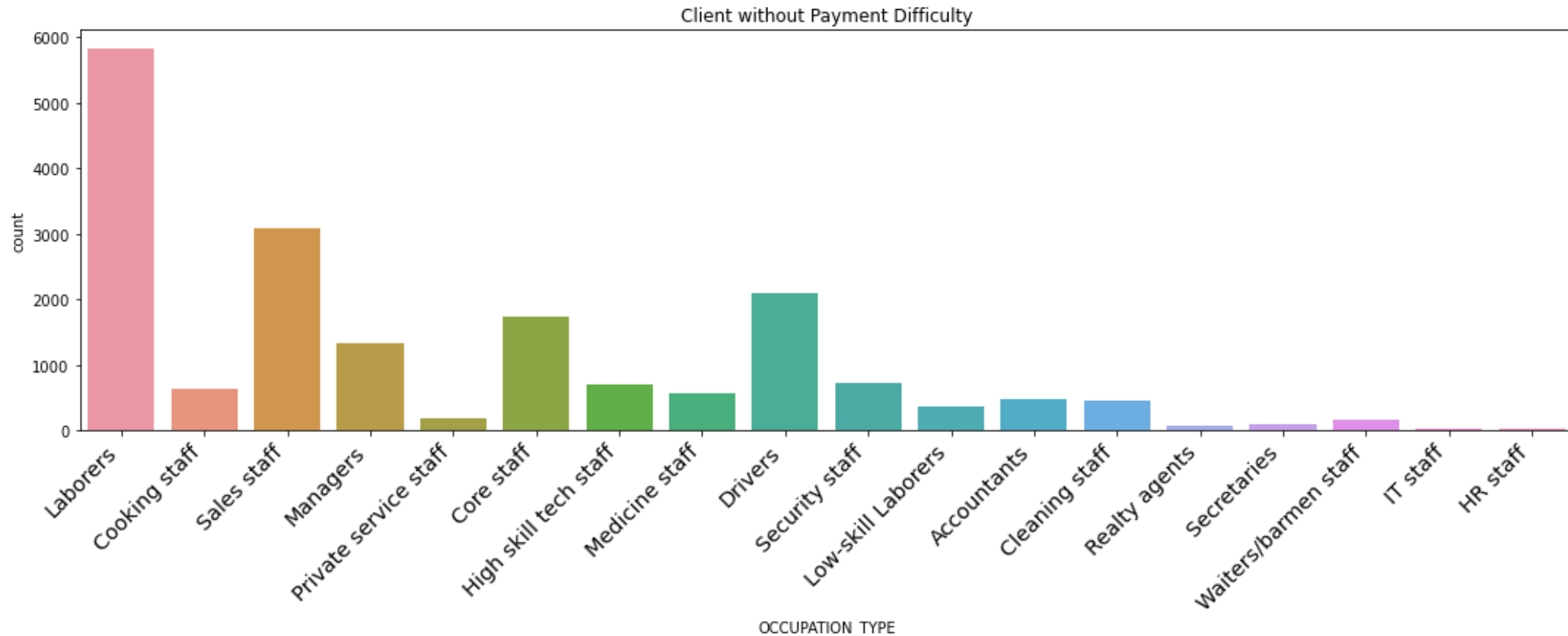
Occupation Type Laborers have more payment difficulty whereas IT staff are having less Payment difficulty.



## DISTRIBUTION OF OCCUPATION\_TYPE OF TARGET-0

### Conclusion:

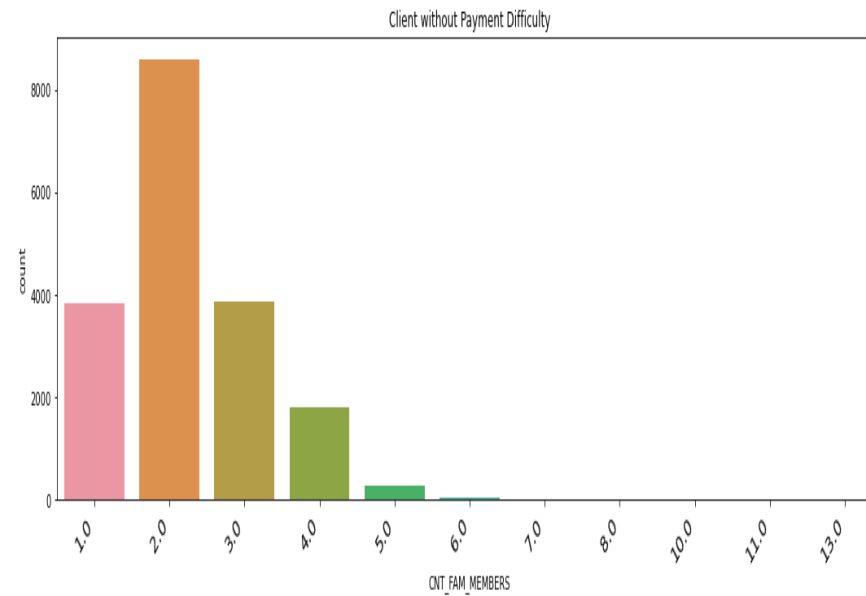
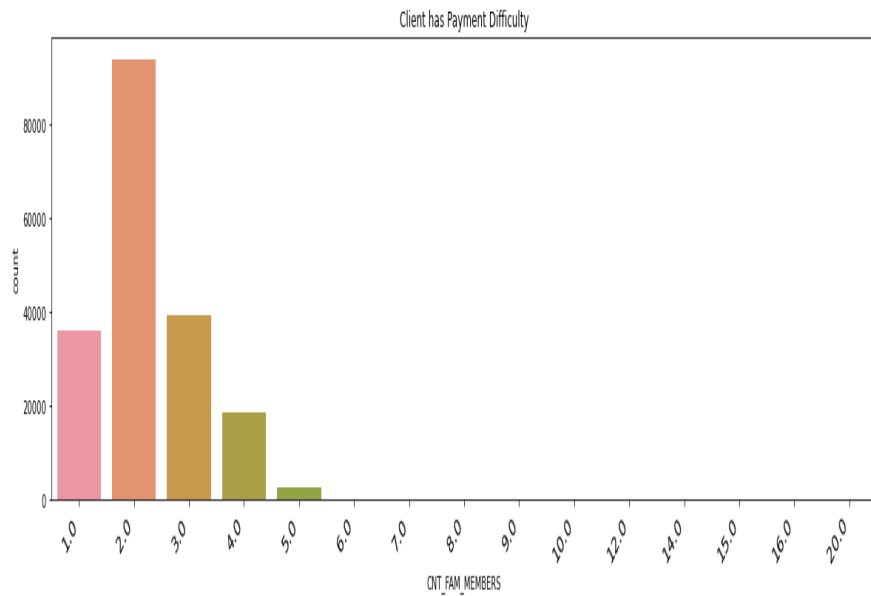
Though Laborers have more payment difficulty we figured in the previous slide, they've repayed the loans as well. From the two graphs it can be concluded raise of number of application is reason behind similar distribution of applicants' loan repayment cases(Target-1 and Target-0)



## DISTRIBUTION OF FAMILY MEMBERS TARGET0 & TARGET1

### Conclusion:

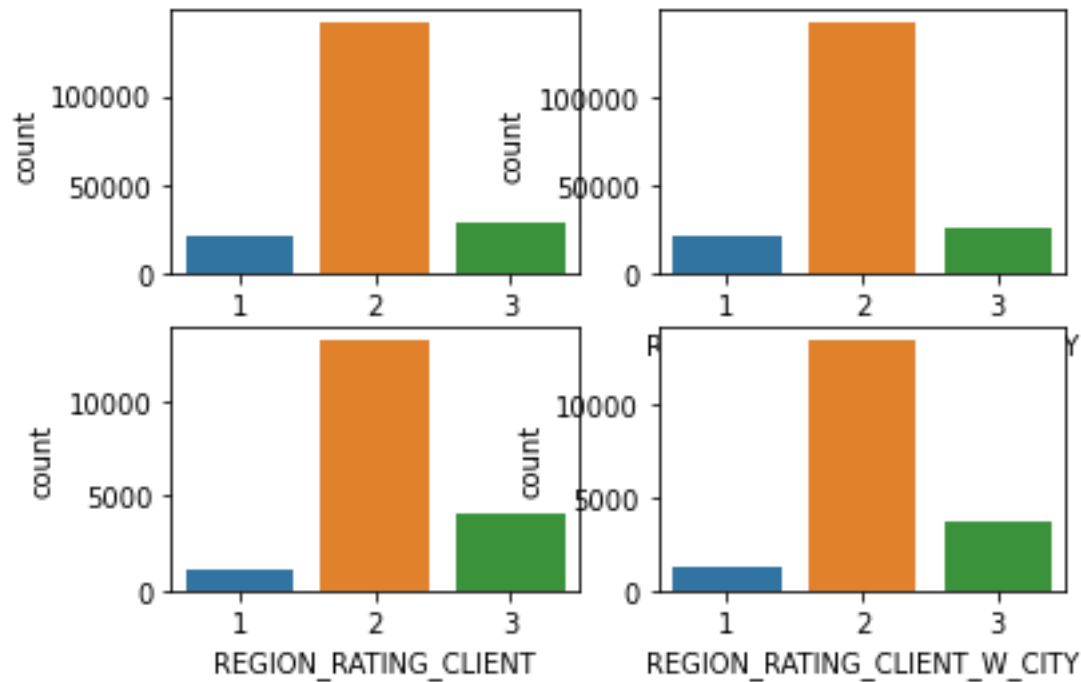
Based on the below two plots we can conclude that count of family member does not play role on the loan repayment.



## DISTRIBUTION OF AREA/LOCALITY OF CLIENT'S ADDRESS FOR TARGET-0 & TARGET-1

### Conclusion

With the graph plotted in below, we can conclude that the area 2 can be targeted for providing loan since those area customer have properly made payments

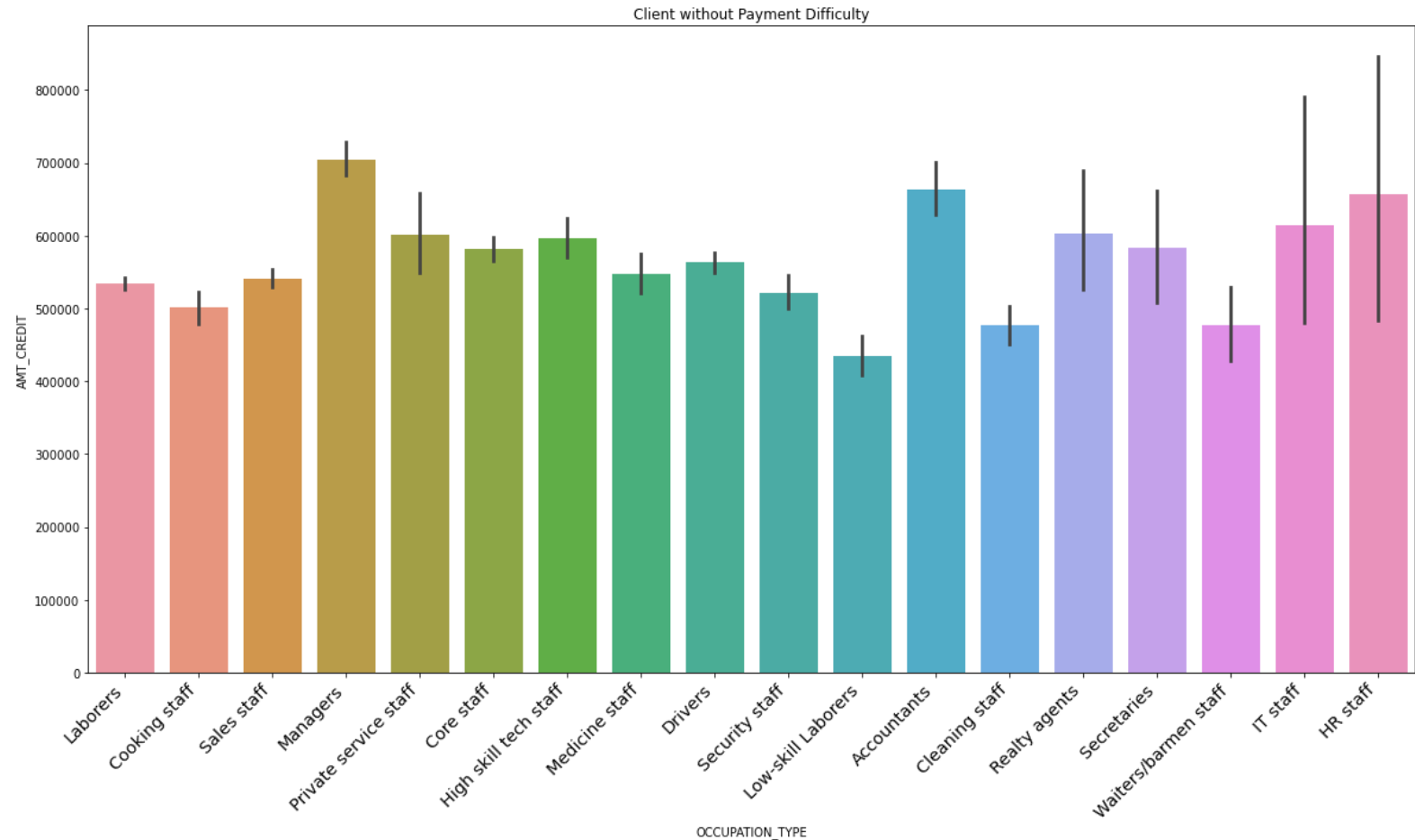


# BI-VARIATE ANALYSIS

## CREDIT AMOUNT VS OCCUPATION TYPE FOR TARGET0

### Conclusion:

With the graph plotted in right side we can conclude Manager occupation type having more amount credited and does not have any payment difficulty.

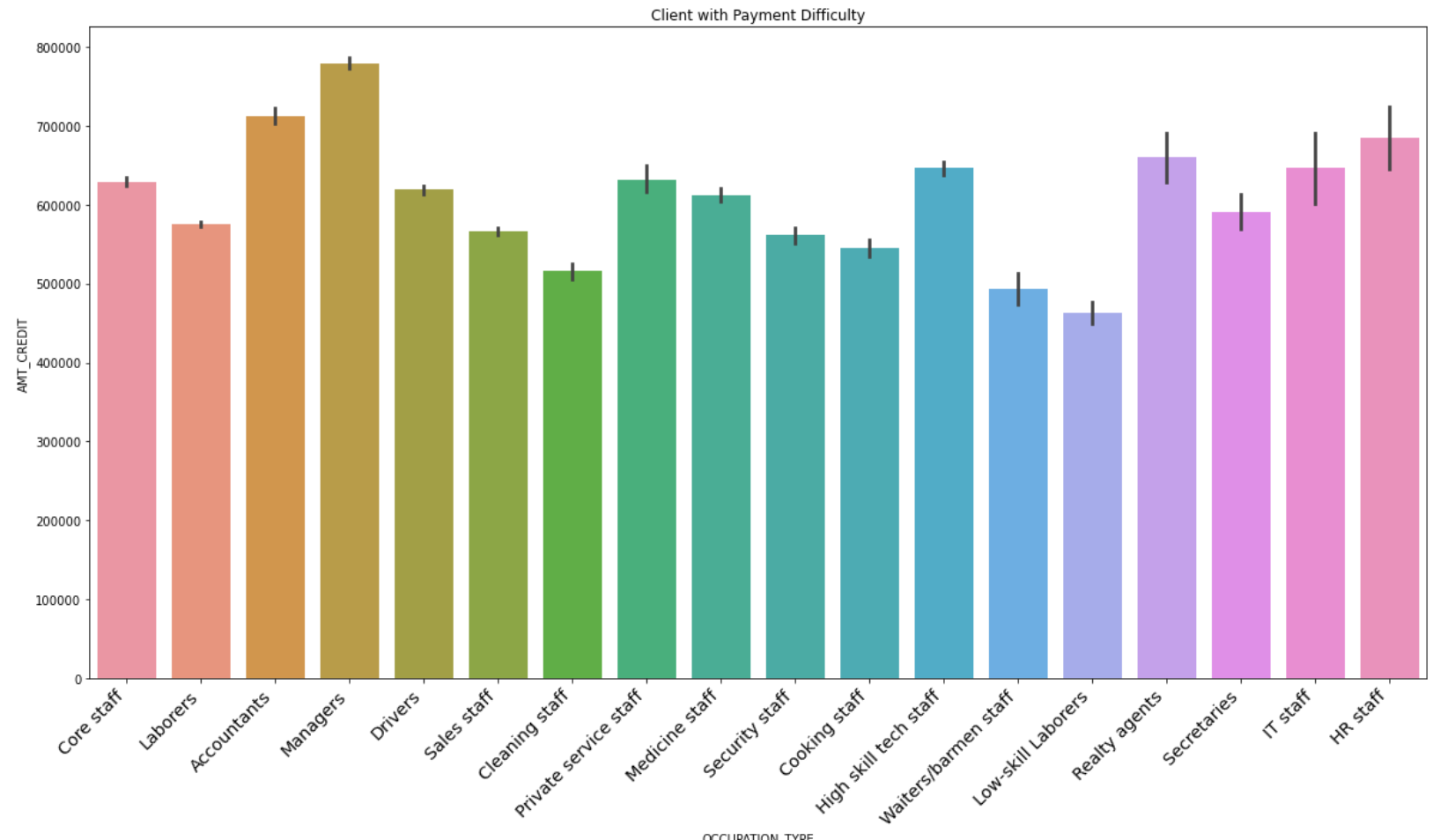




## CREDIT AMOUNT VS OCCUPATION TYPE FOR TARGET1

### Conclusion:

Though Managers have least payment difficulty among other occupation type we figured in the previous slide, they've most difficulty to re-pay the loans as well. From the two graphs it can be concluded -raise of number of application is reason behind similar distribution of applicants' loan repayment cases(Target-1 and Target-0)

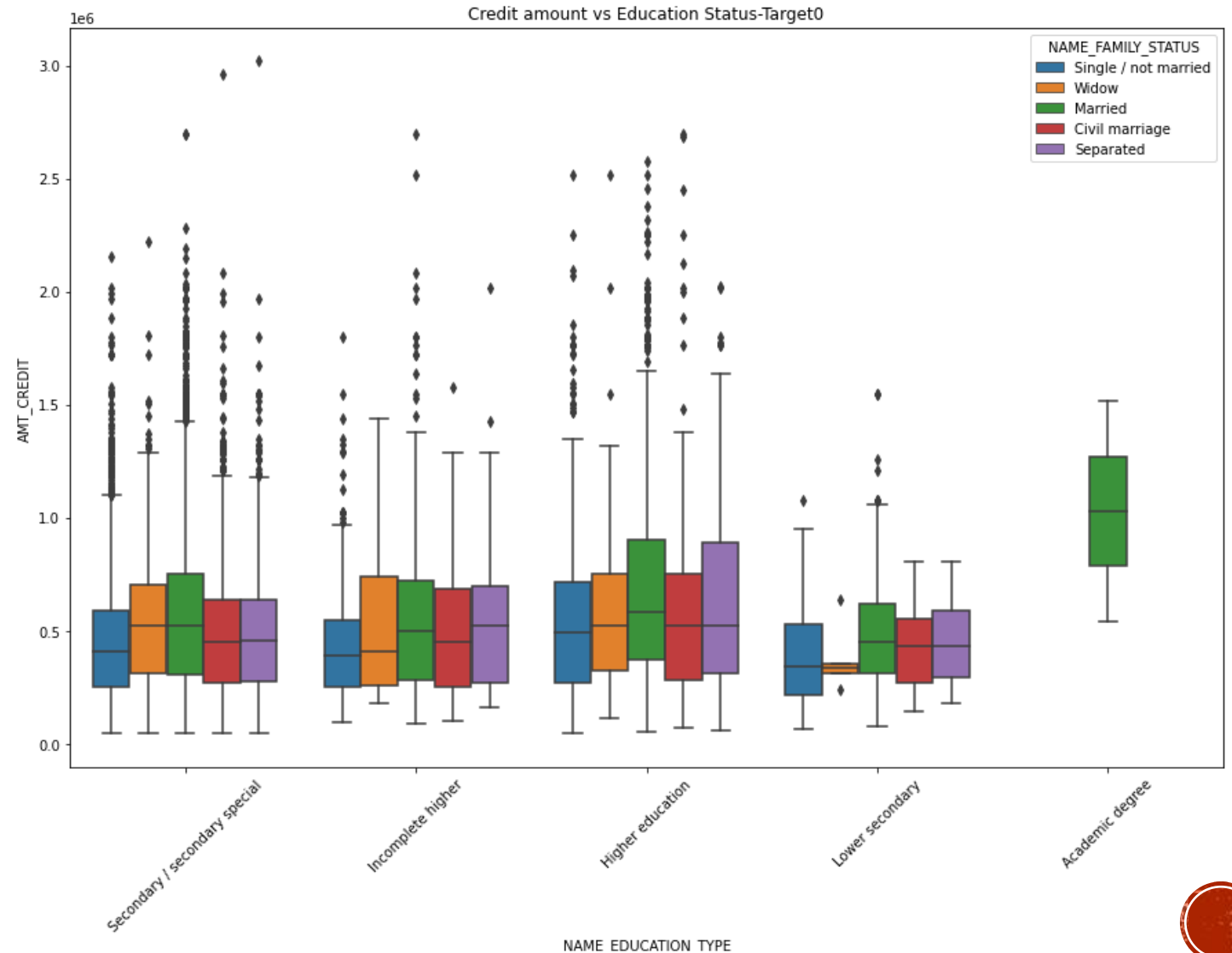


## EDUCATION TYPE , MARITAL STATUS WITH RESPECT TO AMOUNT CREDITED FOR THE APPLICATION FOR TARGET-0

### Conclusion:

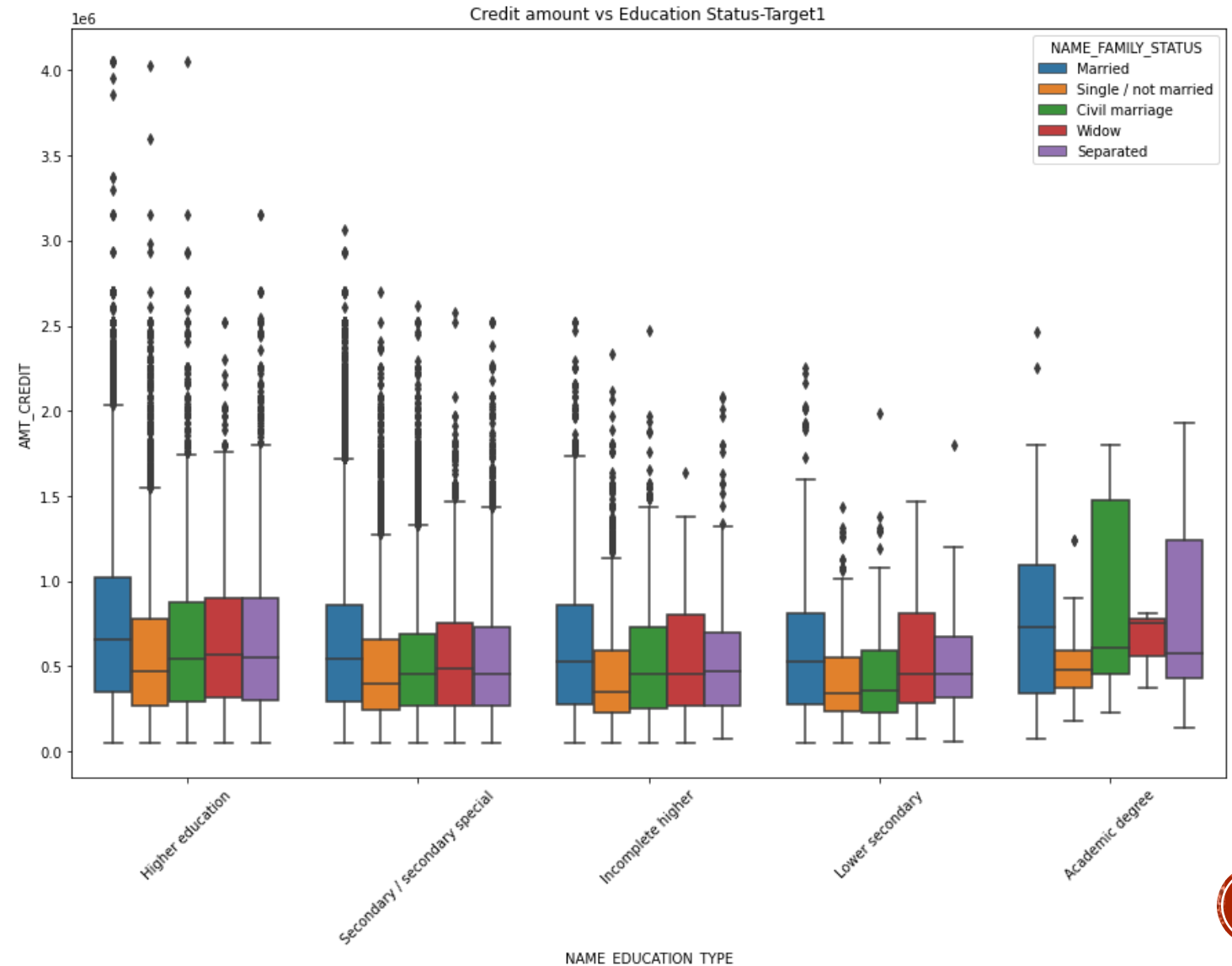
Applicants having academic degree and Married having highest 100<sup>th</sup> percentile and are the targeted customer as they have lesser payment difficulty than other categories.

Whereas Widow with lower secondary education have the lowest 100<sup>th</sup> percentile.

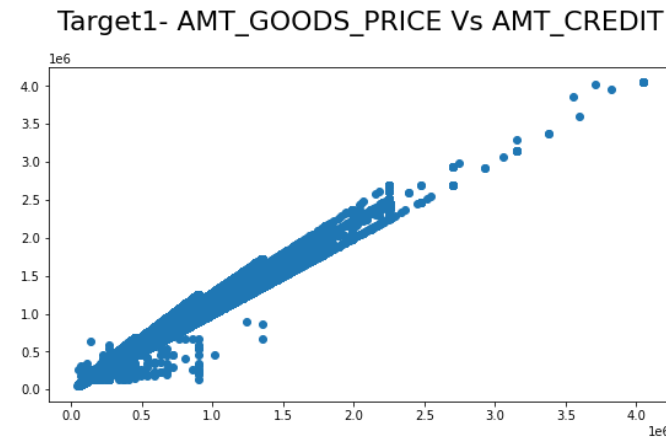
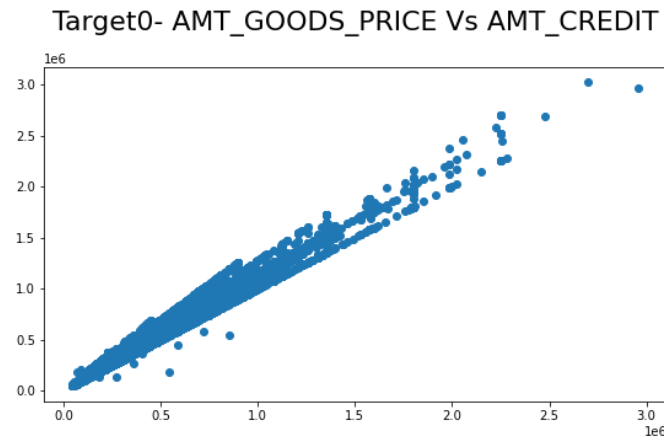


## EDUCATION TYPE , MARITAL STATUS WITH RESPECT TO AMOUNT CREDITED FOR THE APPLICATION FOR TARGET-1

**Conclusions:**  
Applicants having higher education have most payment difficulty- with highest 100<sup>th</sup> percentile.



# SCATTER PLOTS OF DIFFERENT NUMERICAL VARIABLES VS CIBIL SCORE

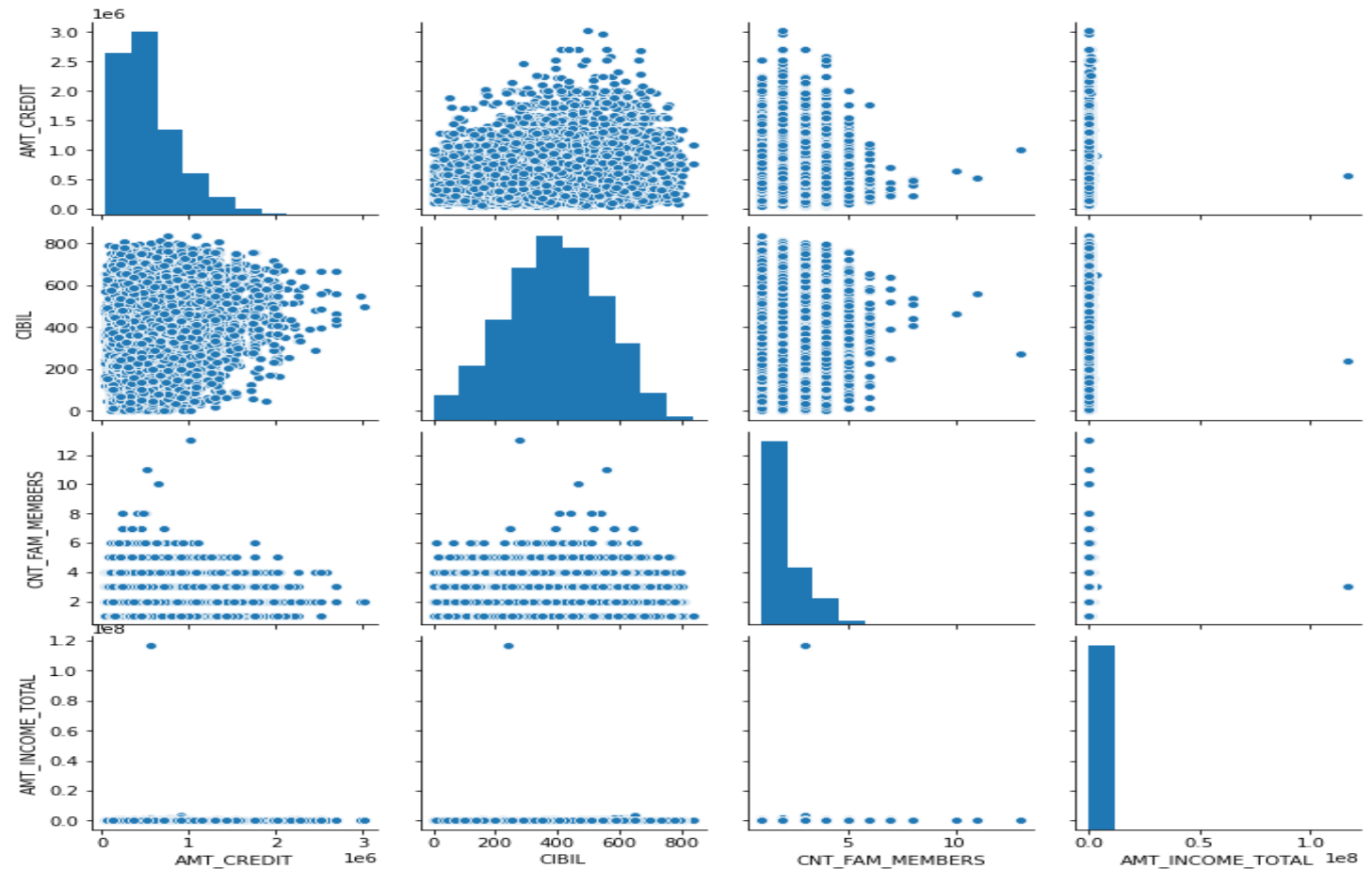


Comment: Amount of goods price has positive correlation with the amount credited for the application for all loan applicants.



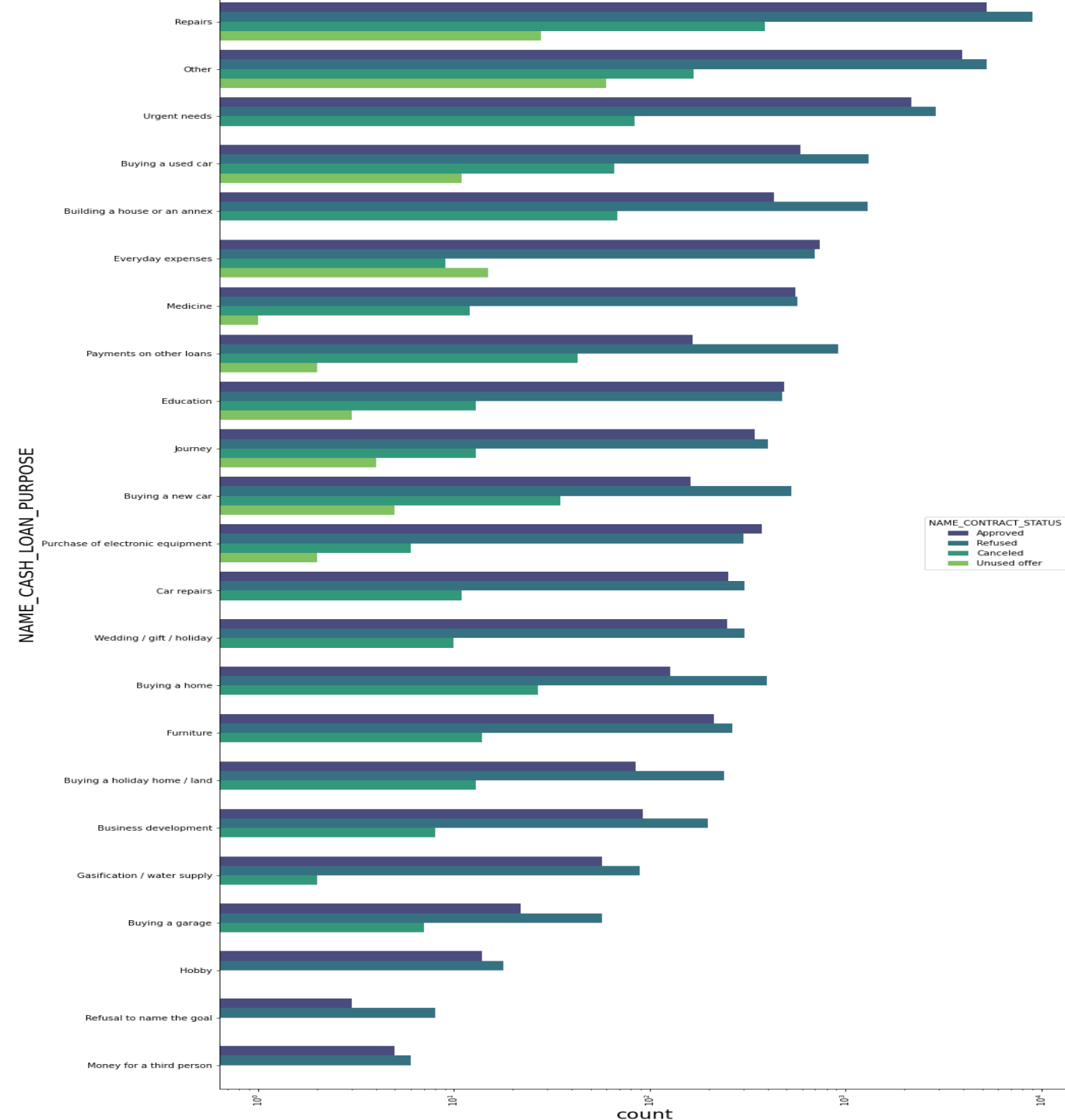
## AMT\_CREDIT','CIBIL','CNT\_FAM\_MEMBERS','AMT\_INCOME\_TOTAL' ON PAIRPLOT

Comment: There is some positive correlation among the columns credited amount, Cibil score, Number of family members and Income. For better visuals analyzing further.



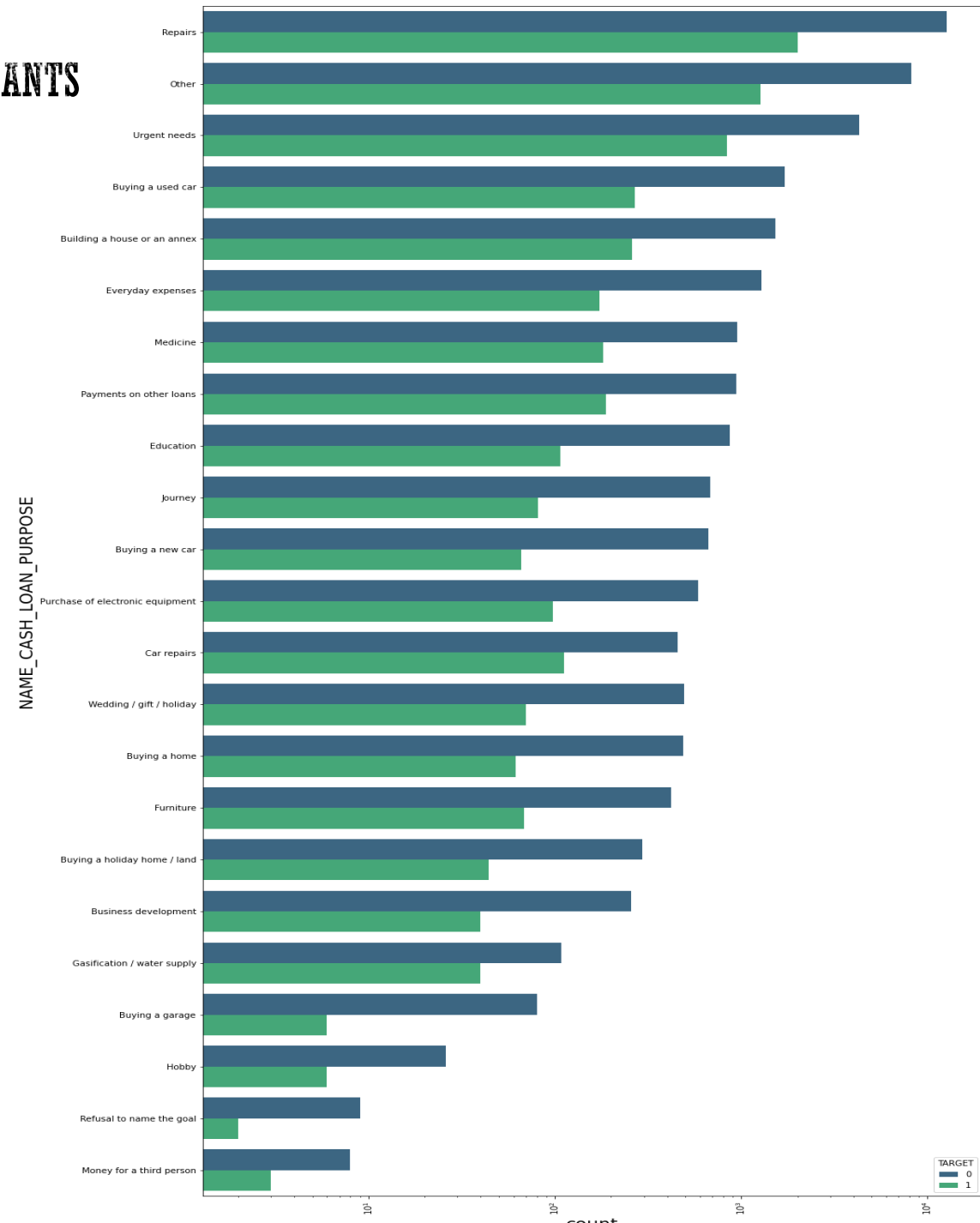
# DISTRIBUTION OF LOAN PURPOSE IN FOR ALL CONTRACT STATUS

Comment: Most of the loans applied on a purpose 'repairs' got rejected. Purposes of 'Buying a new car' and 'Buying a home' have significant higher rejection than approval. 'Medicine' and 'Education' have almost same approval and rejection rate.



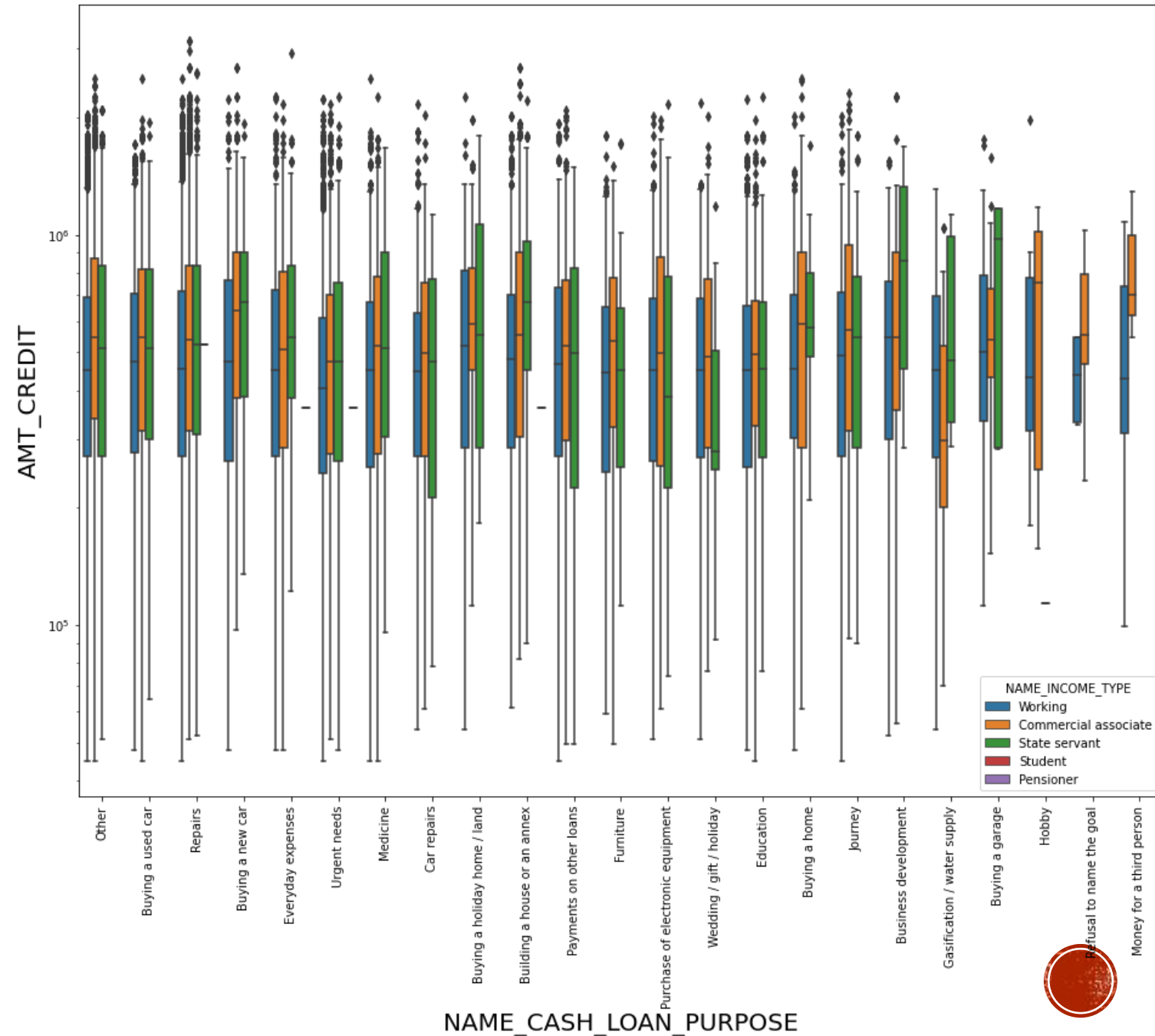
# LOAN PURPOSE FOR BOTH TARGET0 AND TARGET1 APPLICANTS

Comment: On time payments of cash loan with 'Repairs' purpose are facing more difficulties though its seen that Repairs has most loan repay history. It's also seen that applicants have almost similar type of difficulties irrespective of the purpose of taking loan. It's proportionate to the number of loan applicants.



## ■ CREDIT AMOUNT VS PURPOSE OF LOAN FOR EACH CONTRACT STATUS

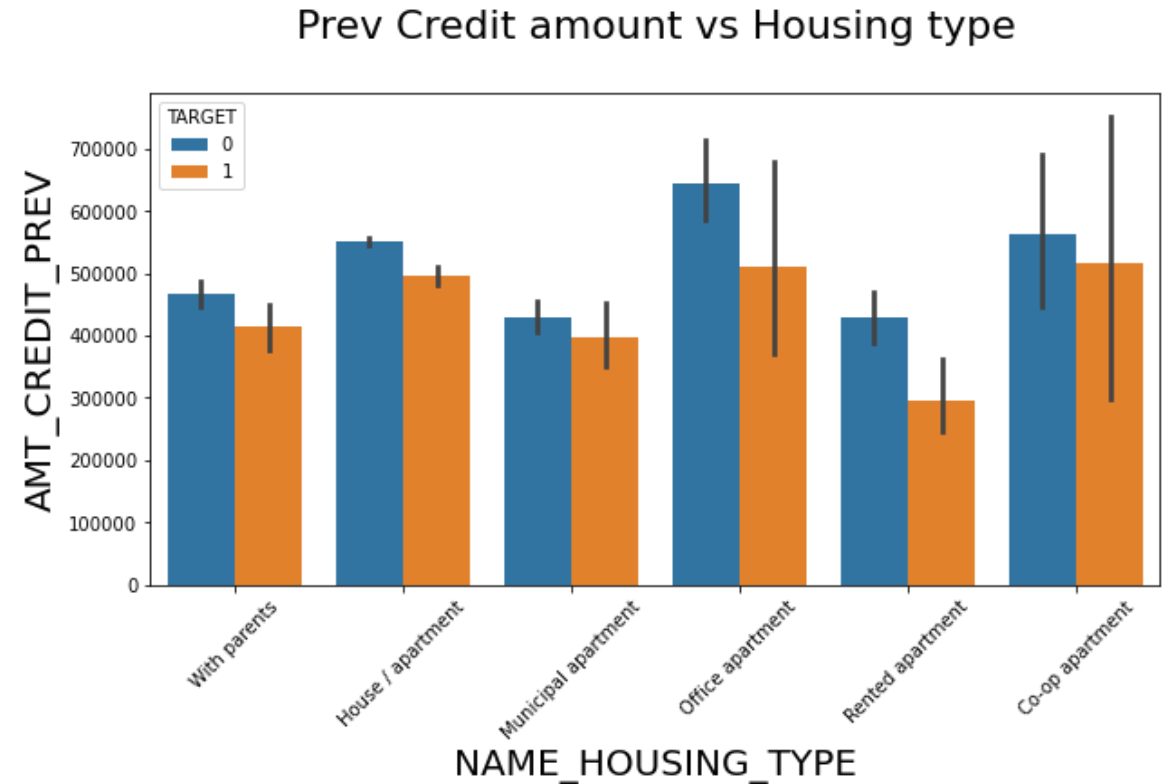
Comment: It's observed that Buying a holiday home/land by state servant and Journey for Commercial Associates has similar 100th percentile and have highest Credited amount. whereas Student has no loan/amount credit history.





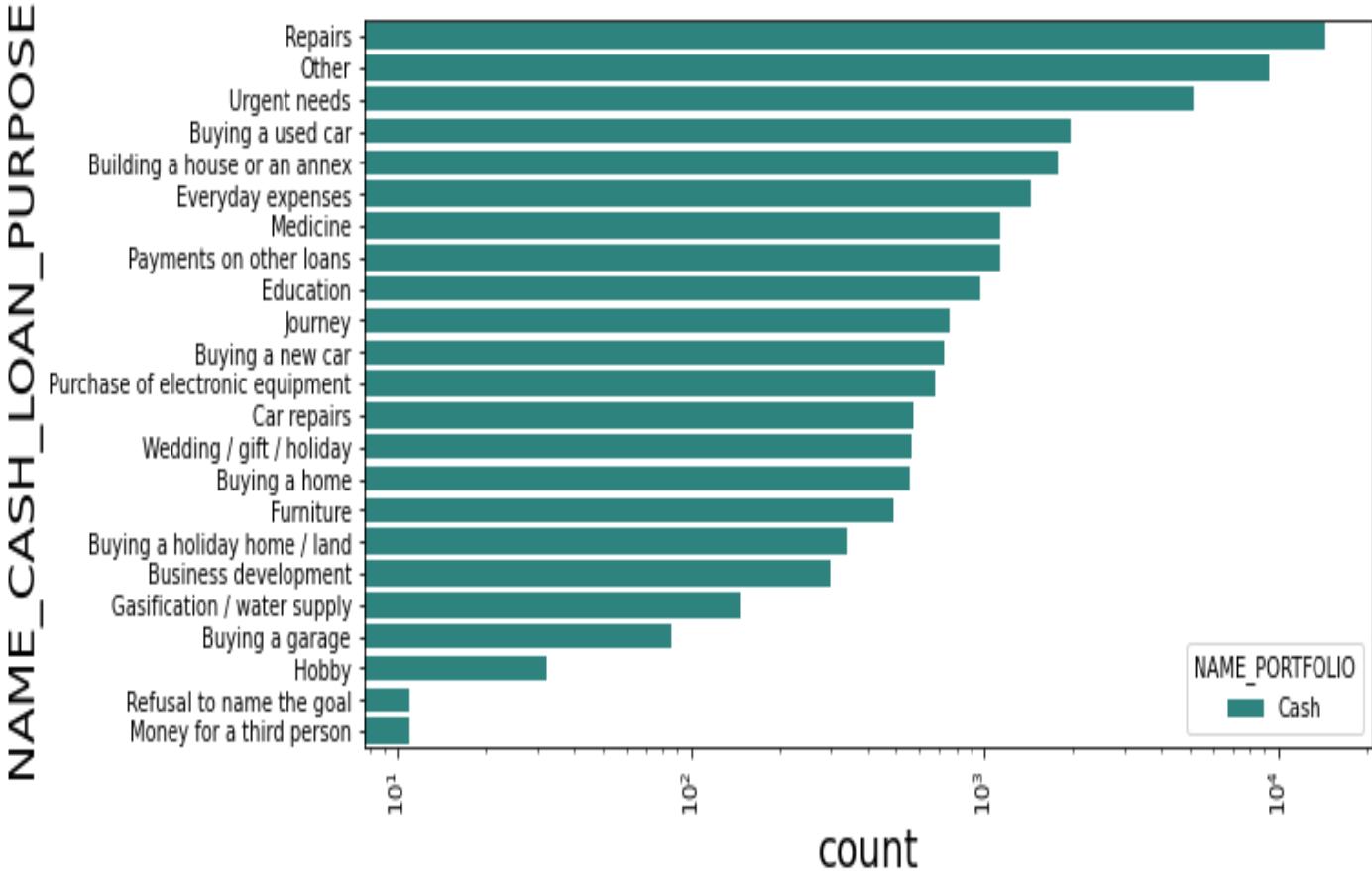
## CREDIT AMOUNT PREV VS HOUSING TYPE

Comment: It's observed that Co-op apartment and Office apartment have payment difficulty for the credited amount , where Office apartment has most amount credited and has best loan payment history.



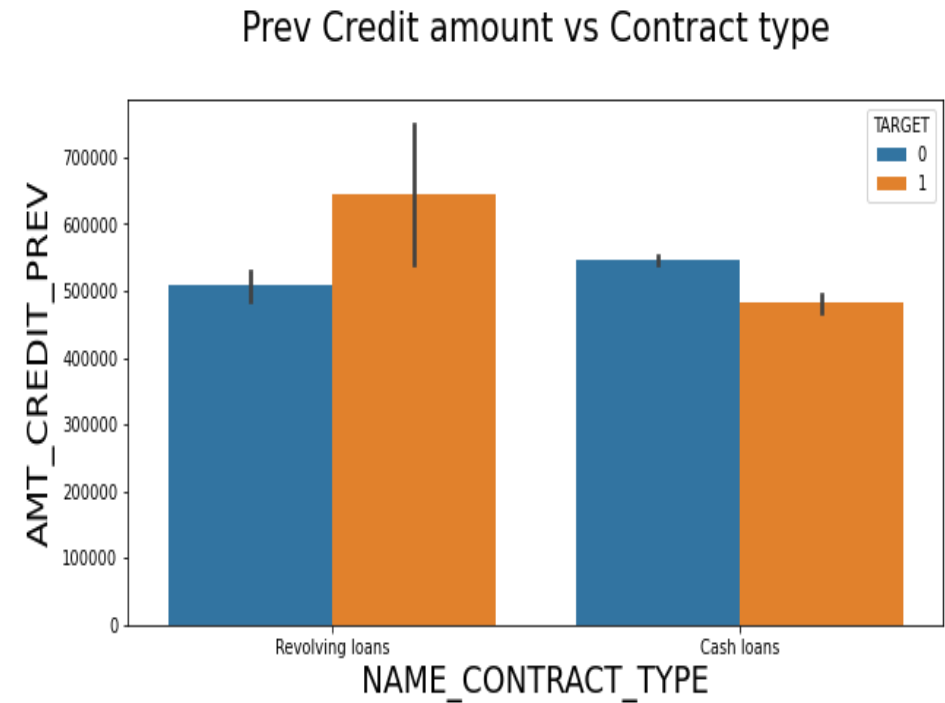
DISTRIBUTION OF LOAN PURPOSE FOR CASH LOANS

Comment: Most cash loans have taken for Repairs purpose.



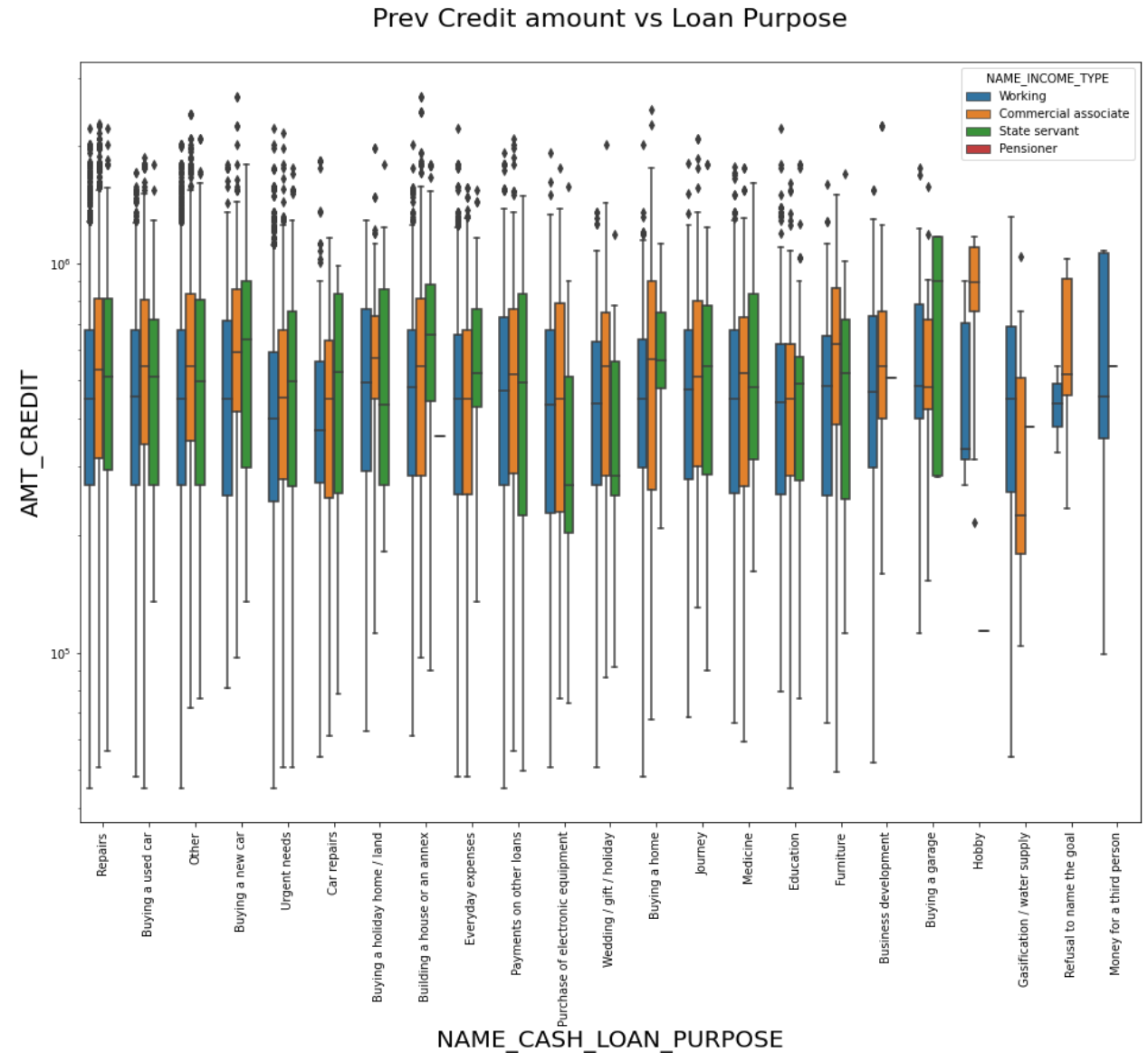
## CREDIT AMOUNT PREV VS CONTRACT FOR BOTH TARGET0 AND TARGET1 APPLICANTS

Comment: For Revolving loans applicants have more payement difficulty than cash loans.



## CREDIT AMOUNT FOR REFUSED LOANS

Comment: Commercial Associates for buying a home has most rejected loan history. It's also seen that pensioner does not have any refused loan history.



# CONCLUSION

- Bank should focus on age group 28-35 with CIBIL\_Score 0.3-0.5
- Bank has given most loans to the applicants who resides on tier-2 Region/City
- Bank has given most loans to Laborers whereas with higher credit loans were given to Managers.
- Bank should avoid giving loans to applicants who are married and have only higher education, the have loan repayment difficulties. Whereas Applicants who are married and have Academic degrees have repay the loan.
- Most loans applied for Repairs purpose are rejected
- Loans are mostly taken by Cash , it's noticed Revolving Loans have more repayment difficulties.

