

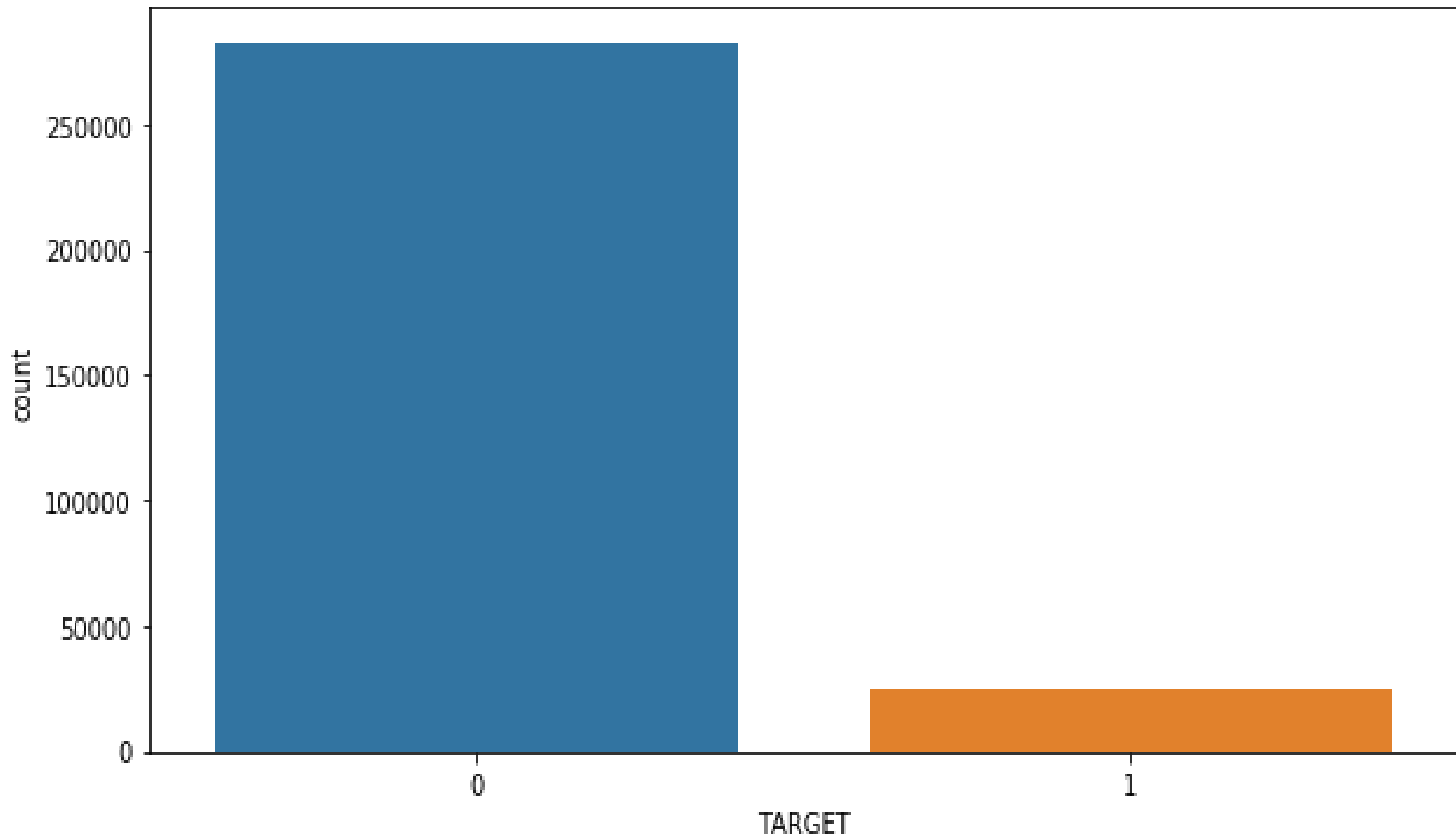
# ***CREDIT EDA CASE STUDY***

***By:***  
***Mir Muhammad Murtaza***  
***&***  
***Mir Muhammad Mujtaba***

# ***OBJECTIVE***

***To identify potential Loan defaulters.***

# ***DATA IMBALANCE***



## *Observations...*

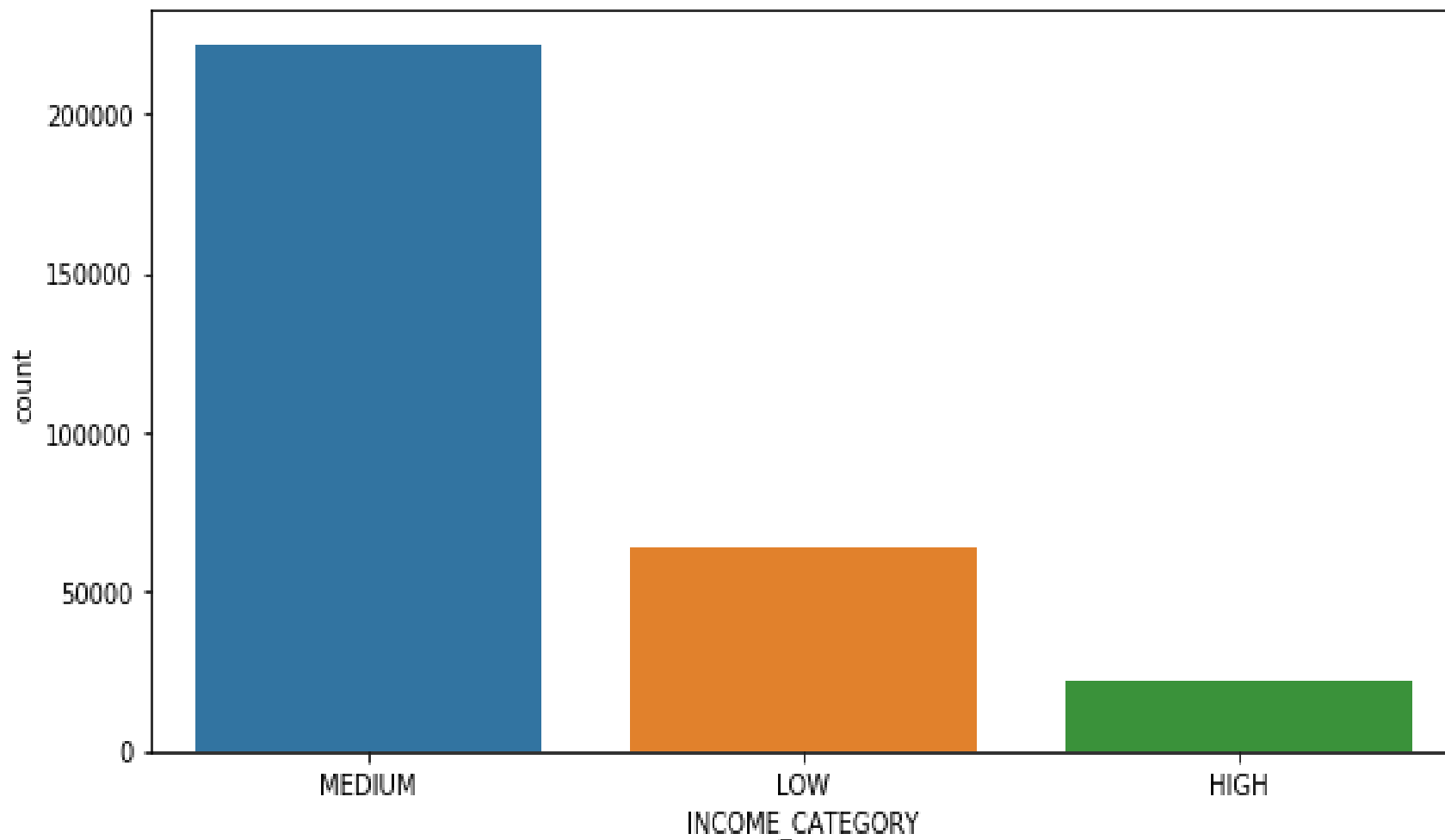
*Records for TARGET 0 are much more in number as compared to records for TARGET 1.*

**HUGE DATA IMBALANCE !!!!**

*The company needs to address the issue of imbalance to pave the way for unbiased analysis*

# ***INCOME CATEGORY***

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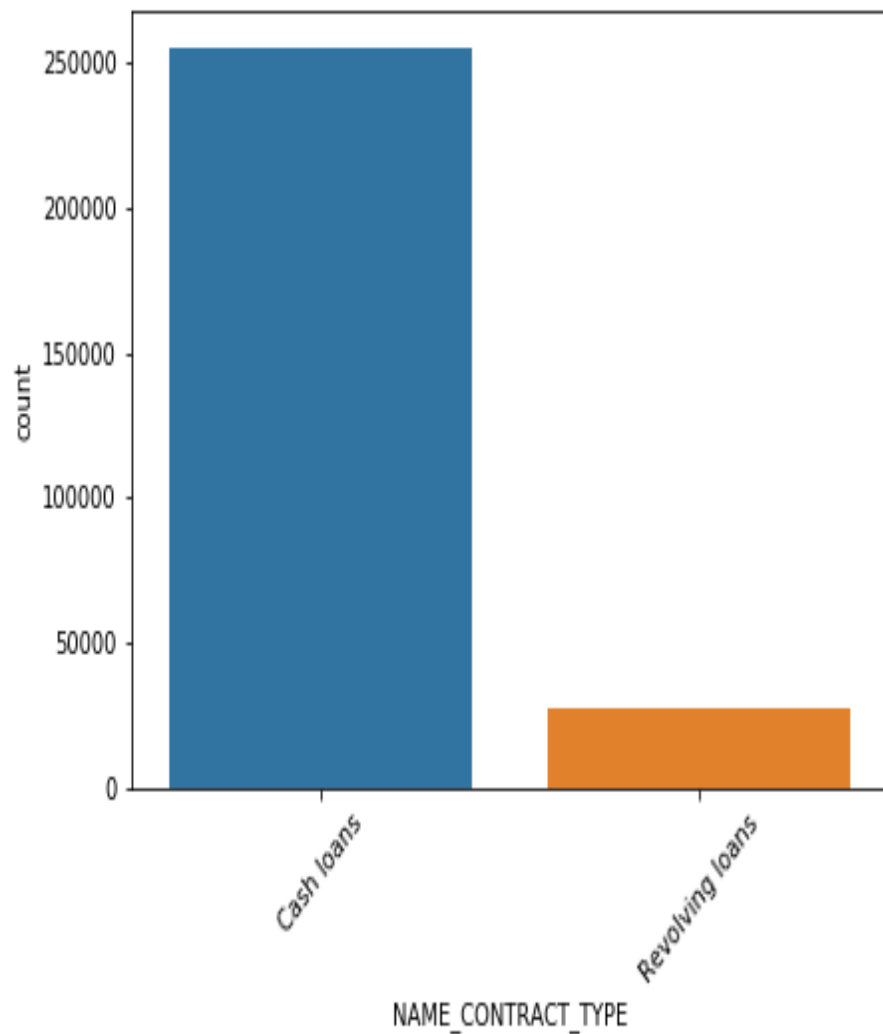
**NOTE:** *Income Category is not originally present in the dataset.*

# *Observations...*

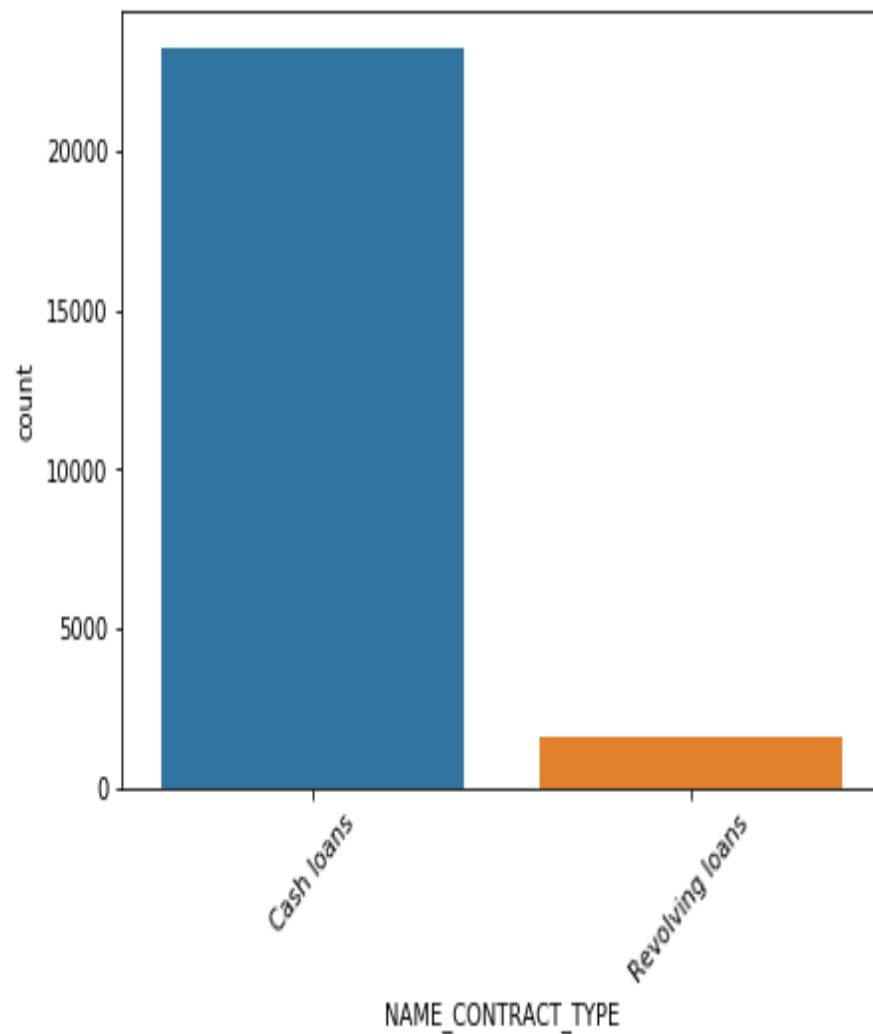
- *People belonging to the MEDIUM income category mostly apply for loans.*
- *People belonging to the HIGH income category hardly apply for loans.*

# ***NAME\_CONTRACT\_TYPE***

TARGET 0



TARGET 1

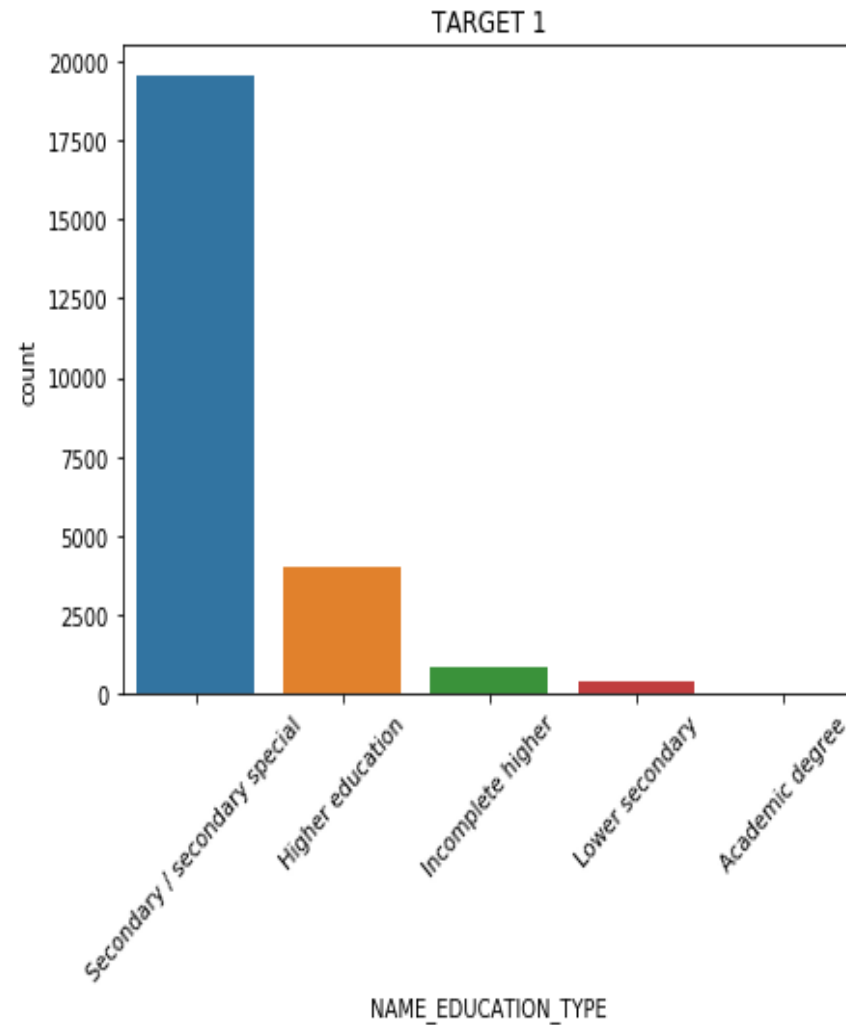
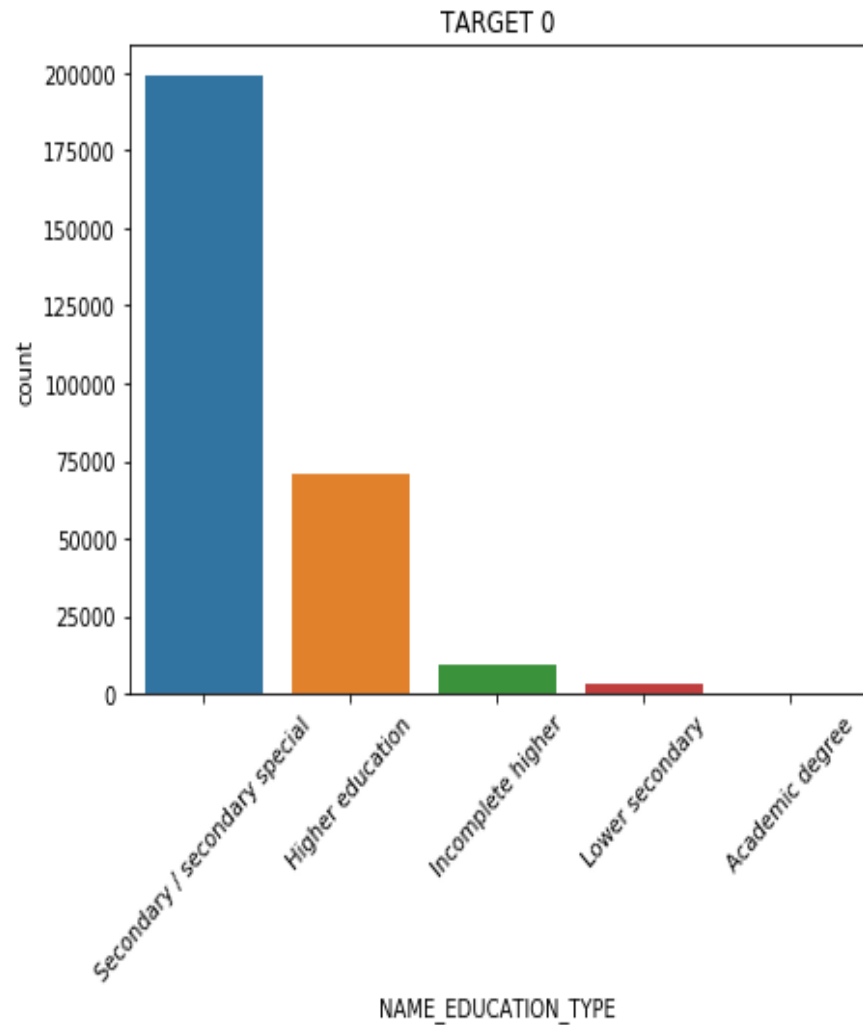


## *Some observations...*

- *Identical behavior in both the TARGET cases.*
- *Cash loans are dominating as compared to Revolving loans.*



# *NAME\_EDUCATION\_TYPE*

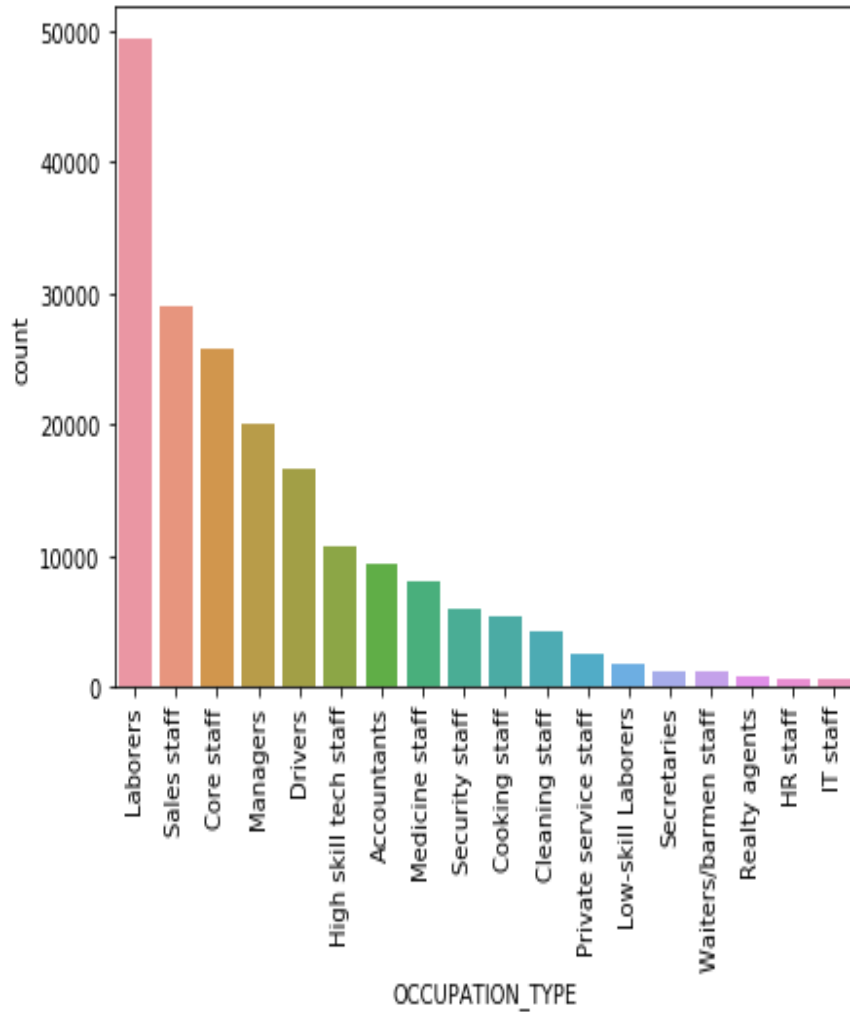


## *Some observations...*

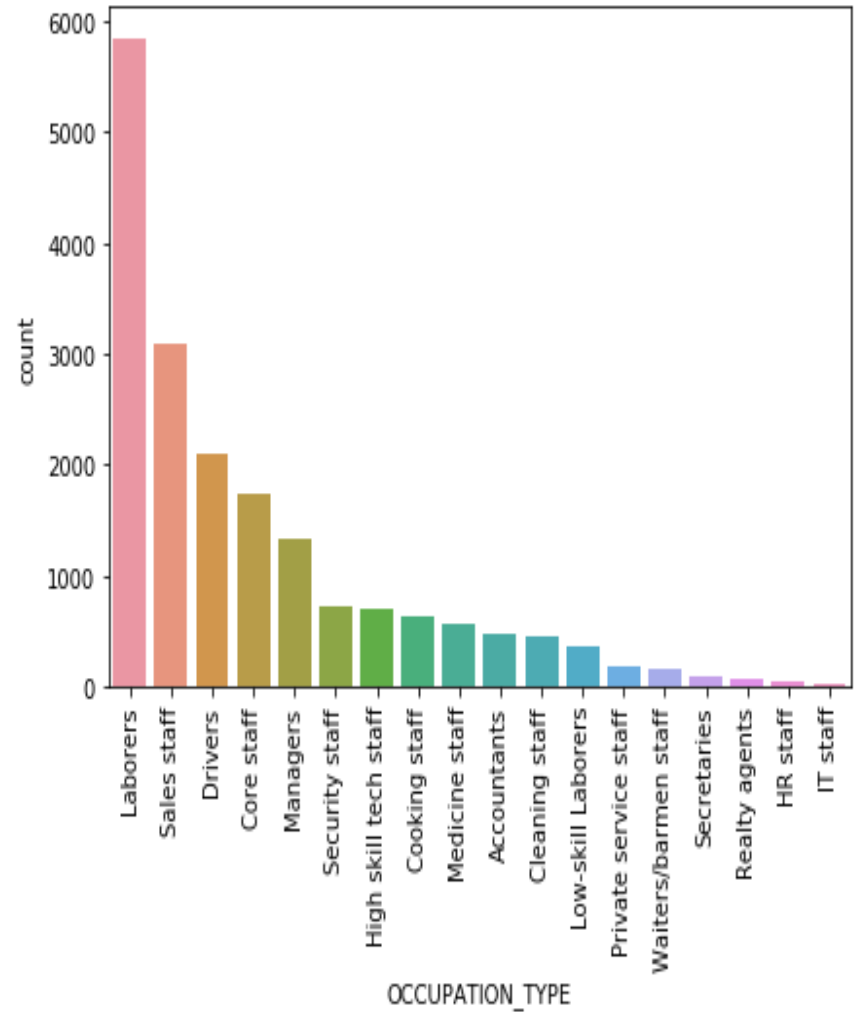
- *Similar behavior in both the TARGET cases.*
- *Less qualified people mostly apply for loans.*

# *OCCUPATION\_TYPE*

TARGET 0



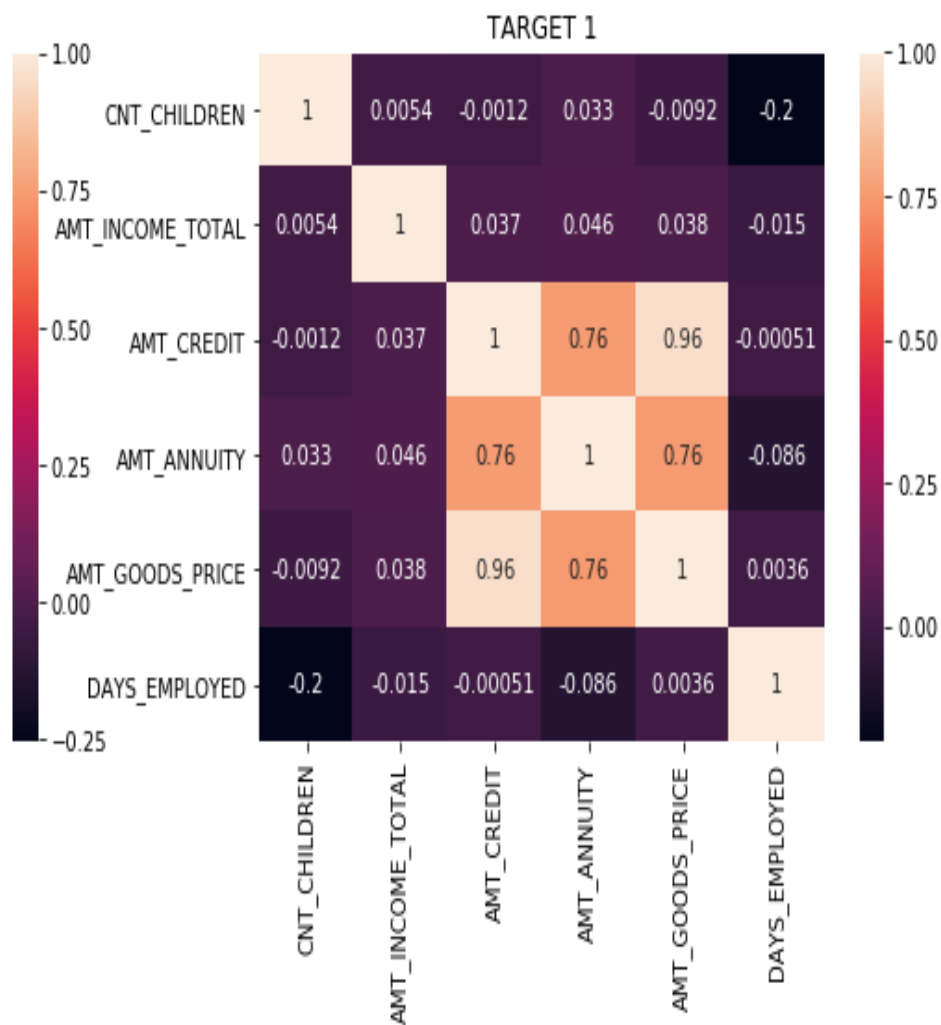
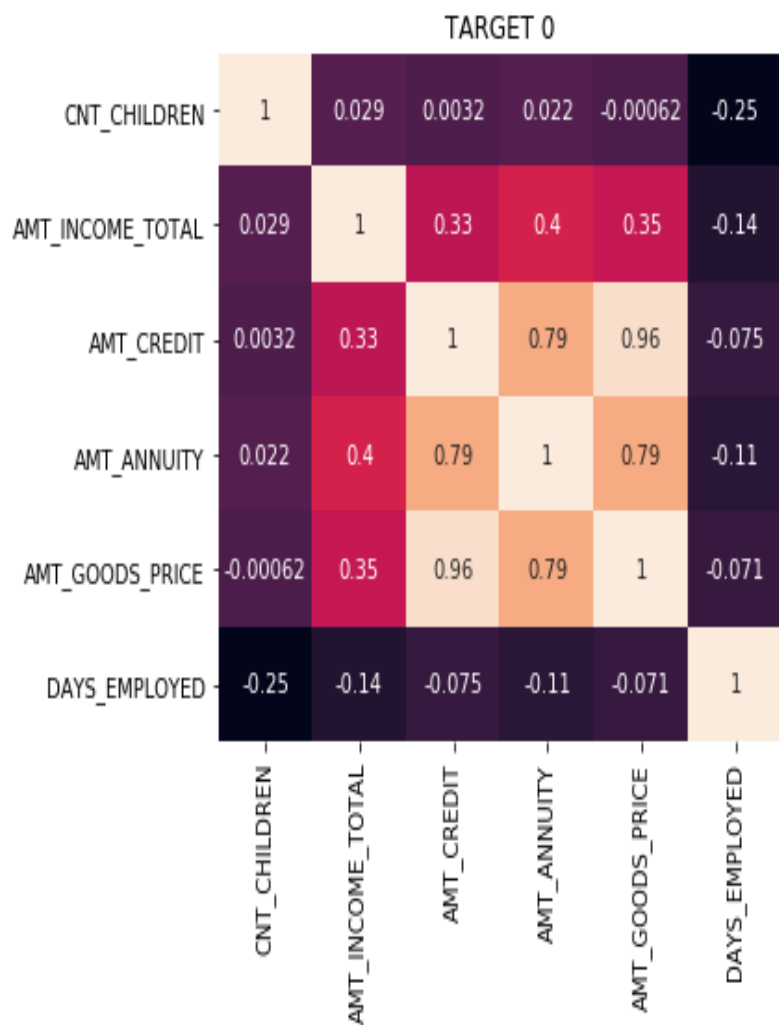
TARGET 1



## *Some observations...*

- *Similar trends except few differences.*
- *Applicants without financially decent enough jobs mostly apply for the loans.*

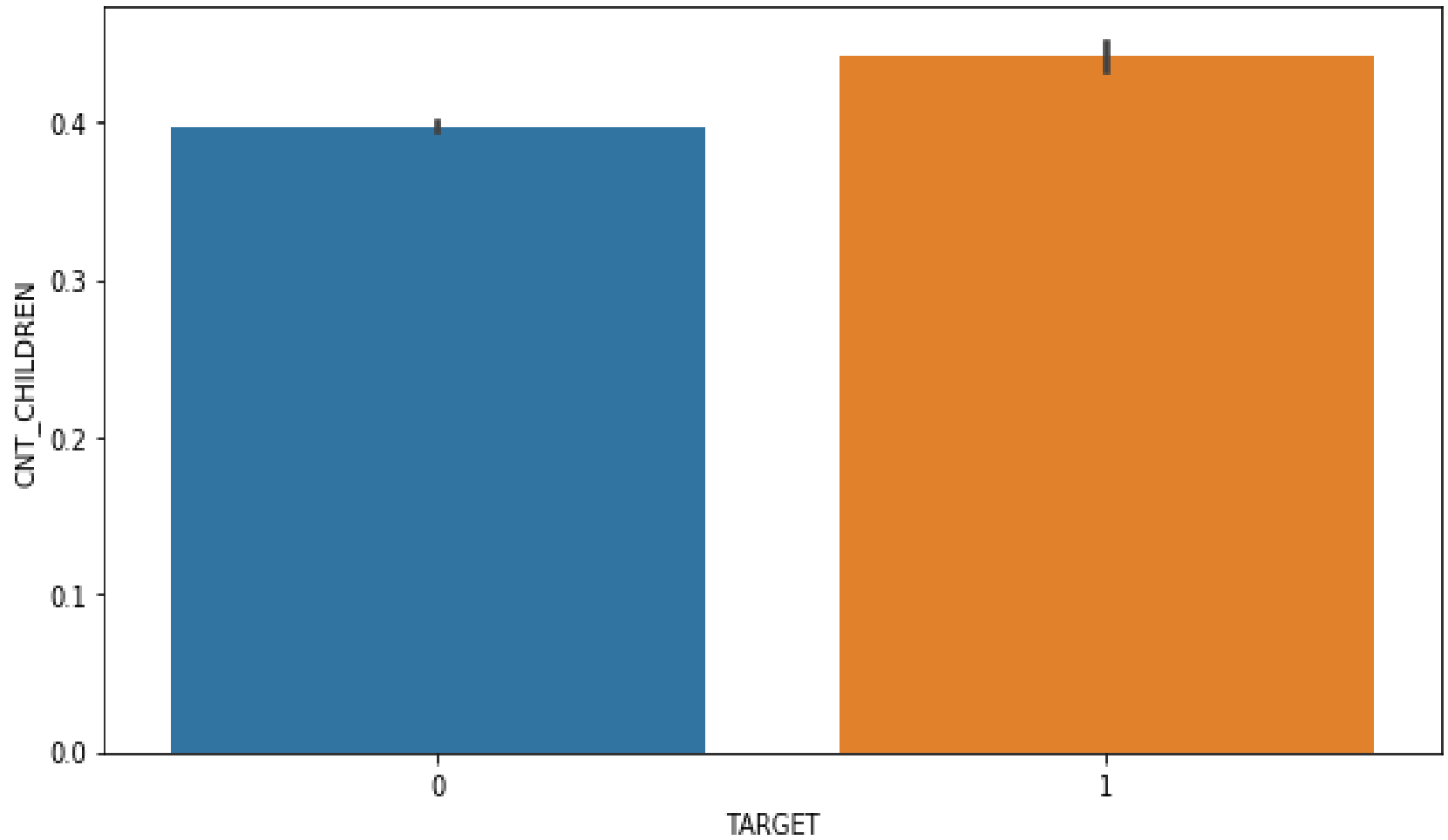
# Correlation between numerical variables



## *Some observations...*

- *Trend in both the TARGET cases is similar except for one major difference.*
- *AMT\_INCOME\_TOTAL has higher correlation in TARGET 0 as compared to TARGET 1.*

# *TARGET vs CNT\_CHILDREN*

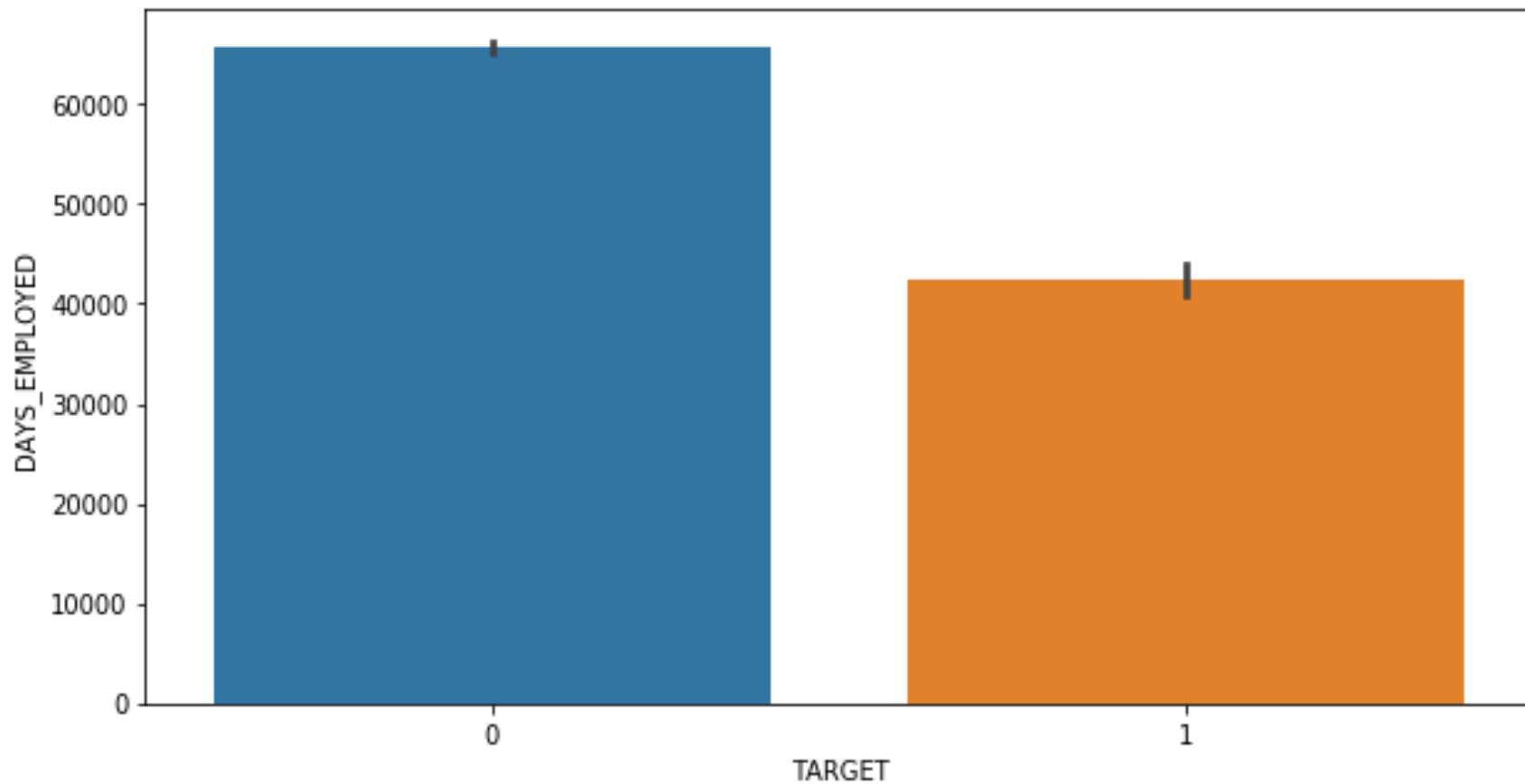


## *Some observations...*

- *People with payment difficulties i.e. Target 1 have more number of children on an average as compared to Target 0.*
- *The company can the exercise caution before granting loans to those people with more number of children.*



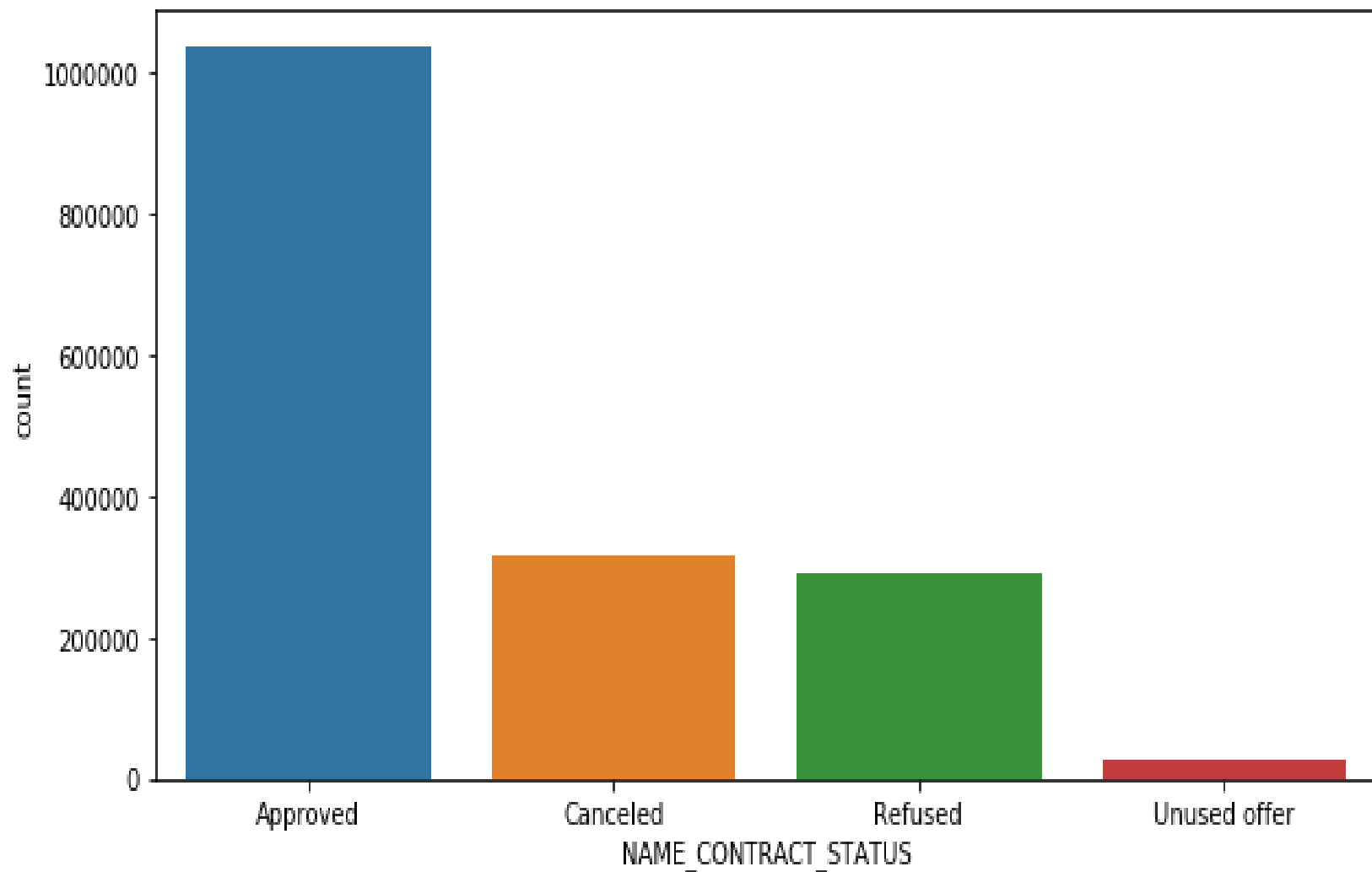
# *TARGET vs DAYS\_EMPLOYED*



## *Some observations...*

- *On an average, the number of employment days in the case of Target 1 is quite less as compared to Target 0.*
- *This may mean that Target 1 has applicants who are relatively new in their respective jobs or maybe complete fresher in their jobs.*

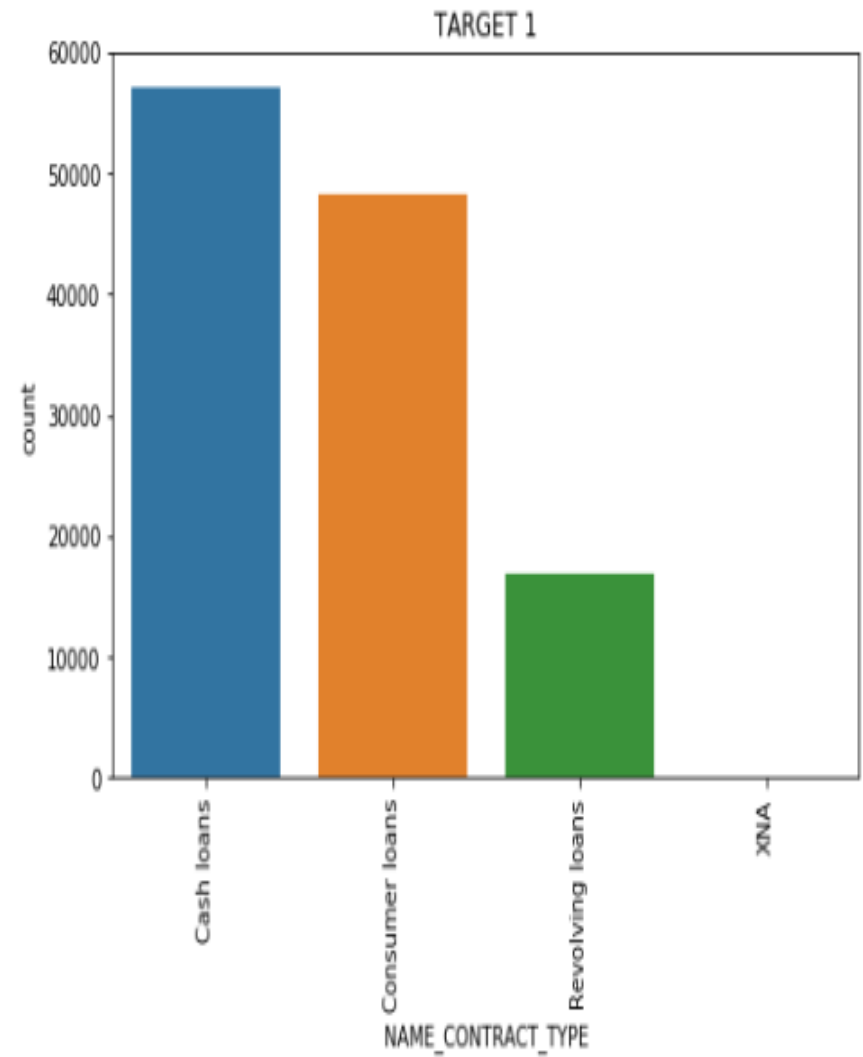
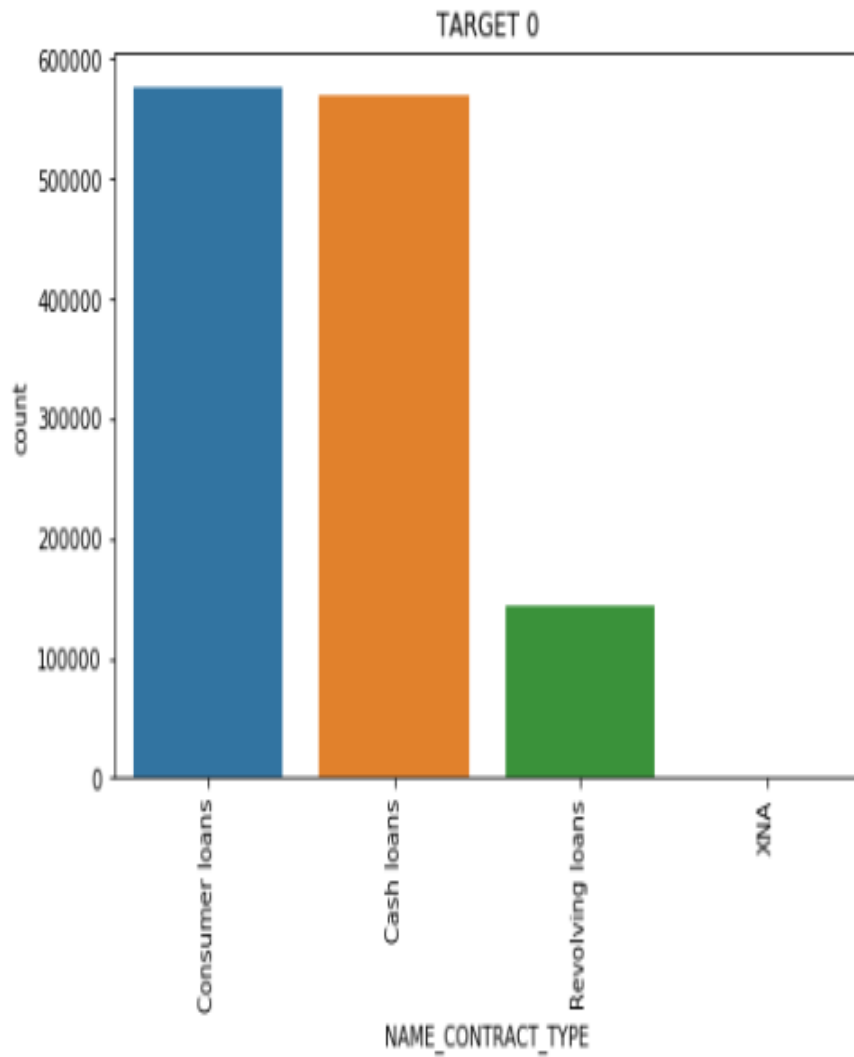
# ***NAME\_CONTRACT\_STATUS***



## *Some observations...*

- *Majority of the applications received get an Approval status by the company.*
- *Data is heavily imbalanced in favor of Approvals.*

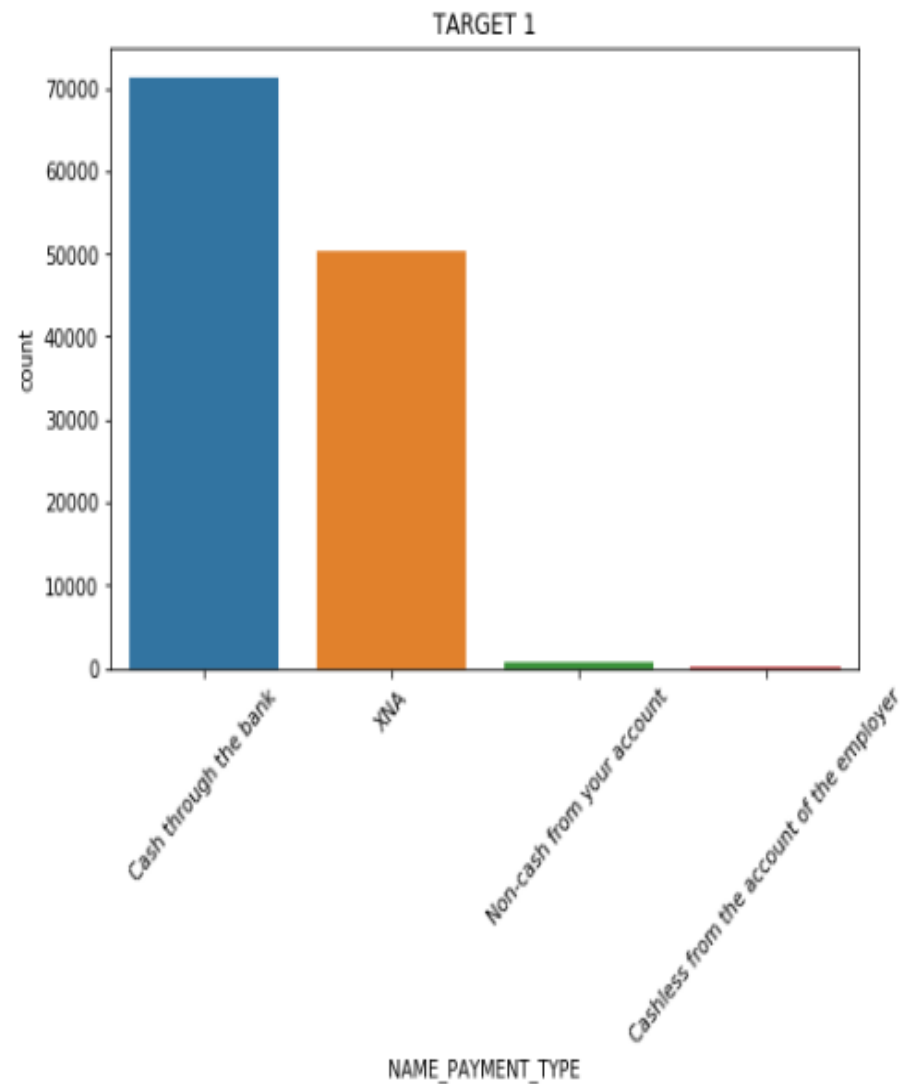
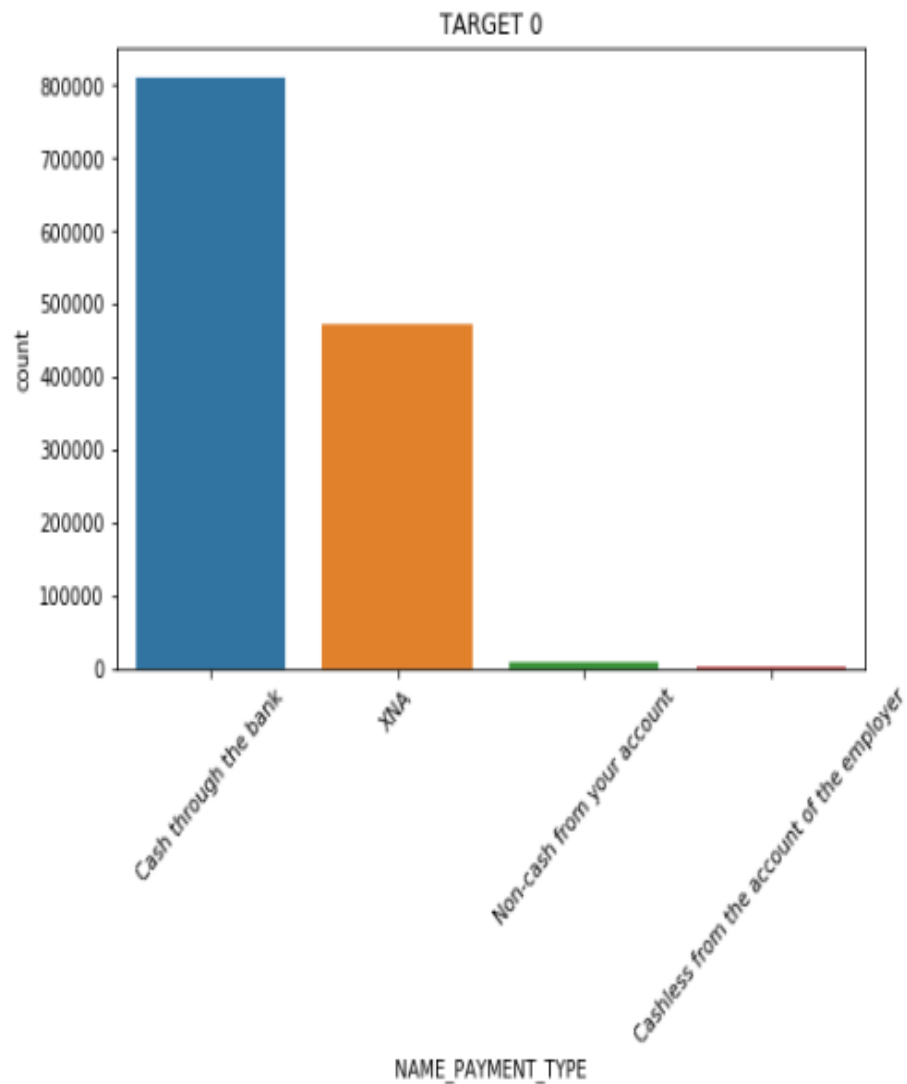
# ***NAME\_CONTRACT\_TYPE***



## *Some observations...*

- *In the case of Target 0, Consumer loans has the maximum count followed by Cash loans.*
- *In the case of Target 1, Cash loans has the maximum frequency followed by Consumer loans.*

# NAME\_PAYMENT\_TYPE

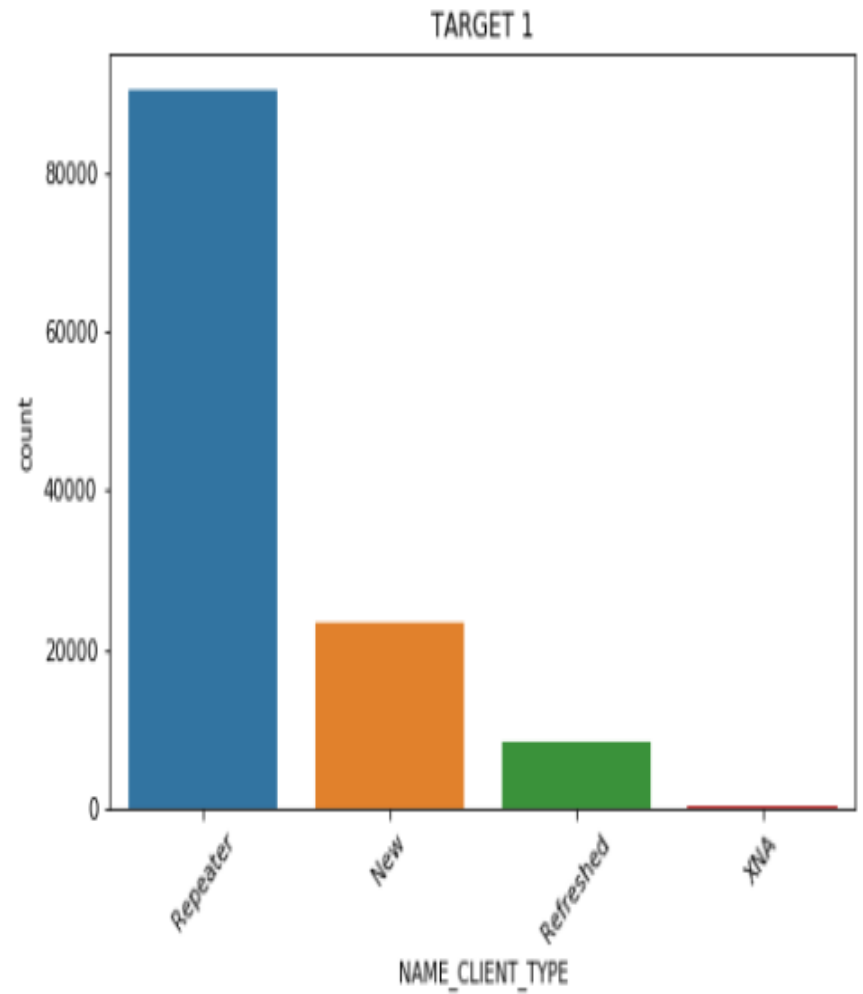
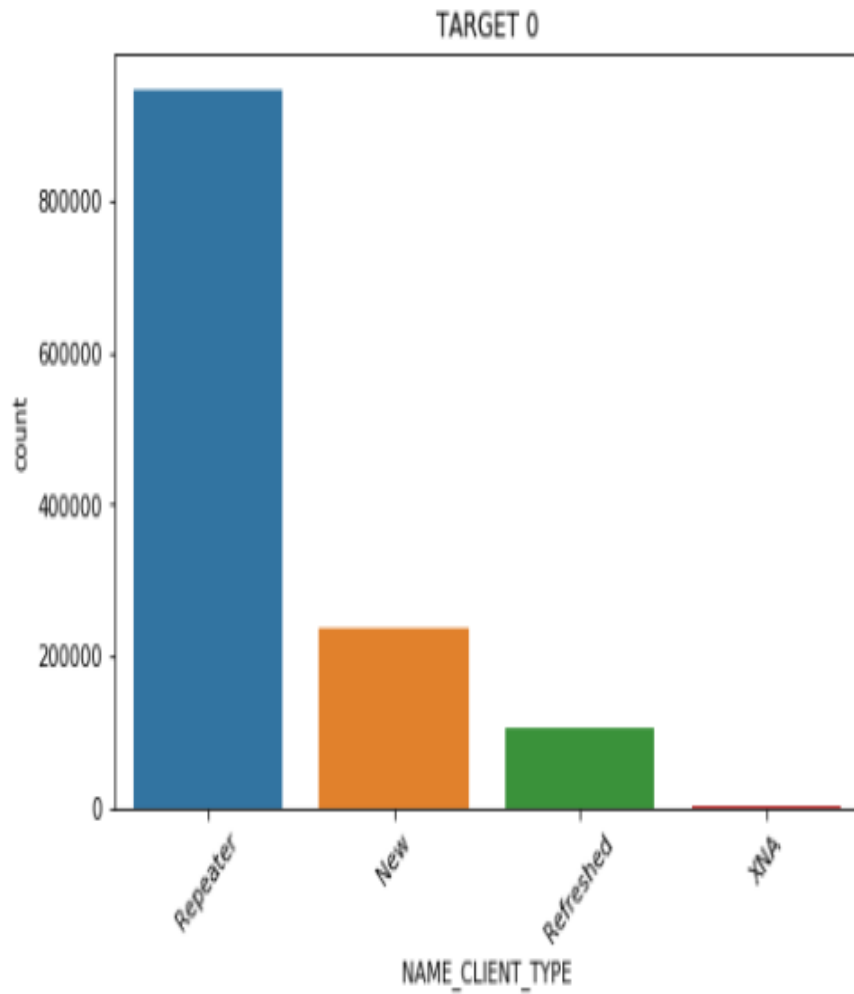


## *Some observations...*

- *Identical trends in both the Target cases.*
- *Cash through the bank is the most frequently used type of payment.*



# ***NAME\_CLIENT\_TYPE***



## *Some observations...*

- *Identical trends can be observed in both the Target cases.*
- *Category Repeater having the highest count.*

# ***RECOMMENDATIONS***

- *Company needs to address the issue of Data Imbalance to pave the way for an unbiased analysis.*
- *Company may need to exercise caution before granting Cash loans as such applicants have payment issues and hence may default.*
- *Company may need to exercise caution before granting loans to applicants who don't own a car as they may default.*

## *...continued...*

- *Company may need to exercise caution before granting loans to applicants who own a house as they may default.*
- *Company may need to exercise caution before granting loans to applicants who are less qualified as they may default.*
- *Company may need to exercise caution before granting loans to applicants who are married as they may default.*

## *...continued...*

- *Company may need to exercise caution before granting loans to applicants who don't have financially decent enough jobs as they may default.*
- *Company may need to exercise caution before granting loans to applicants with low income but still purchasing expensive goods as they may default.*
- *Applicants with payment difficulties on an average have more children and hence may default. Therefore, the company may exercise caution.*

## *...continued...*

- *On an average, people with payment difficulties have less number of employment days. Therefore, company may exercise caution before granting loans to applicants who are fresher in their respective jobs or had a recent job shift.*
- *Maximum number of applications are approved by the company even in the case of people with payment difficulties. It may indicate that the company lacks a reliable mechanism to identify potential defaulters.*
- *Applicants with Cash through the banks as their payment type may have payment issues and hence may default.*

*...continued...*

- *Company may exercise caution before granting loans to Repeater applicants.*
- *Applicants who haven't disclosed their goods' category may default and hence the company needs to be cautious.*