

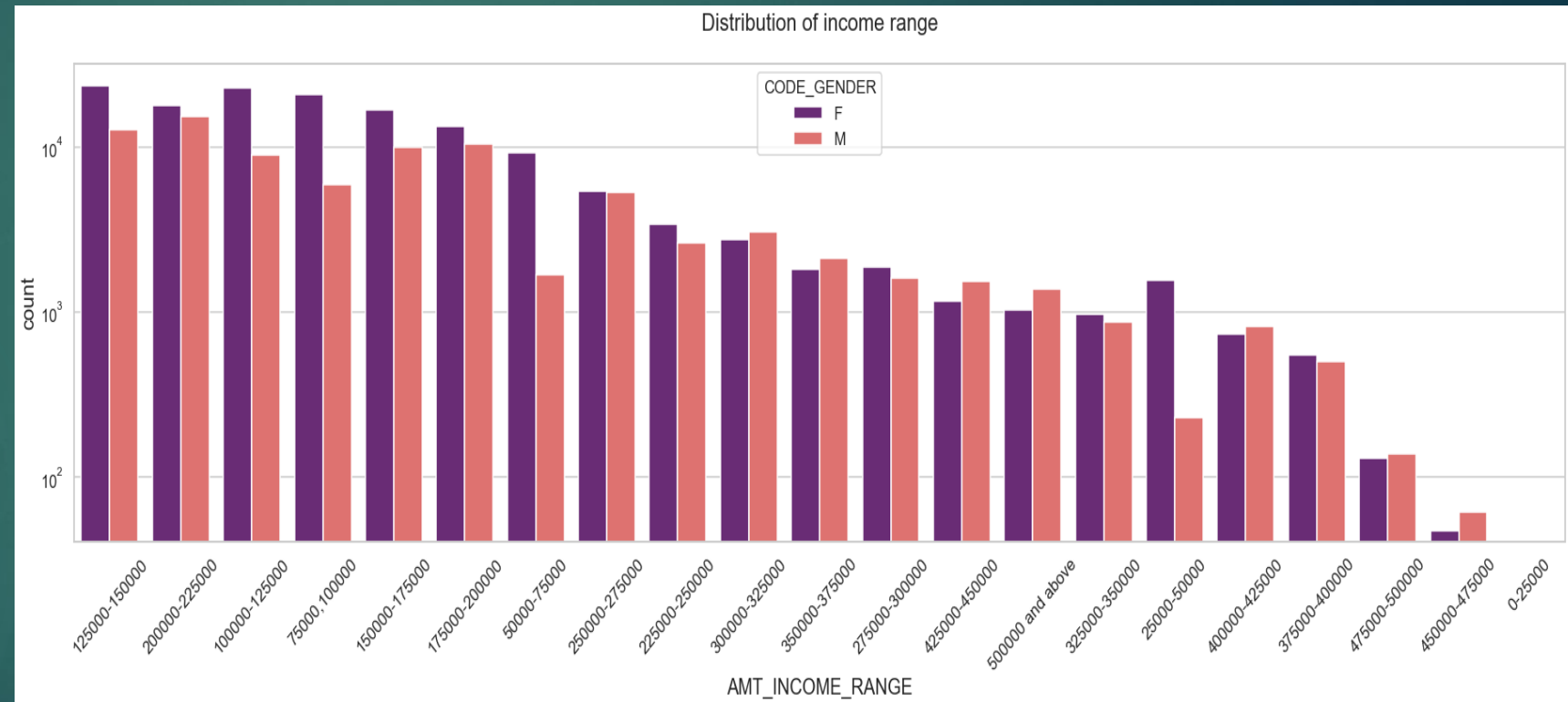
CREDIT EDA ASSIGNMENT

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Distribution of Income range

Points to be concluded from the graph on the right side.

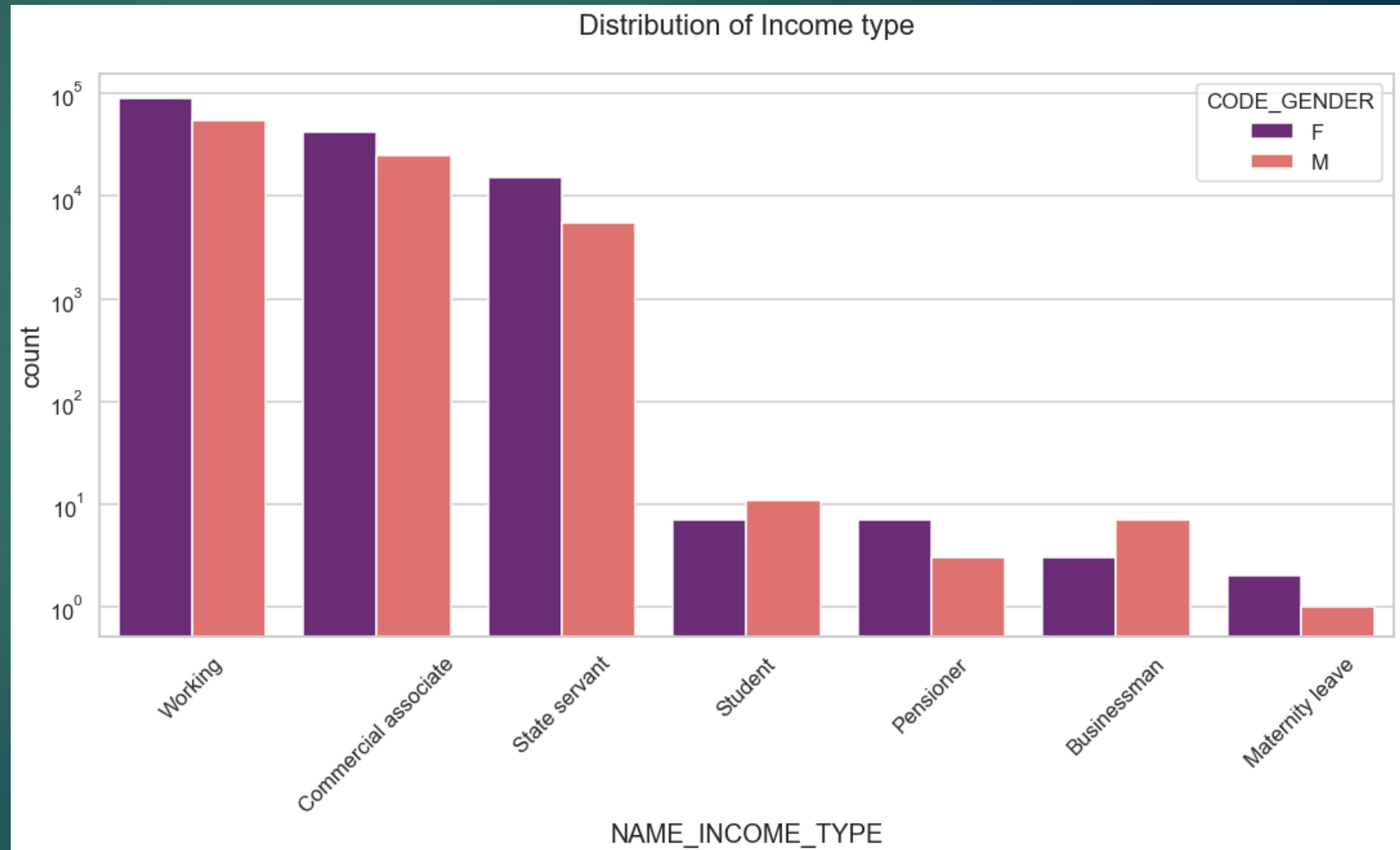
- ▶ Female counts are higher than male.
- ▶ Income range from 100000 to 200000 is having more number of credits.
- ▶ This graph show that females are more than male in having credits for that range.
- ▶ Very less count for income range 400000 and above.



Distribution of income type

Points to be concluded from the graph on the right.

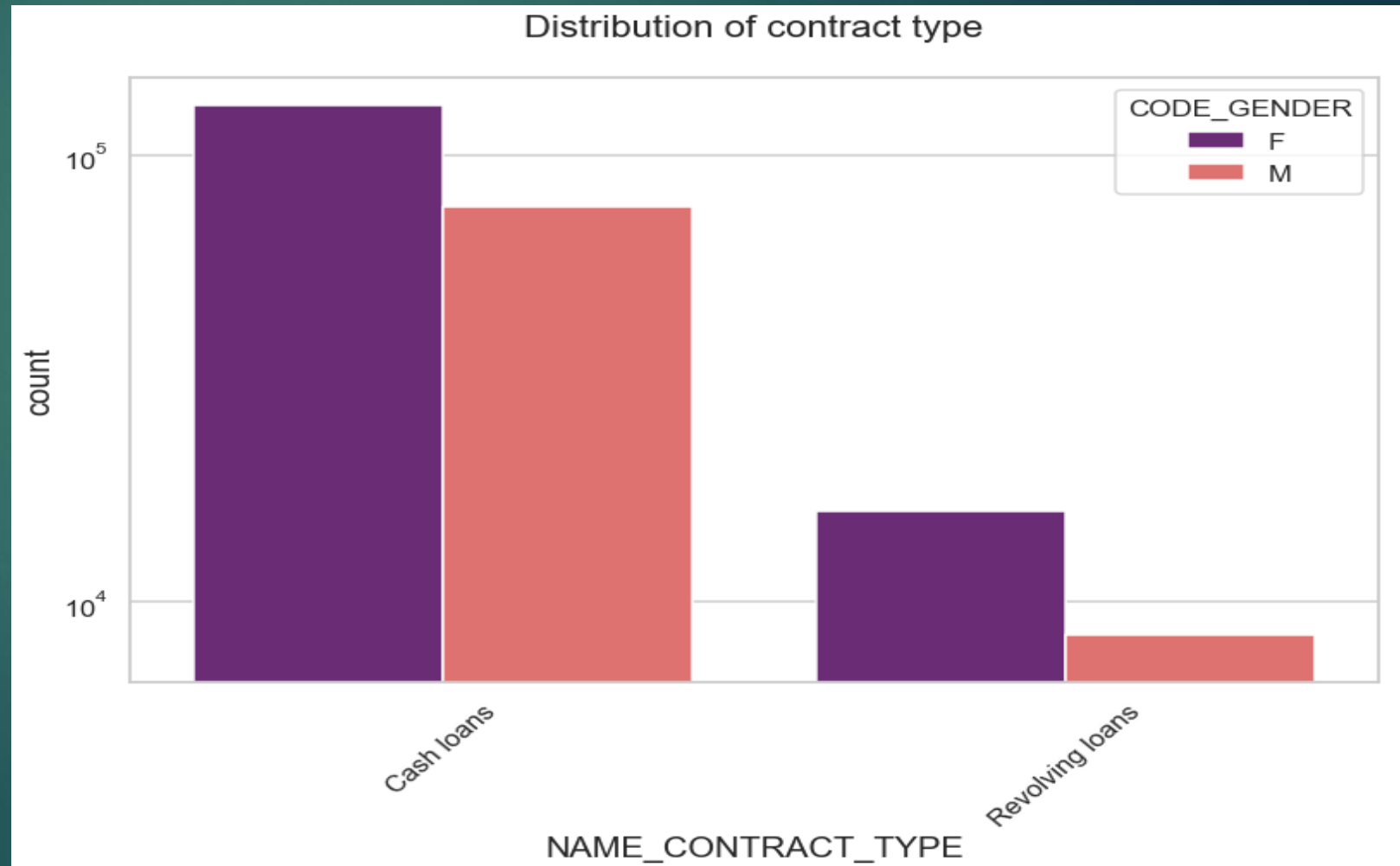
- ▶ For income type 'working', 'commercial associate', and 'State Servant' the number of credits are higher than others.
- ▶ For this Females are having more number of credits than male.
- ▶ Less number of credits for income type 'student', 'pensioner', 'Businessman' and 'Maternity leave'.



Distribution for contract type

Points to be concluded from the graph on the right.

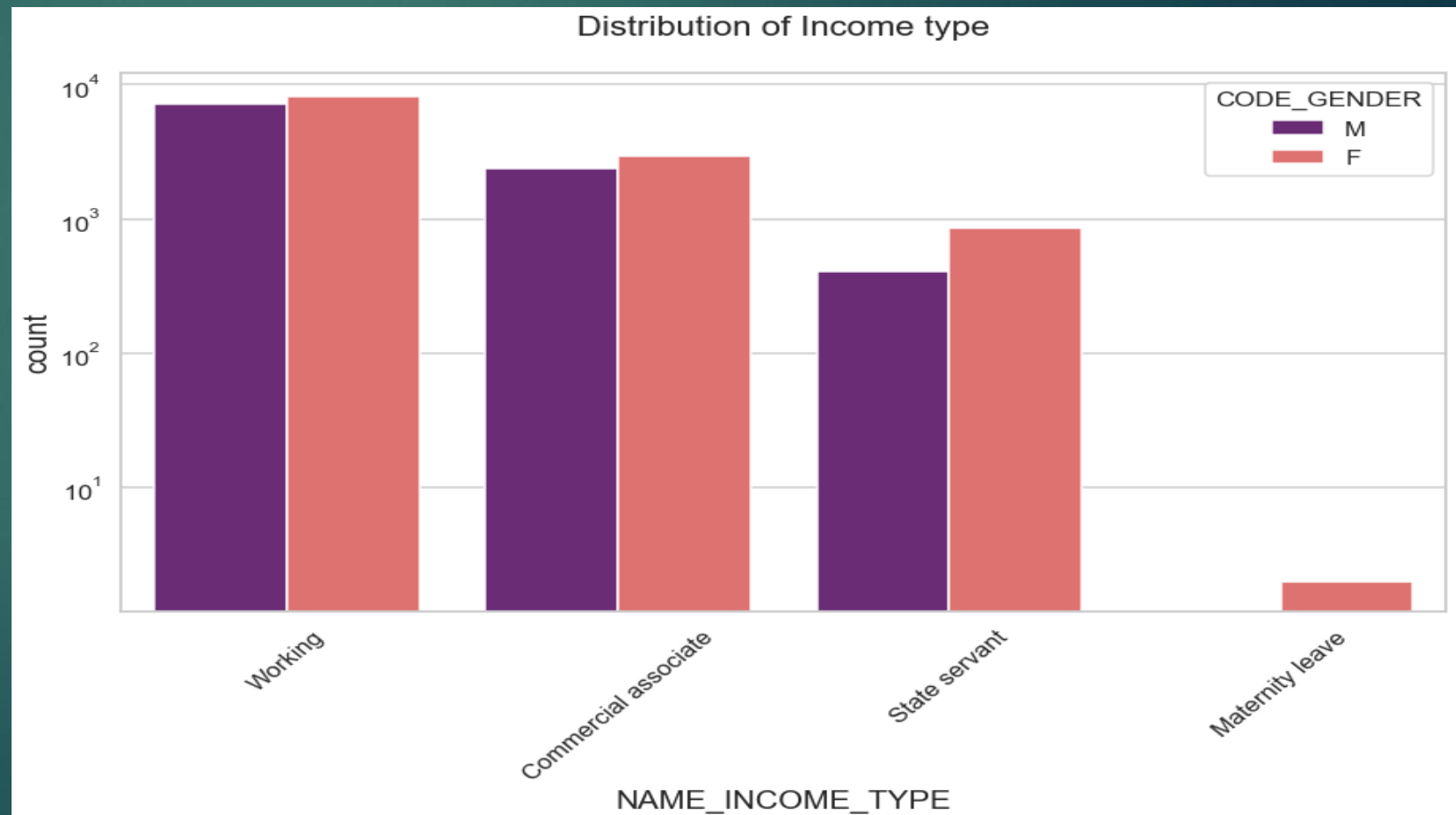
- ▶ For contract type 'cash loans' is having higher number of credits than 'Revolving loans' contract type.
- ▶ For this also Female is leading for applying credits.



Distribution of income type

Points to be concluded from the graph on the right side.

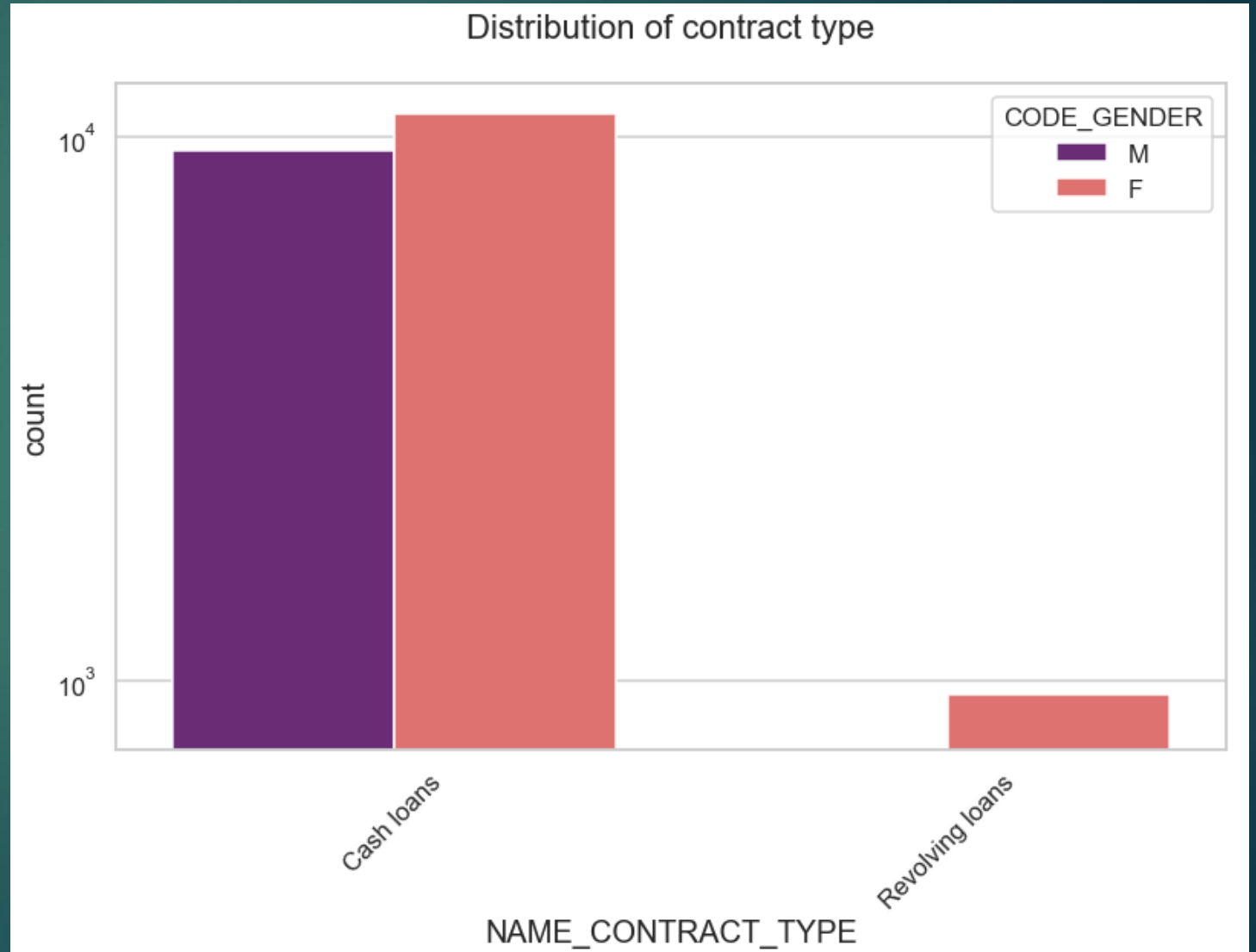
- ▶ For income type 'working', 'commercial associate', and 'State Servant' the number of credits are higher than other i.e. 'Maternity leave'.
- ▶ For this Females are having more number of credits than male.
- ▶ Less number of credits for income type 'Maternity leave'.
- ▶ For type 1: There is no income type for 'student', 'pensioner' and 'Businessman' which means they don't do any late payments.



Distribution for contract type

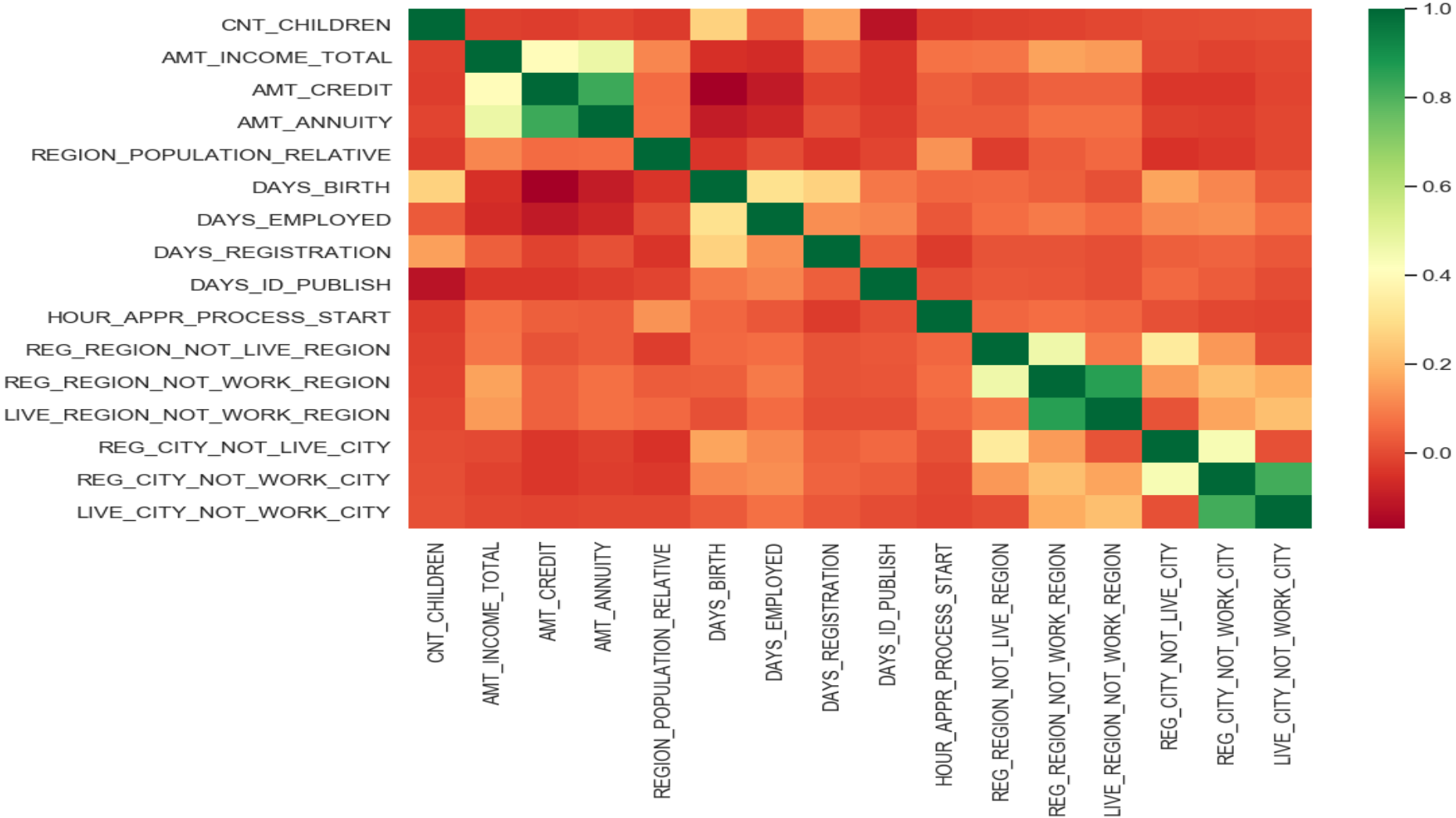
Points to be concluded from the graph on the right.

- ▶ For contract type 'cash loans' is having higher number of credits than 'Revolving loans' contract type.
- ▶ For this also Female is leading for applying credits.
- ▶ For type 1 : there is only Female Revolving loans.



CORRELATION OF TARGET 0

Correlation for target 0

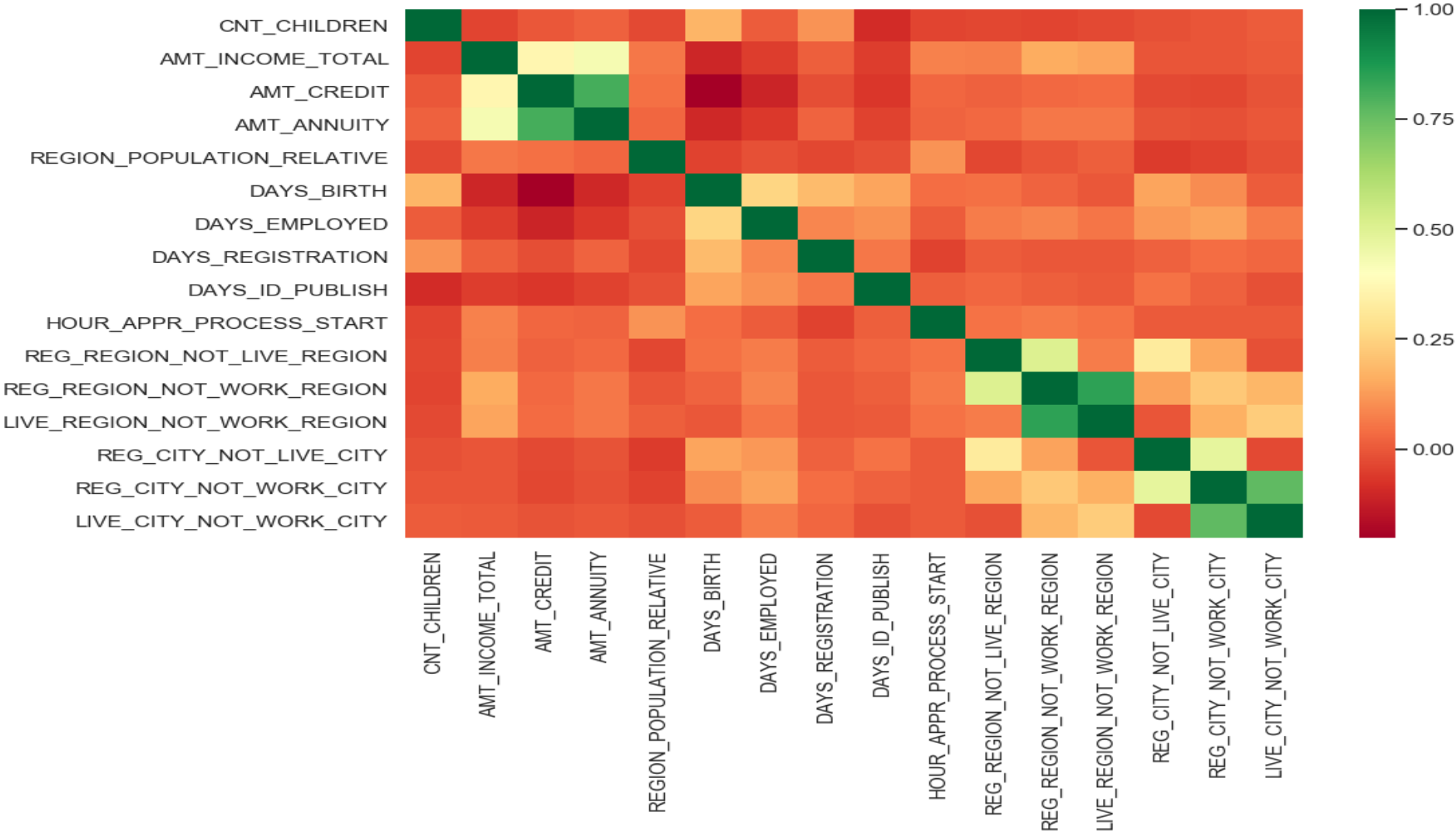


Correlation For target 0

Points to be concluded from the graph presented before.

- ▶ Credit amount is inversely proportional to the date of birth, which means Credit amount is higher for low age and vice-versa.
- ▶ Credit amount is inversely proportional to the number of children client have, means Credit amount is higher for less children count client have and vice-versa.
- ▶ Income amount is inversely proportional to the number of children client have, means more income for less children client have 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 1



Correlation for type 1

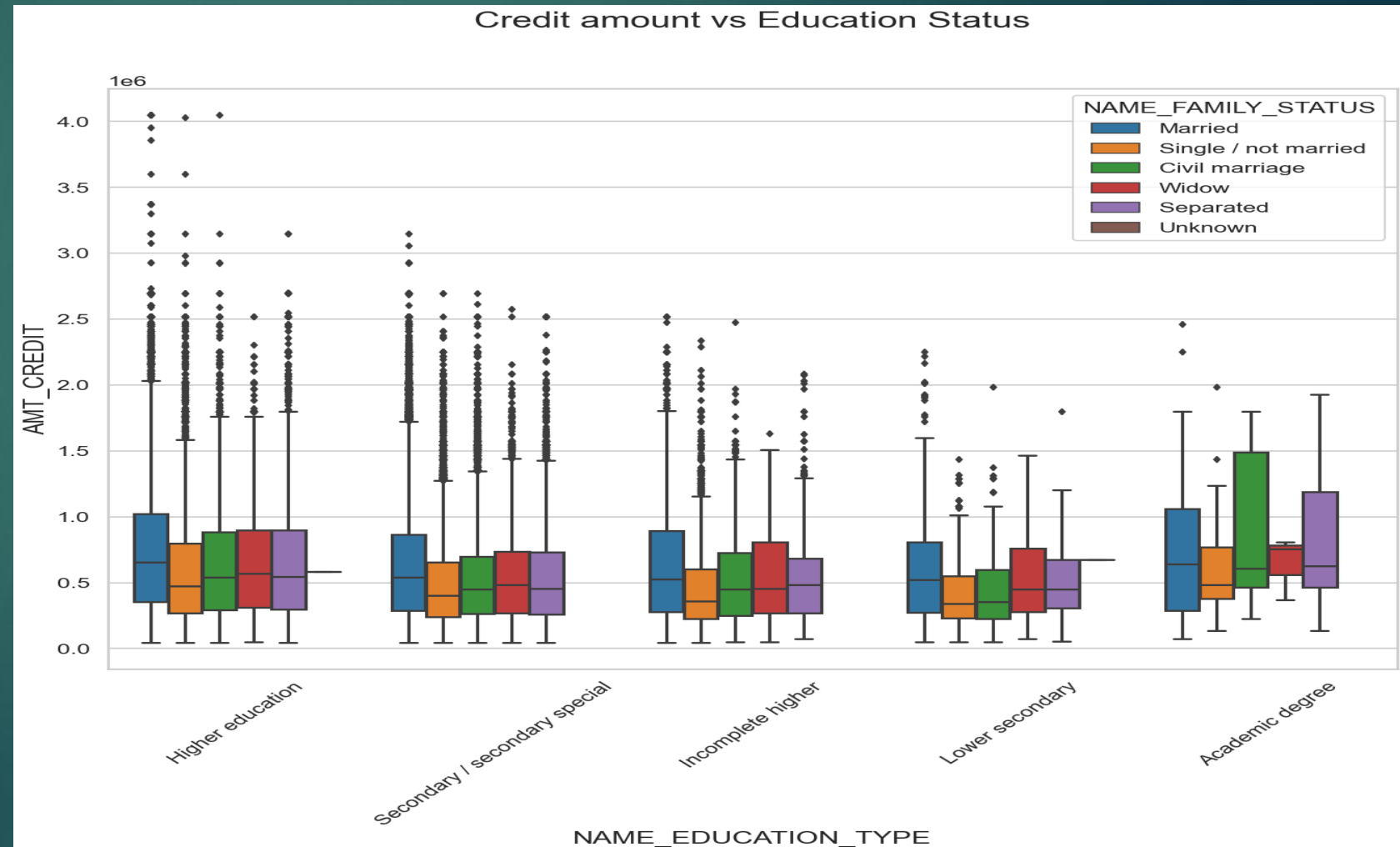
This heat map for Target 1 is also having quite a same observation just like Target 0. But for few points are different. They are listed below.

- ▶ The client's permanent address does not match contact address are having less children and vice-versa
- ▶ The client's permanent address does not match work address are having less children and vice-versa

Credit amount vs Education Status

Few points can be concluded from the graph.

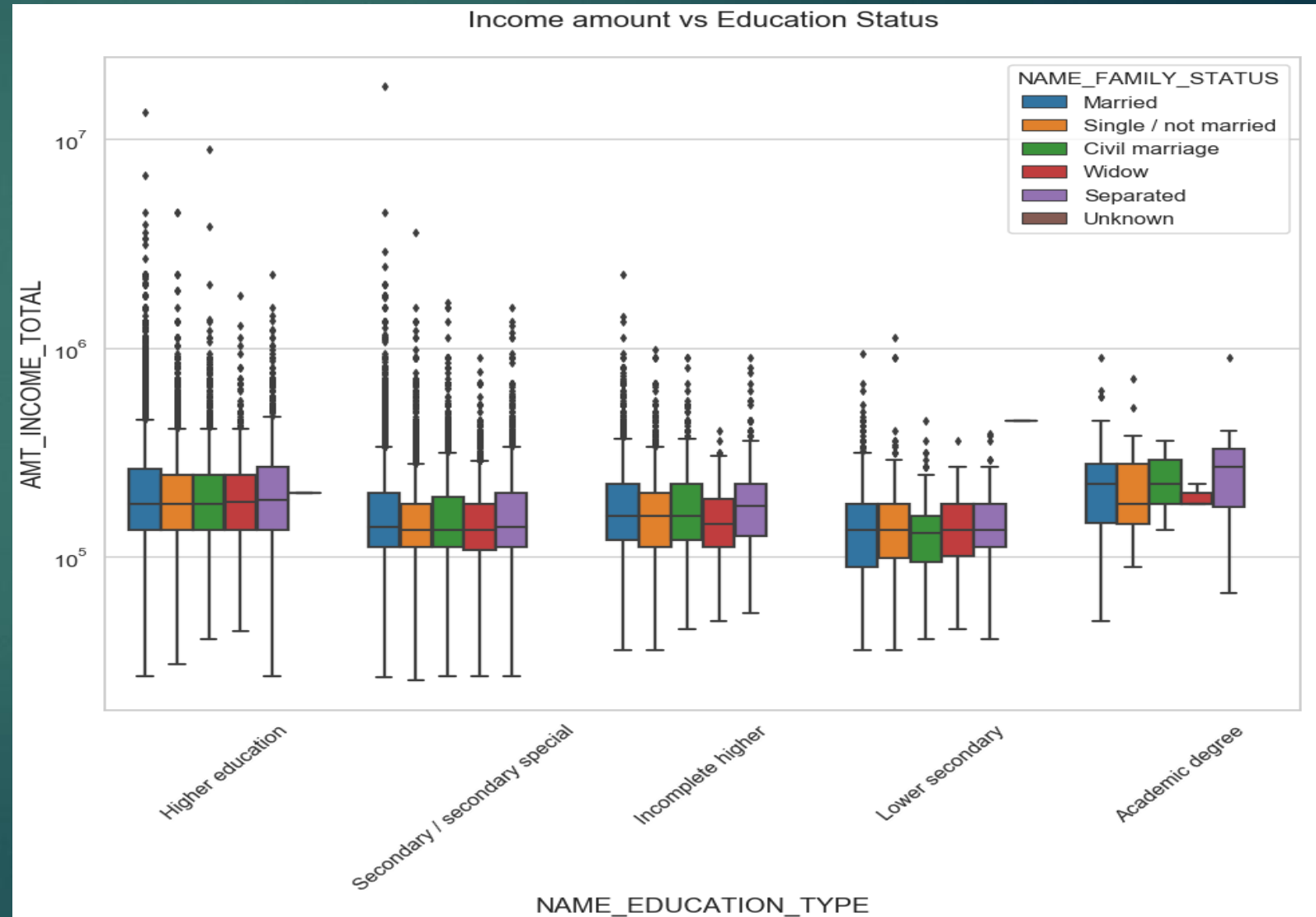
- ▶ Family status of 'civil marriage', 'marriage' and 'separated' of Academic degree education are having higher number of credits than others.
- ▶ Higher education of family status of 'marriage', 'single' and 'civil marriage' are having more outliers.
- ▶ Civil marriage for Academic degree is having most of the credits in the third quartile.



Income amount vs Education Status

Few points can be concluded from the graph.

- ▶ For Education type 'Higher education' the income amount mean is mostly equal with family status. It does contain many outliers.
- ▶ Less outlier are having for Academic degree but they are having the income amount is little higher than Higher education.
- ▶ Lower secondary of civil marriage family status are



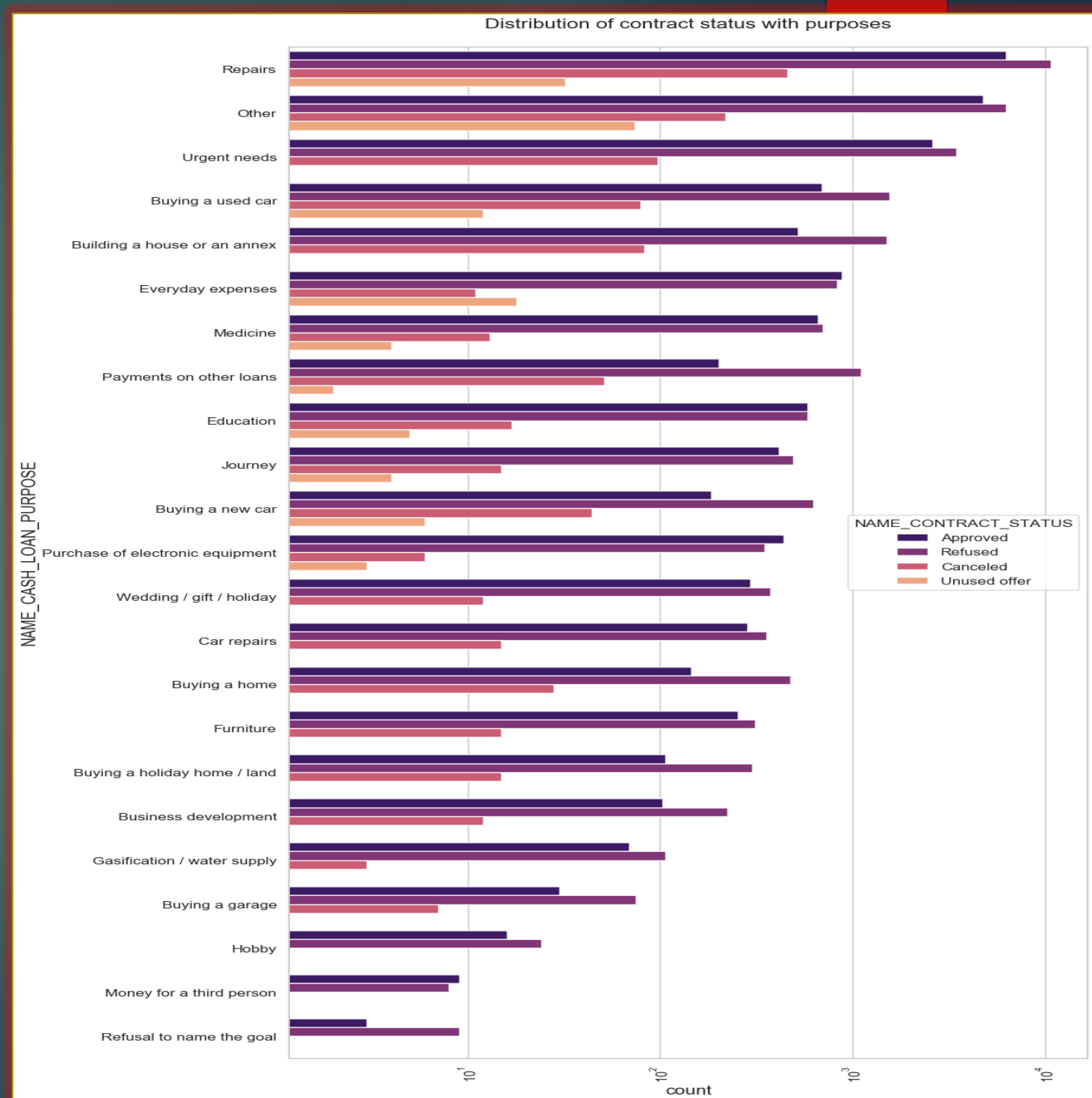


Univariate analysis after merging previous data

Distribution of contract status with purposes

Few points can be concluded from the graph.

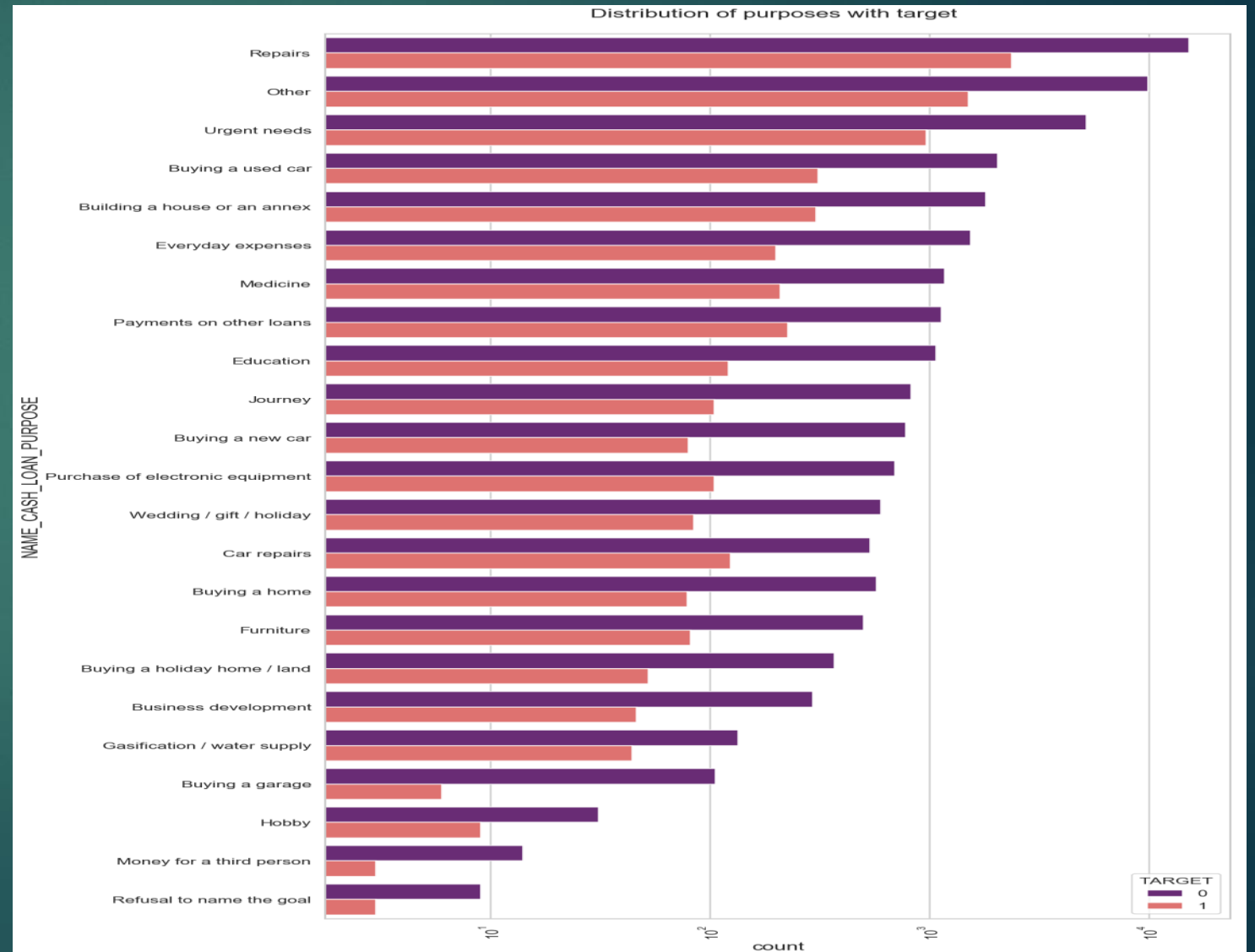
- ▶ Most rejection of loans came from purpose 'repairs'.
- ▶ For education purposes we have equal number of approves and rejection
- ▶ Paying other loans and buying a new car is having significant higher rejection than approves.



Distribution of purposes with target

Few points can be concluded from the graph.

- ▶ Loan purposes with 'Repairs' are facing more difficulties in payment on time.
- ▶ There are few places where loan payment is significant higher than facing difficulties. They are 'Buying a garage', 'Business development', 'Buying land', 'Buying a new car' and 'Education' Hence we can focus on these purposes for which the client is having for minimal payment difficulties.



Prev Credit amount vs Loan Purpose

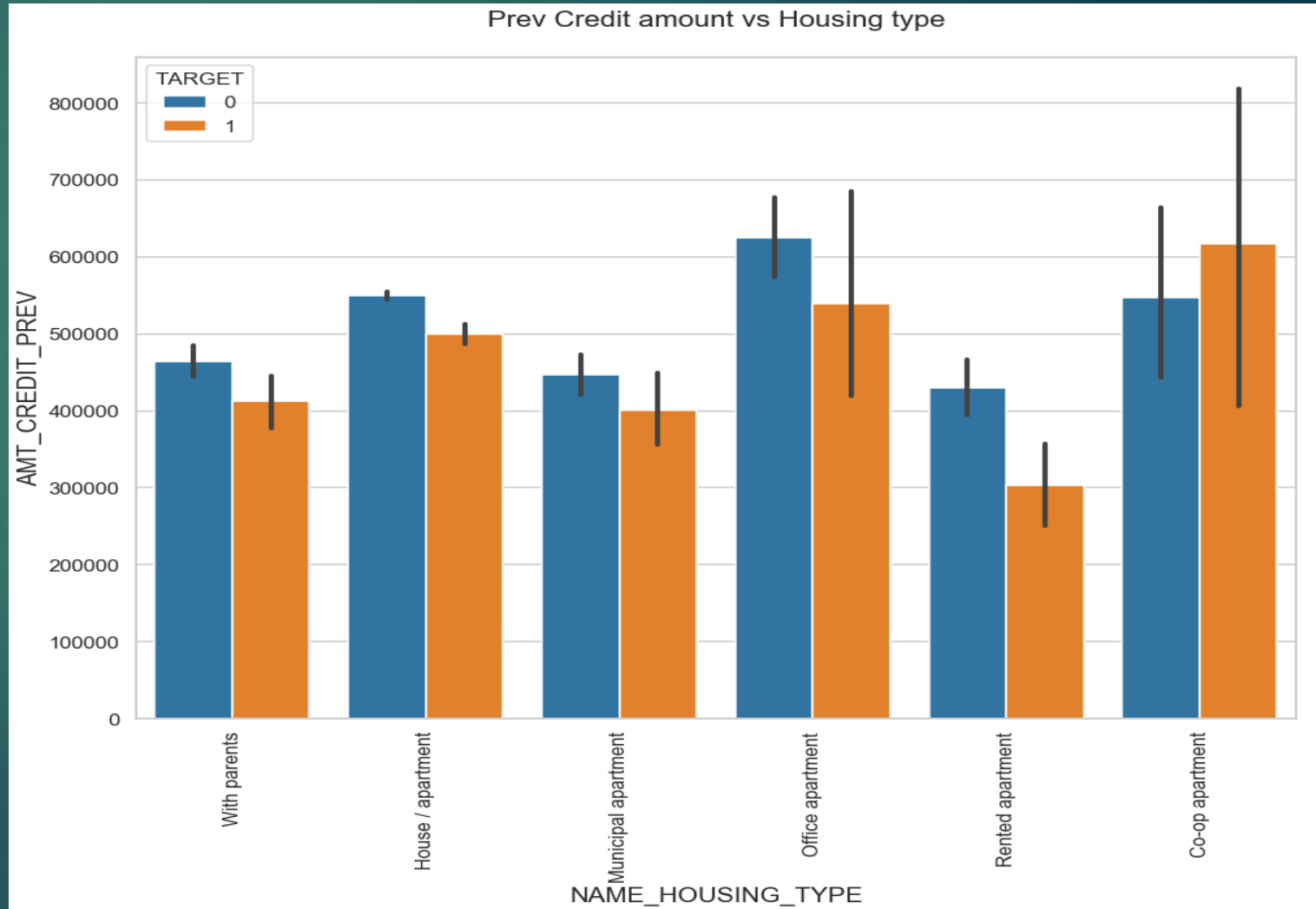
From the previous graph we can conclude the below points:

- ▶ 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 have a significant amount of credit applied
- ▶ Money for third person or a Hobby is having less credits applied for.

Prev Credit amount vs Housing type

Few points can be concluded from the graph.

- ▶ Here for Housing type, office apartment is having higher credit of target 0 and co-op apartment is having higher credit of target 1.
- ▶ So, 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 with parents or House/apartment or municipal apartment for successful payments.



conclusion

- *Bank are focusing more on contract types and housing types. contact type includes 'student', 'pensioner' and 'businessman', other than 'co-op-apartment' for successful payment.*
- *Income type 'working' are having number of the most unsuccessful payment so banks should focus less on these.*
- *Higher number of unsuccessful payment also include loan purpose 'repair'*
- *Housing type 'with parents' is having least number of unsuccessful payment so get as much as clint from housing type 'with parents'.*



THANK YOU

