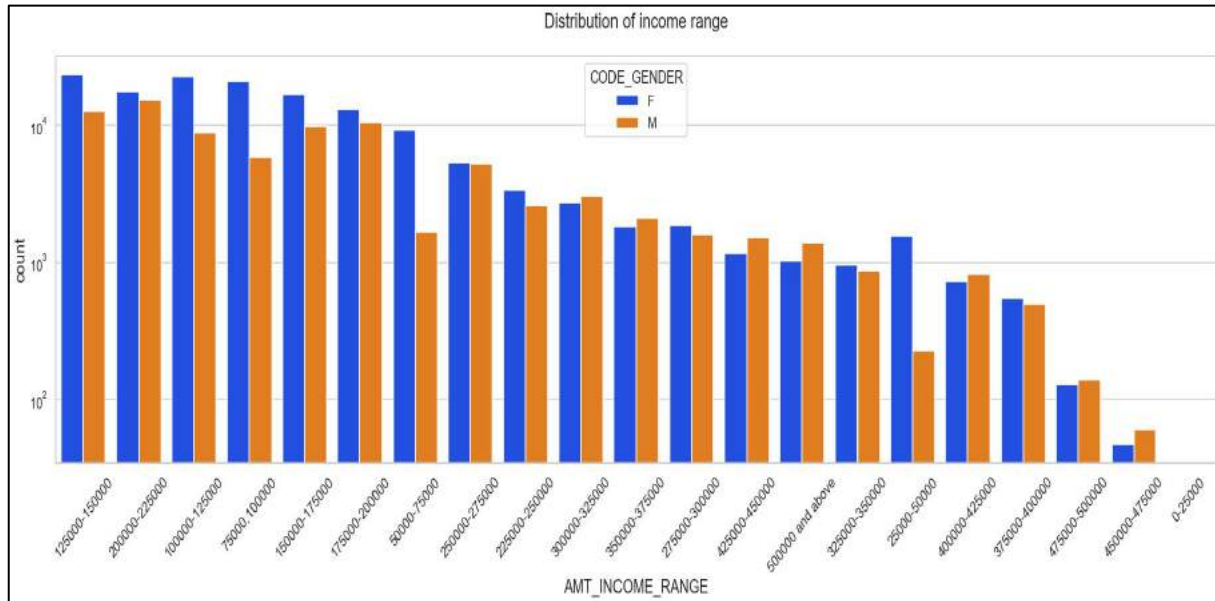# Credit EDA-Case Study

by-Rahul Prakash

Categorical Univariate analysis for target-0
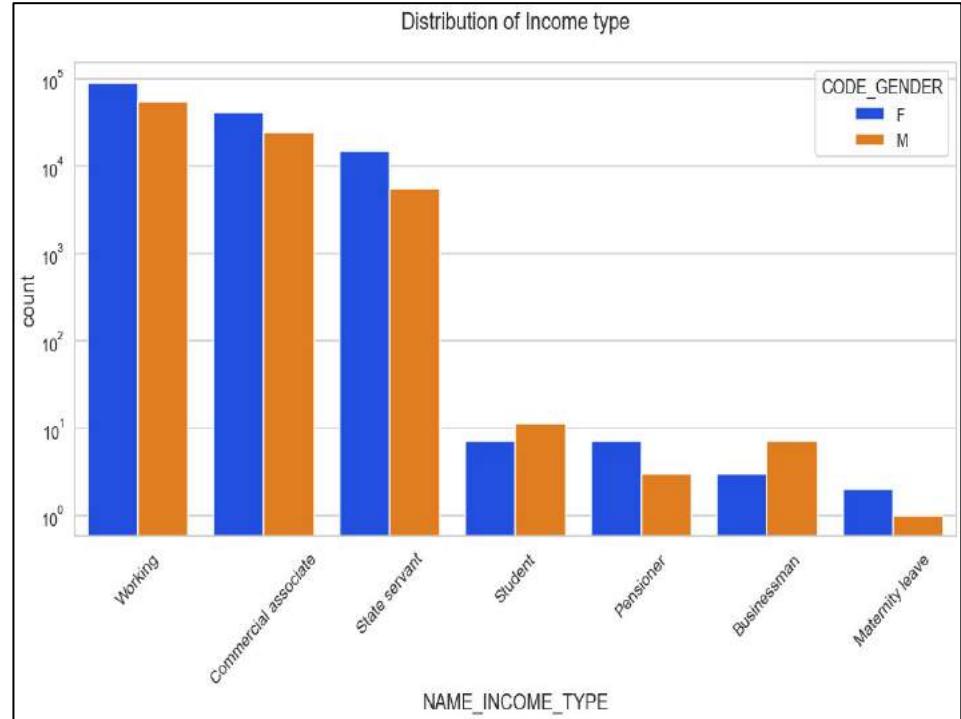
Distribution of Income range-

•Female counts are higher than male.

•Income range from 100000 to 200000 has more number of credits.

• Graph show that females are more than male in having credits for the given range.

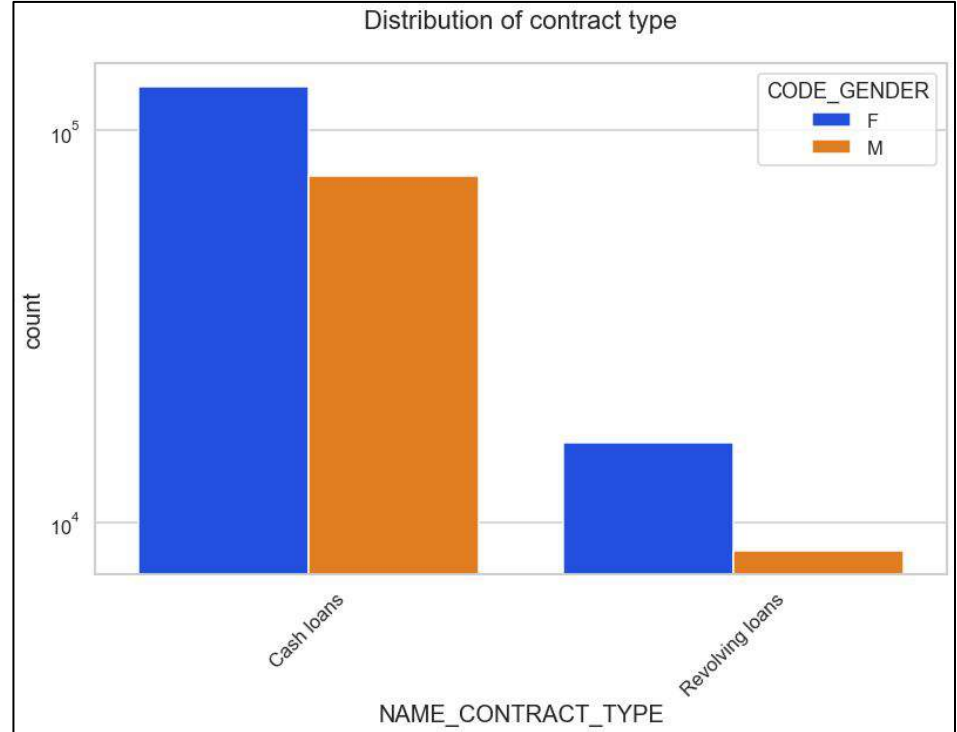•Very less count for income range 400000 and above.

Distribution of Income Type-

- For income type working,commercial associate, and State Servant the number of credits are higher than others.

- Graph shows females are having more number of credits than male.

- Less number of credits for income type student ,pensioner, Businessman and Maternity leave.

Distribution for contract type-

•For contract type,cash loans is higher in number of credits than Revolving loans contract type.

•Females are higher for applying credits.

Distribution of contract type

Categorical Univariate analysis for target -1

Distribution of Income range-

Male counts are higher than female.

•Income range from 100000 to 200000 has more number of credits.

•Graph show that males are more than female in having credits for the given range.

•Very less count for income range 400000 and above.


Distribution of income range
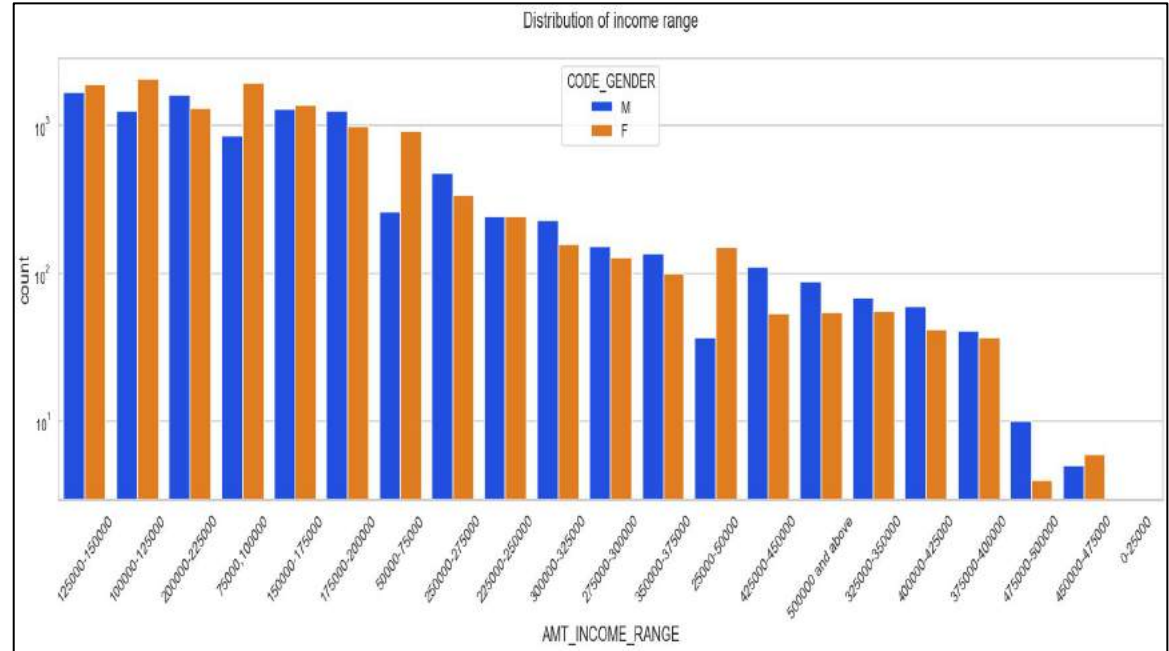
Distribution of income type-

- For income type working, commercial associate, and State Servant the number of credits is higher than other types.

- Females have more number of credits than male.

- The are Less number of credits for income type Maternity leave.

- For type 1: There is no income type for student , pensioner and Businessman which means they don't do any late payments.
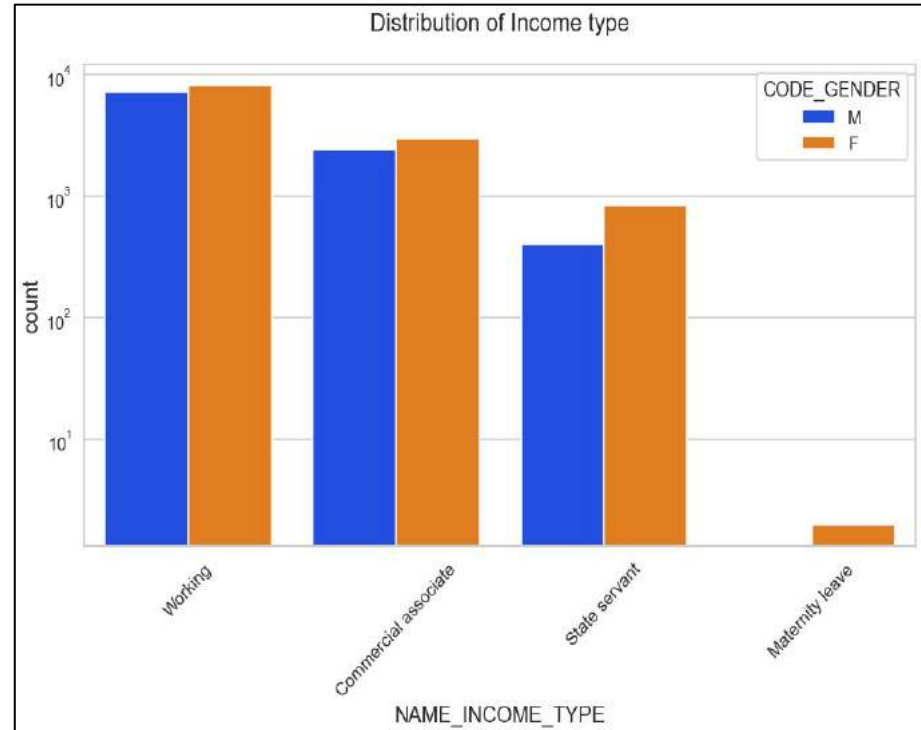
Distribution for contract type-

- For contract type cash loans has higher number of credits than Revolving loans contract type.

- For this also Female is leading for applying credits..
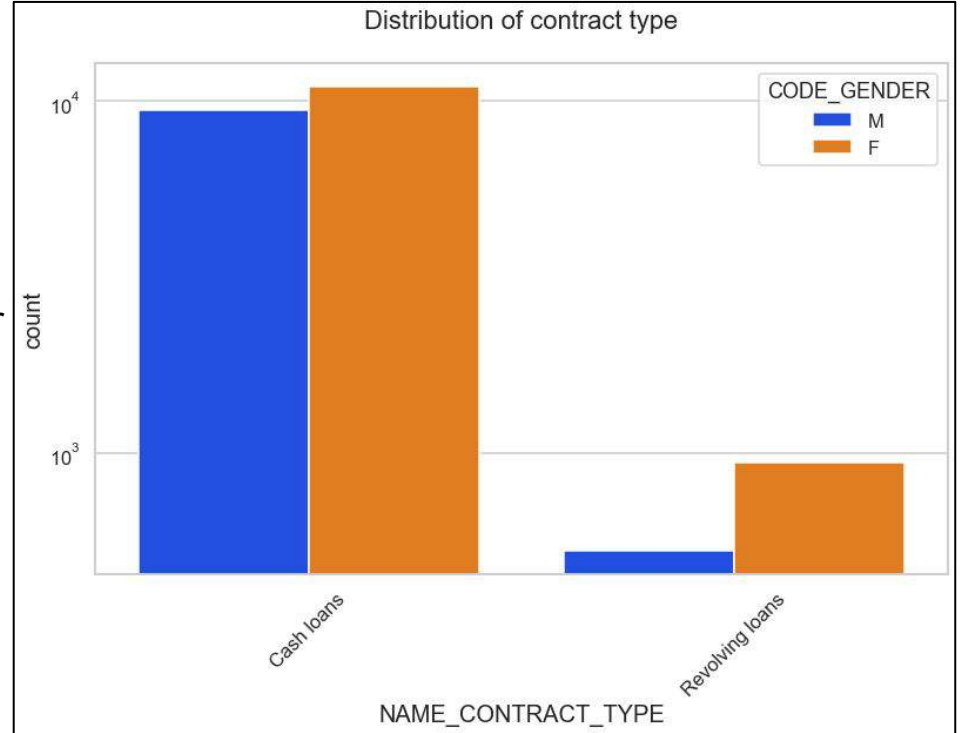
Correlation of target-0

•Credit amount is inversely proportional to the date of birth, meaning that the credit amount is higher for lower age.

•Credit amount is inversely proportional to the number of children that the client has, meaning that the credit amount is higher for client having less children and vice-versa.

•Income amount is inversely proportional to the number of children that the client has, means more income for client having less children and vice-versa.

•less children client have in densely populated area.

•Credit amount is higher to densely populated area.

•The income is also higher in densely populated area.


Correlation for target 0
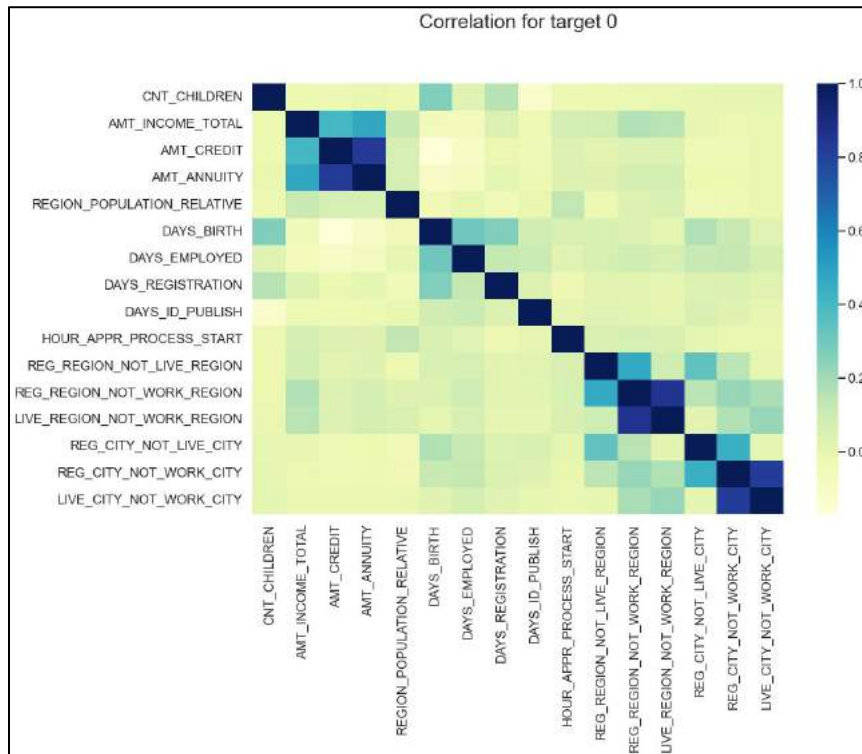
Correlation of target-1

•The client's whose permanent address that does not match contact address are having less children and vice-versa.

•The client's whose permanent address does not match work address are having less children and vice-versa.

Correlation for target 1
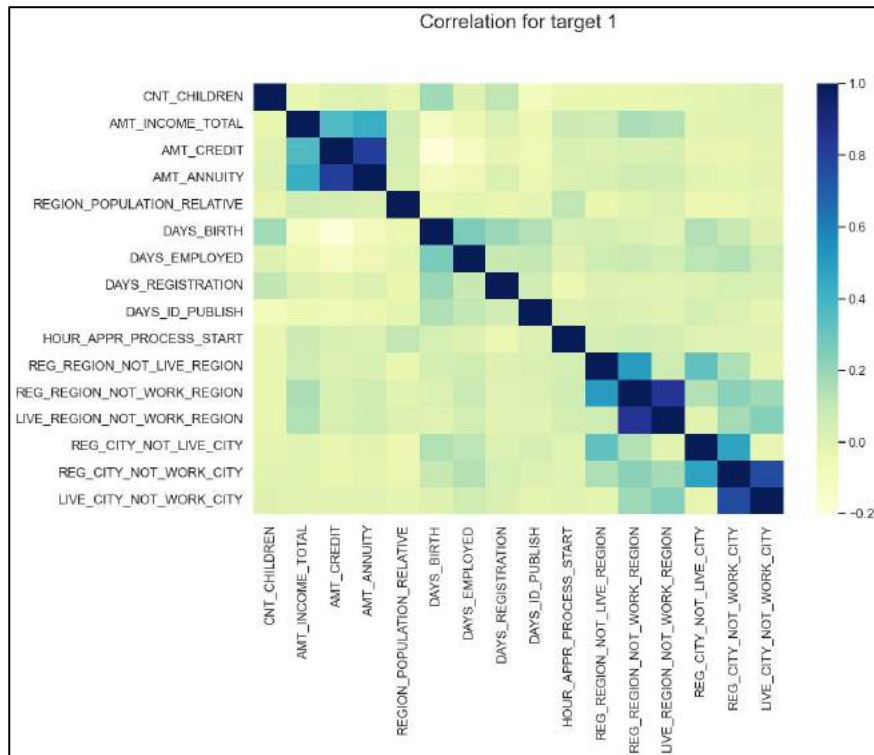
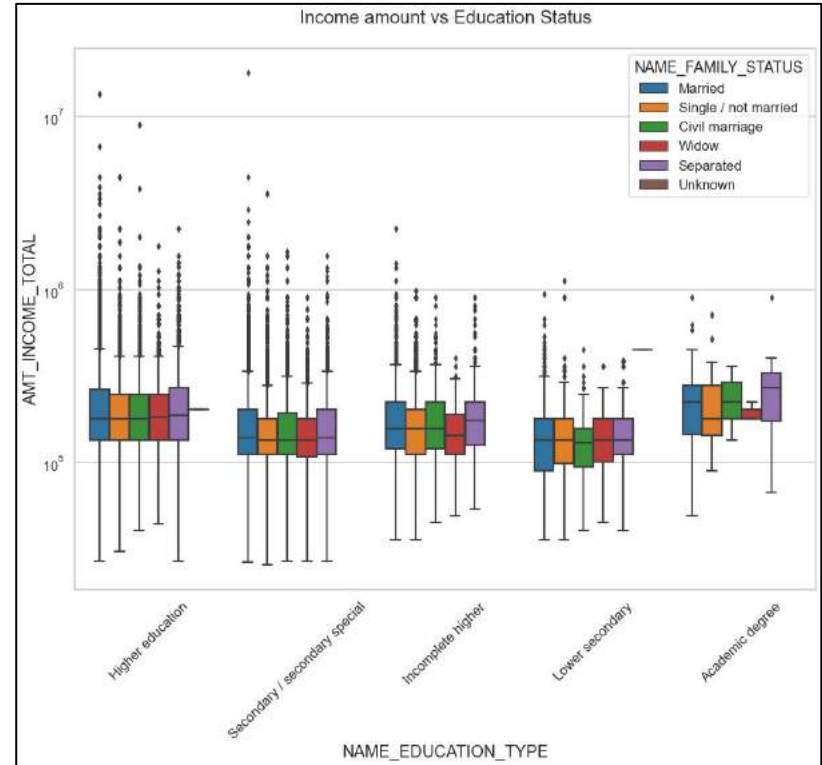# Bivariate analysis for type - 0

Credit amount vs Education Status

• Family status of civil marriage, marriage and separated from Academic degree education have higher number of credits than others.

• Higher education of family status of marriage, single and civil marriage are having more outliers.

• Civil marriage for Academic degree has most number of the credits in the third quarter.

Credit amount vs Education Status
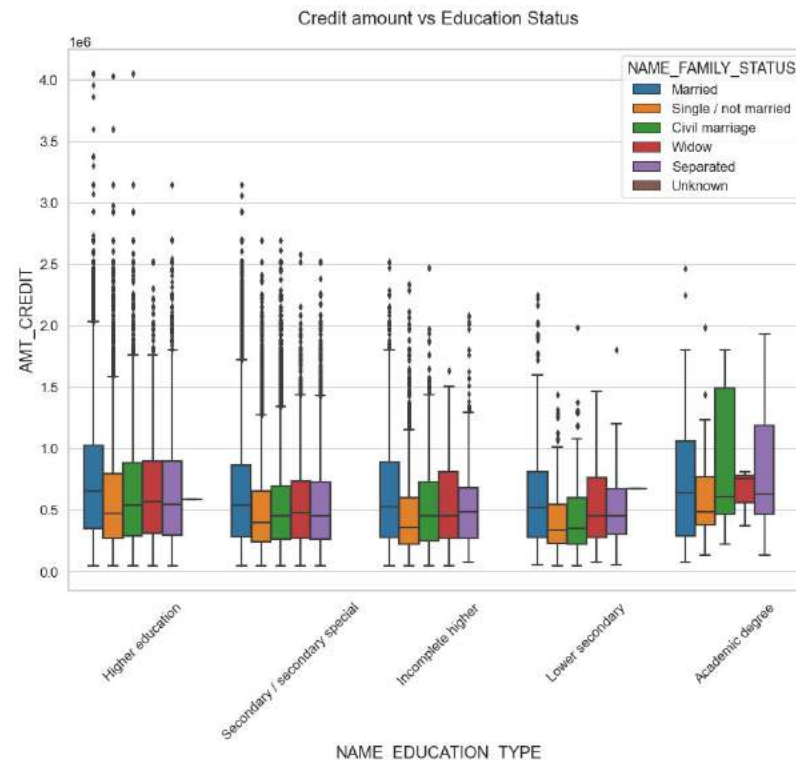
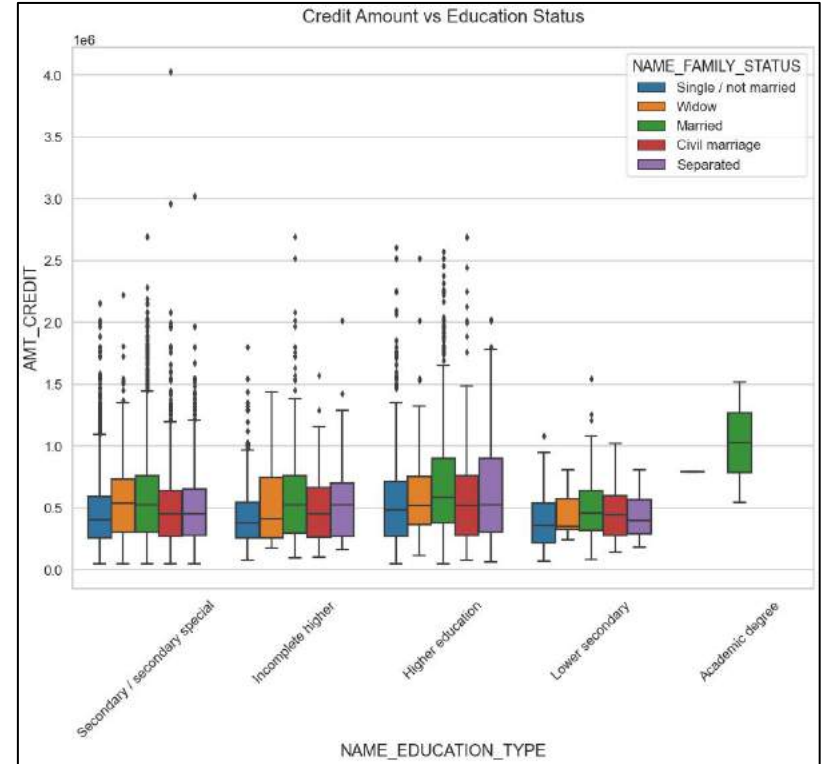# Bivariate analysis for type - 0

Income amount vs Education Status

•Less outlier are given for Academic degree but the income amount is little higher that Higher education.

•Lower secondary of civil marriage family status are have less income amount than others.

Income amount vs Education Status

# Bivariate analysis for type - 1

Credit amount vs Education Status

• Similar to Target0,Family status of civil marriage, marriage and separated from Academic degree education have higher number of credits than others.

• Higher Education and Secondary Education have most number of outliers.

• Civil marriage for Academic degree has most number of the credits in the third quarter.

# Bivariate analysis for type - 1

Income amount vs Education Status

•Less outliers are given for Academic degree but the income amount is little higher that Higher education.

•Lower secondary status have less income amount than others..
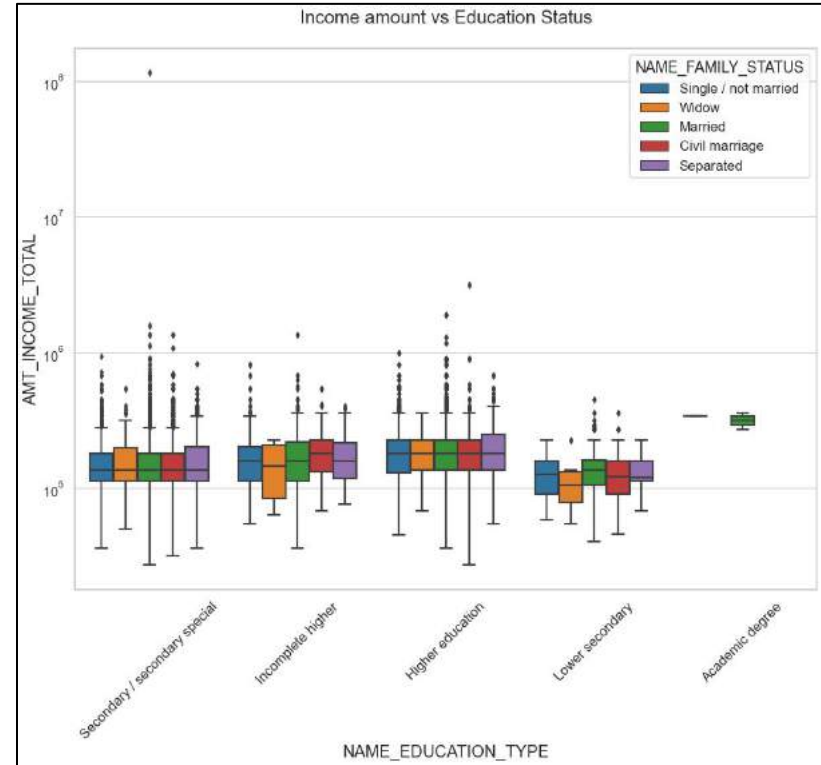
Univariate analysis after merging previous data

Distribution of contract status with purposes-

• Most rejection of loans came from purpose repairs.

• We have equal number of approves and rejection for education purposes

• Paying other loans and buying a new car is significantly higher rejection than approves.

Distribution of contract status with purposes
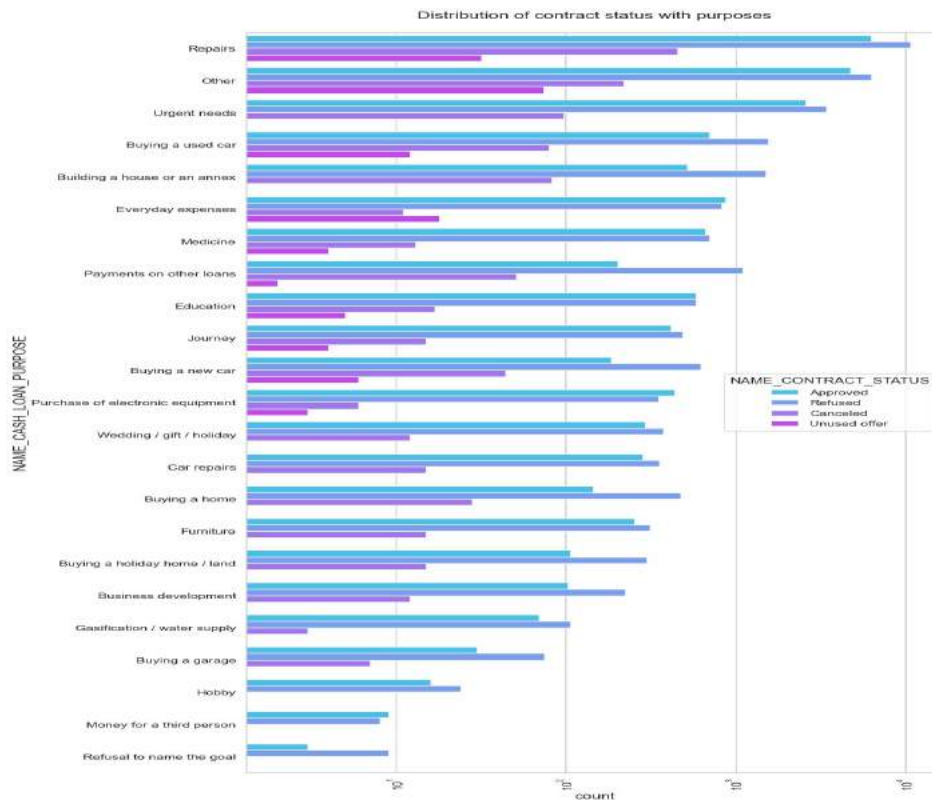
Univariate analysis after merging previous data

Distribution of contract status with target-

•Loan purposes with Repairs face more difficulties in timely payment.

•Few places where loan payment is significantly higher than facing difficulties like buying a garage, business development, buying land, and education can be focused on more because the client is having minimal payment difficulties.

Distribution of purposes with target
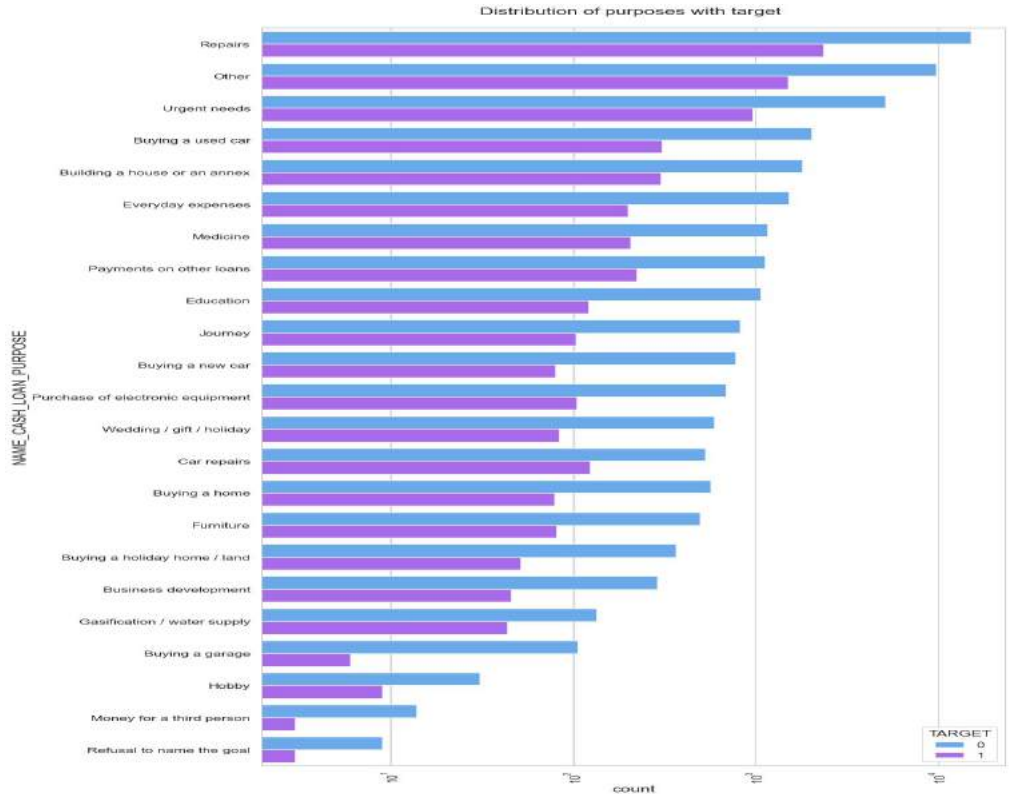
Performing bivariate analysis
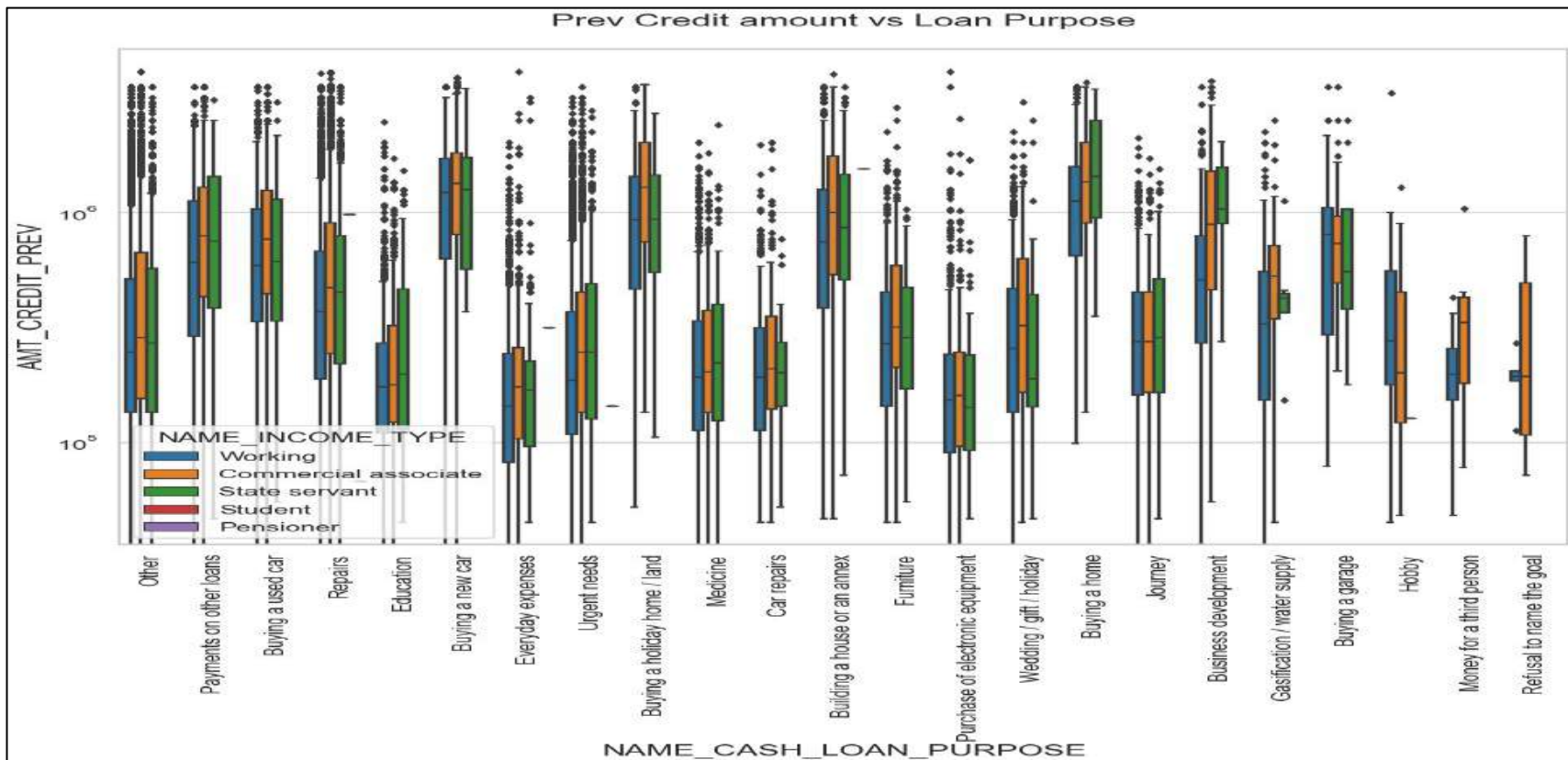
Prev Credit amount vs Loan Purpose-

The above graph depicts the bivariate analysis of Previous credit amount vs Loan Purpose. It tells us that-

•The credit amount of Loan purposes like Buying a home, Buying a land, Buying a new car and Building a house is higher.

•Income type of state servants has significant amount of credit applied

•Money for third person has less credits applied for.

Prev Credit amount vs Housing type-

• For Housing type-office apartment, has a higher credit for target 0 and co-op apartment is having higher credit for target 1.

• We can conclude that bank should avoid giving loans to the housing type of co-op apartment as they are having difficulties in payment.

• Bank can focus mostly on housing type that are rented or House\apartment or municipal apartment for successful payments.

Prev Credit amount vs Housing type
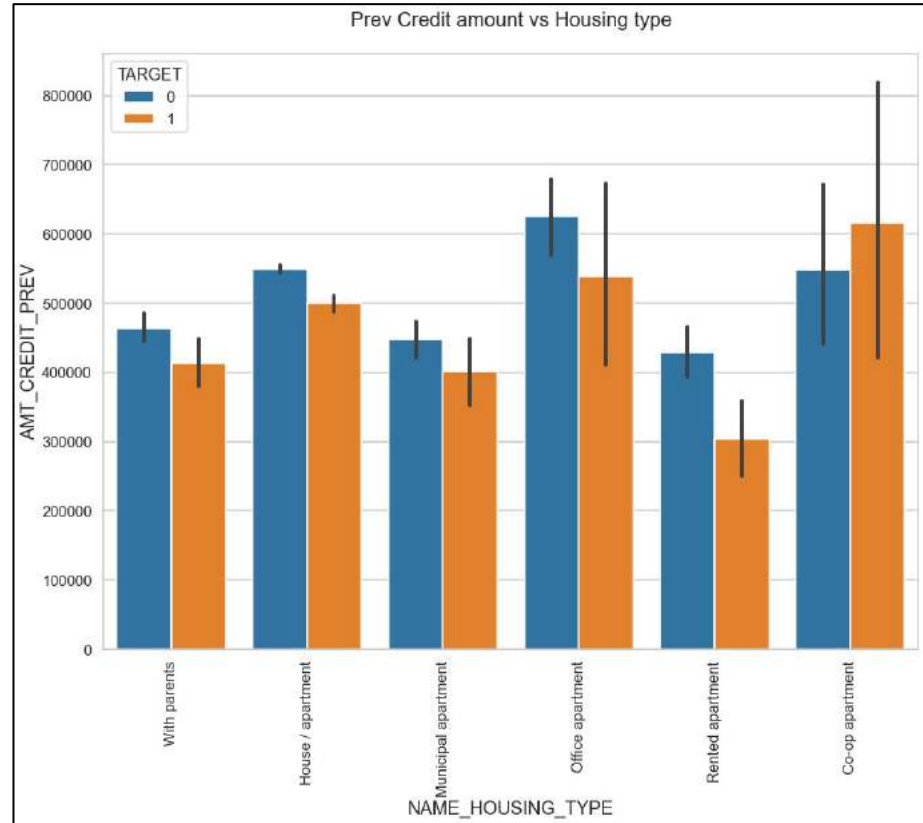
Conclusion

1. Banks should focus on contract type "Student" ,"Pensioner" and "Businessman" with housing type other than 'Co-op apartment' for successful payments.

2. Banks should focus less on income type "Working" as they are having most number of unsuccessful payments.

3. With loan purpose "Repair" is having higher number of unsuccessful payments on time.

4. Get more clients from housing type "With parents" as they are having least number of unsuccessful payments.

Thank You!!