

CREDIT EDA CASE STUDY

BY

DUVVURI SURYATHEJA REDDY

VAMSHI PASULA

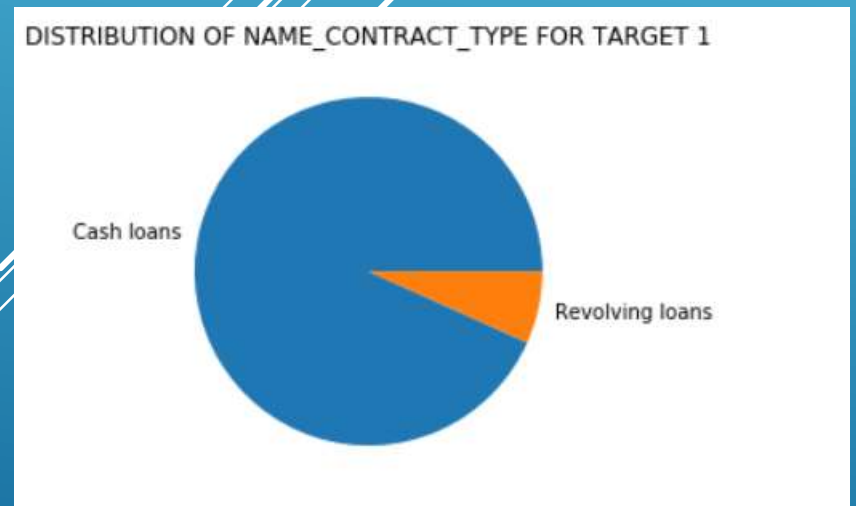
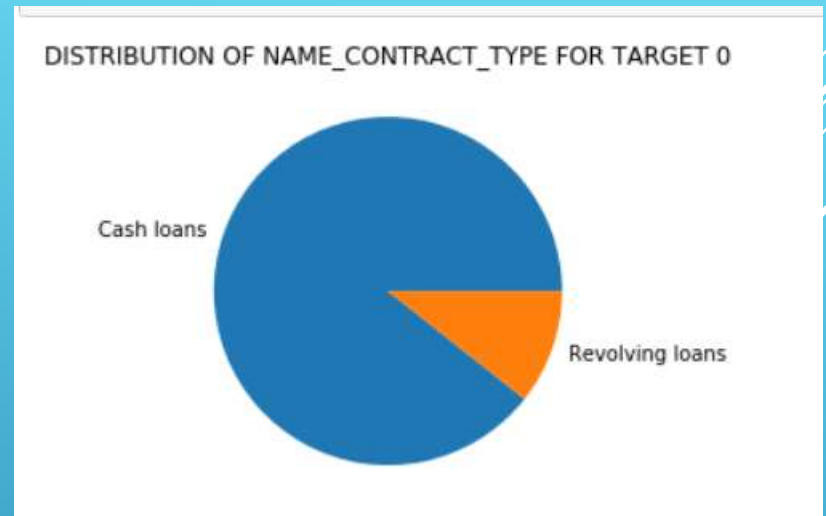
Several thin, parallel white lines of varying lengths and orientations are positioned in the bottom right corner of the slide, creating a modern, abstract graphic element.

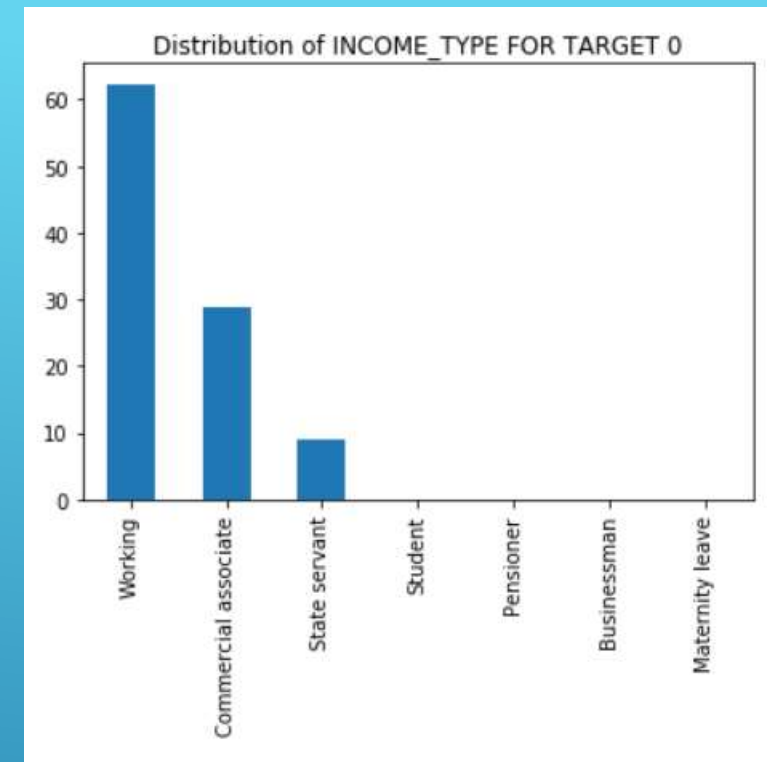
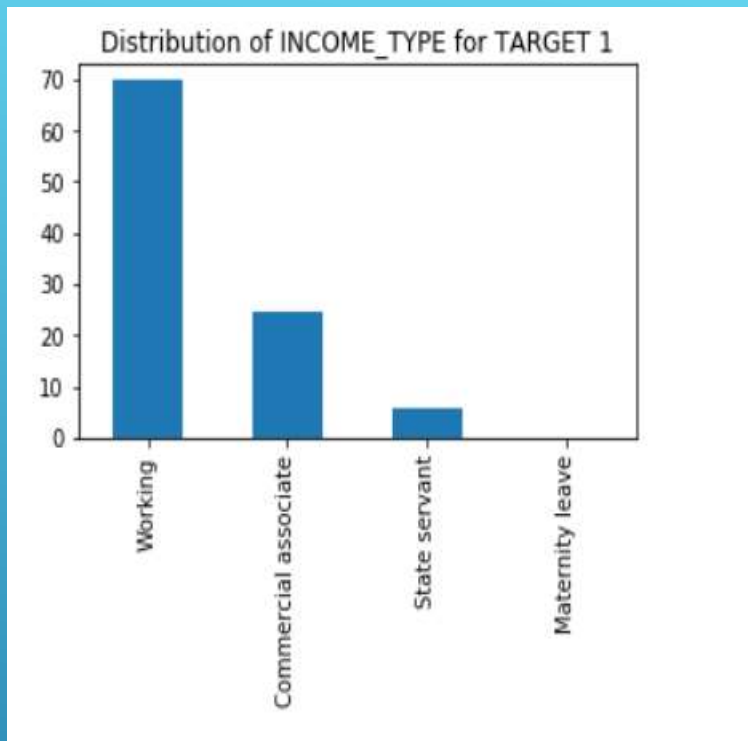
DISTRIBUTION OF CONTRACT TYPE:

1- CASH LOANS PERCENTAGE IN DEFAULTERS IS MORE WHEN COMPARED TO NON DEFAULTERS

2- REVOLVING LOANS IN DEFAULTERS HAS LESS PERCENTAGE THAN IN NON DEFAULTERS

3- THEREFORE THOSE WHO HAVE CASH LOANS HAVE MORE CHANCE OF DEFAULTING AND THOSE WHO HAVE REVOLVING LOANS HAVE LESS CHANCE OF DEFAULTING

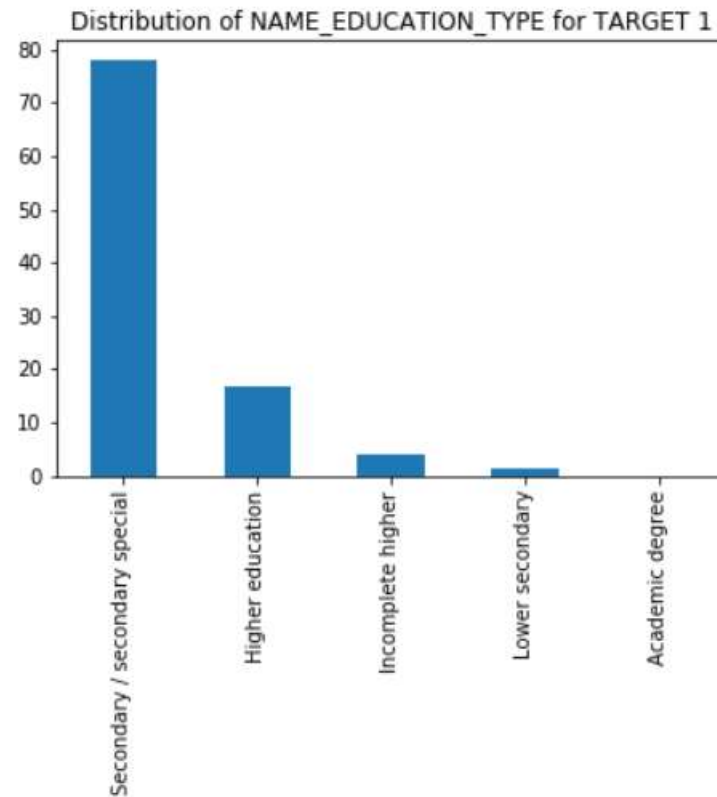
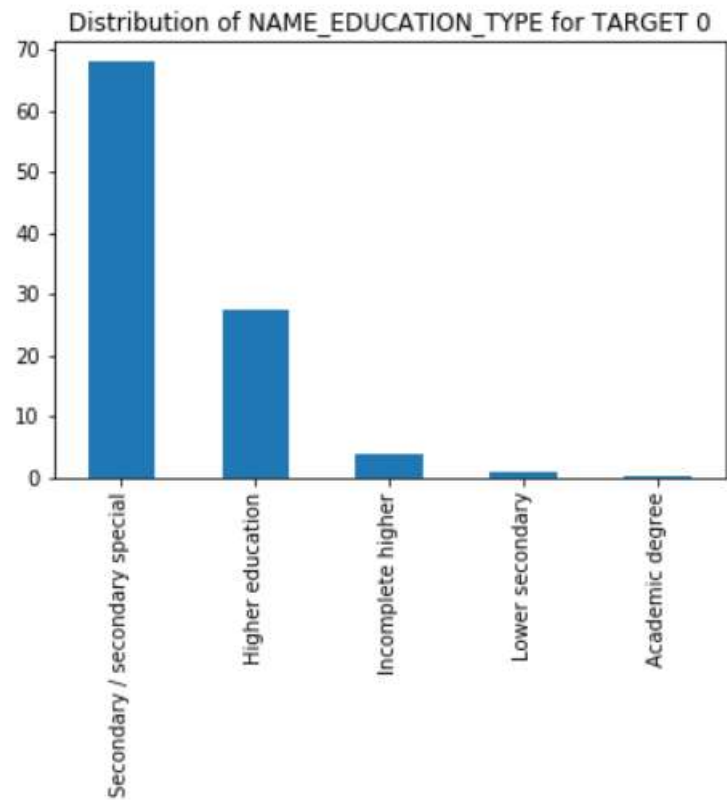




DISTRIBUTION OF INCOME TYPE:

1- MOST LOANS ARE APPLIED BY WORKING PROFESSIONALS

2- WHEN WE COMPARE BOTH PLOTS WE CAN SEE STUDENTS,PENSIONERS AND BUSINESS MEN ARE NOT THERE IN DEFAULTERS ,IT MEANS BUSINESS MEN,PENSIONERS AND STUDENTS IF GIVEN LOAN THEY WONT DEFAULT



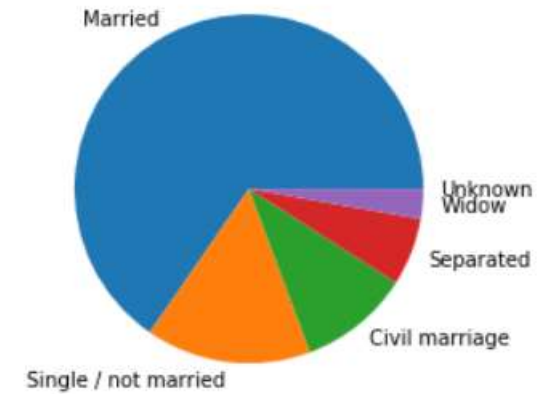
DISTRIBUTION OF EDUCATION TYPE:

THEREFORE FROM THE ABOVE TWO BAR PLOTS WE CAN UNDERSTAND THAT SECONDARY EDUCATED,HIGHER EDUCATED PEOPLE APPLIED LOANS A LOT

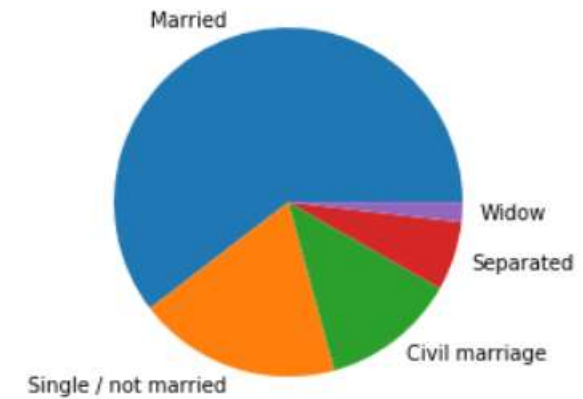
DISTRIBUTION OF FAMILY STATUS:

SINGLES PERCENTAGE IS HIGHER IN DEFAULTERS IT MEANS IF THE APPLICANT IS SINGLE THERE IS HIGH CHANCES OF HIM TO HAVE PAYMENT DIFFICULTIES

Distribution of NAME_FAMILY_STATUS for TARGET 0



Distribution of NAME_FAMILY_STATUS for TARGET 1

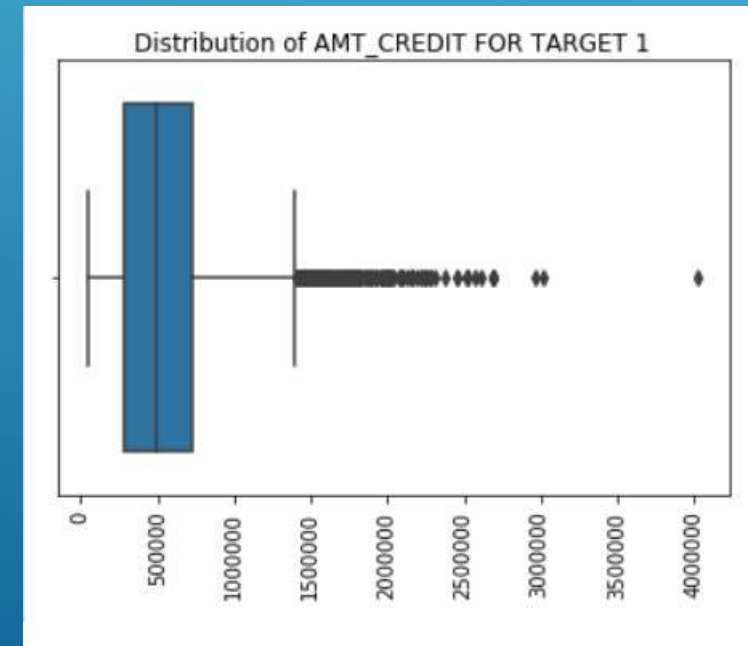
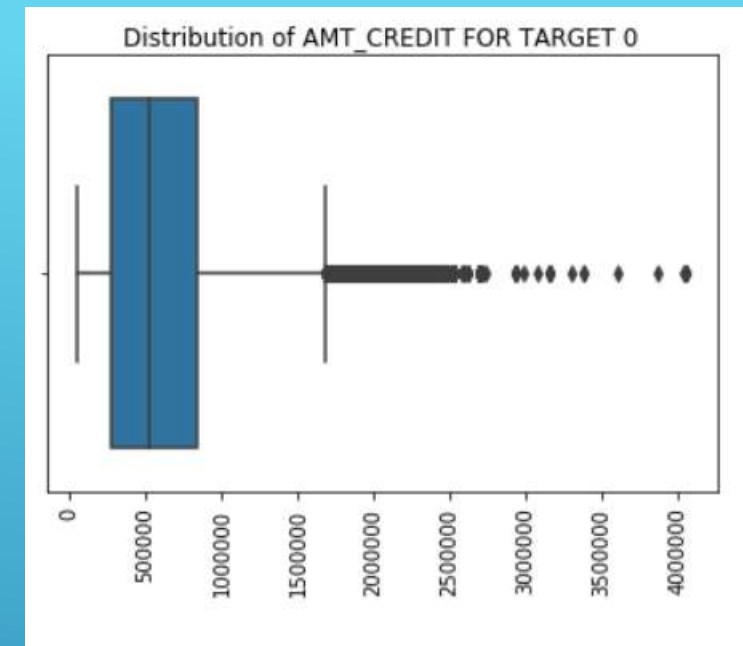


DISTRIBUTION OF CREDIT AMOUNT:

1- BOTH PLOTS ARE SIMILAR

2- WE CAN SEE THAT THERE ARE OUTLIERS IN BOTH

3- IT IS OBSERVED THAT THIRD QUARTILE IS BIGGER THAN FIRST QUARTILE WHICH MEANS MORE CLIENTS REGISTER FOR LOANS WITH CREDIT AMOUNT IN THIRD QUARTILE THAN IN FIRST QUARTILE

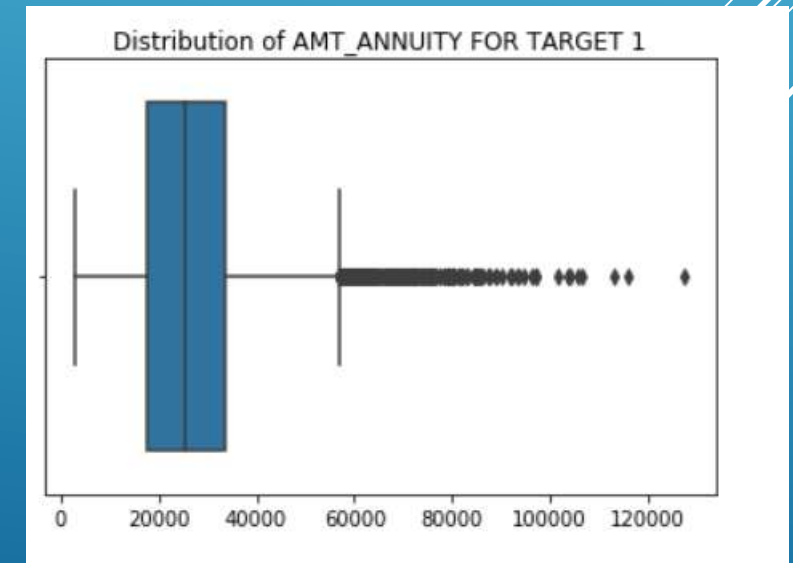
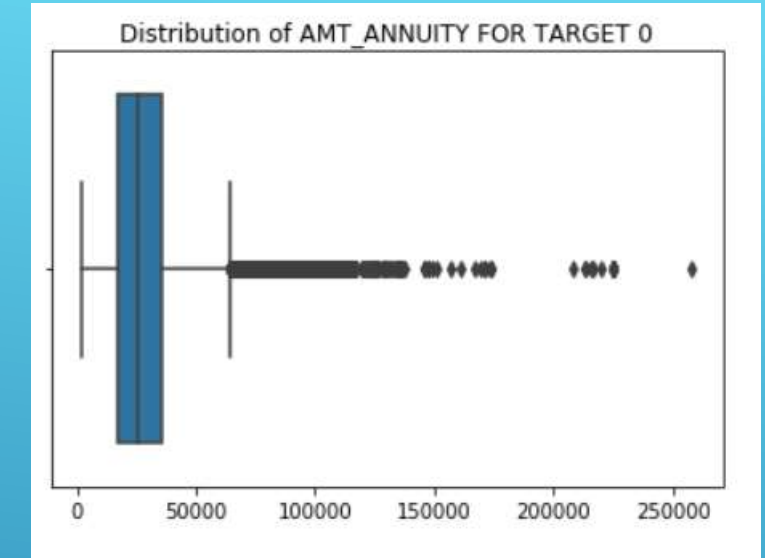


DISTRIBUTION OF ANNUITY AMOUNT:

1- BOTH PLOTS ARE SIMILAR

2- WE CAN SEE THAT THERE ARE OUTLIERS IN BOTH

3- IT IS OBSERVED THAT FIRST QUARTILE IS BIGGER THAN THIRD QUARTILE WHICH MEANS MORE CLIENTS HAVE ANNUITY AMOUNT IN FIRST QUARTILE THAN IN THIRD QUARTILE

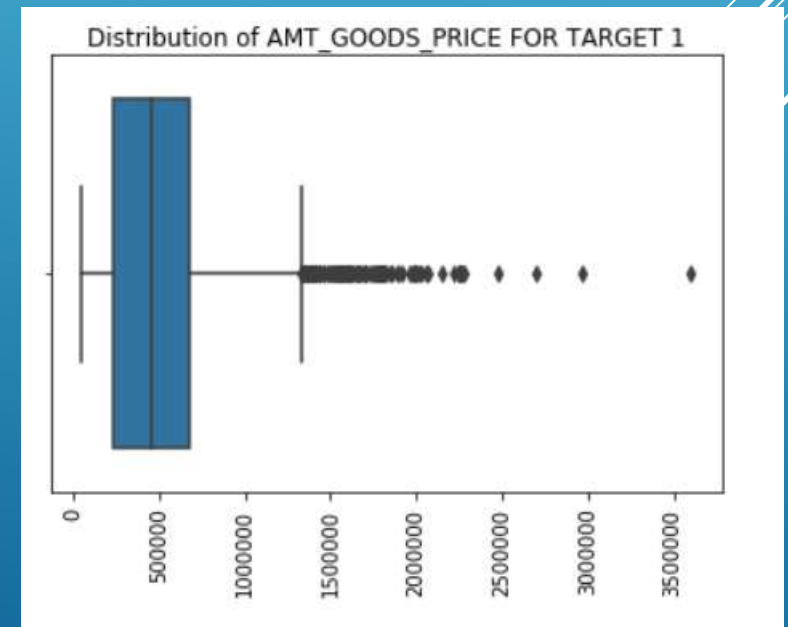
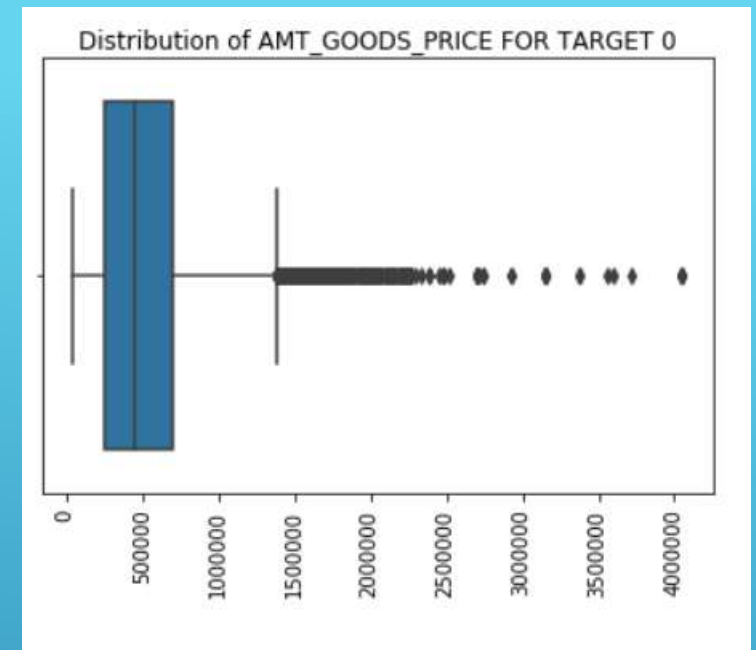


DISTRIBUTION OF GOODS PRICE AMOUNT:

1- BOTH PLOTS ARE SIMILAR

2- WE CAN SEE THAT THERE ARE OUTLIERS IN BOTH

3- IT IS OBSERVED THAT THIRD QUARTILE IS BIGGER THAN FIRST QUARTILE WHICH MEANS MORE CLIENTS HAVE GOODS PRICES IN THIRD QUARTILE THAN IN FIRST QUARTILE

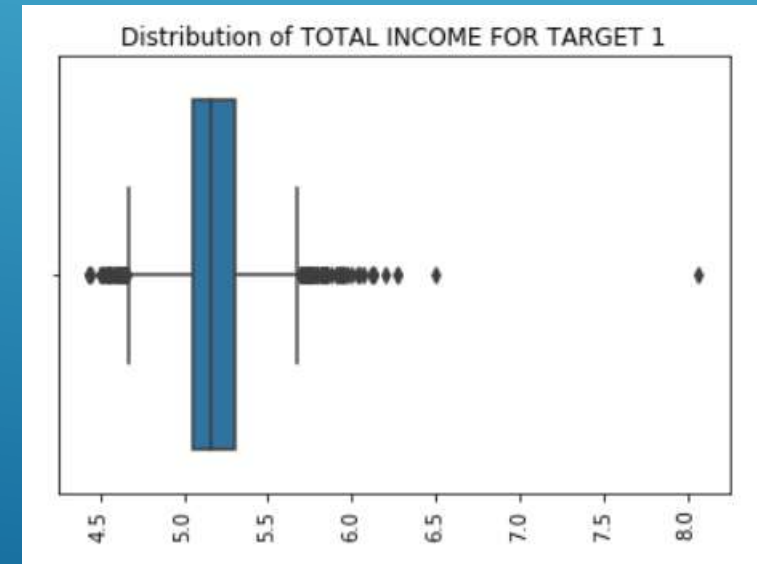
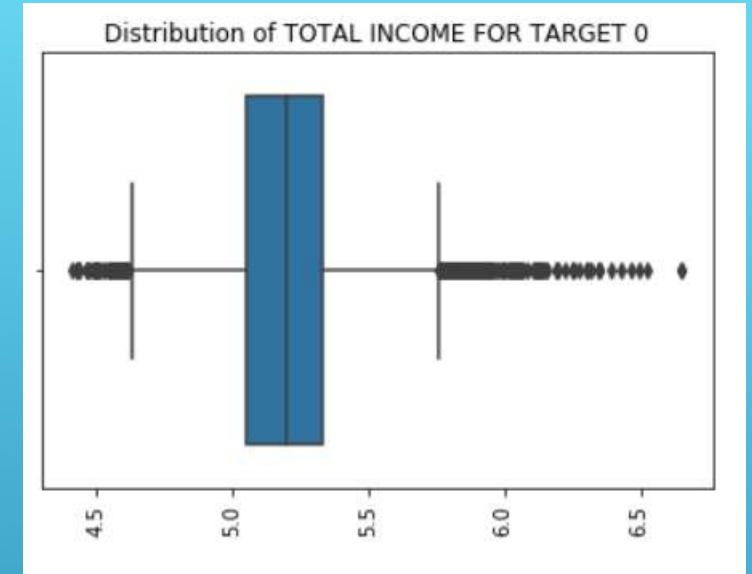


DISTRIBUTION OF INCOME AMOUNT:

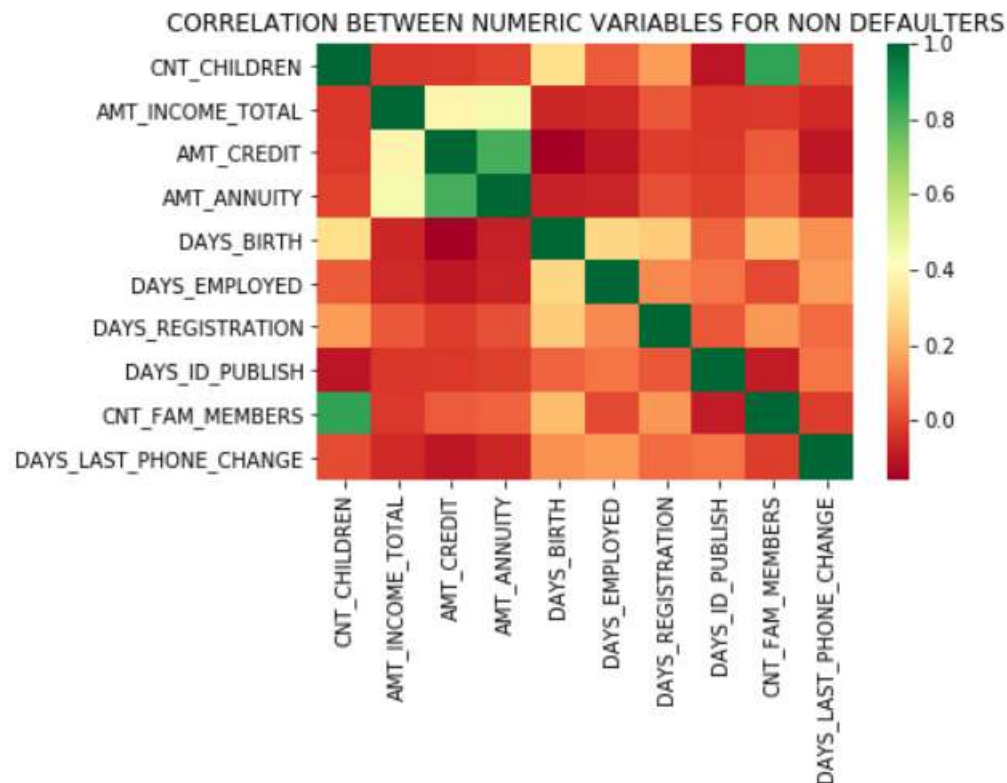
1- BOTH PLOTS ARE SIMILAR

2- WE CAN SEE THAT THERE ARE OUTLIERS IN BOTH BUT THERE IS ONE OUTLIER WHICH IS VERY FAR AWAY FROM MEDIAN IN DEFAULTERS

3- IT IS OBSERVED THAT FIRST QUARTILE IS BIGGER THAN THIRD QUARTILE WHICH MEANS MORE CLIENTS HAVE INCOME AMOUNT IN FIRST QUARTILE THAN IN THIRD QUARTILE



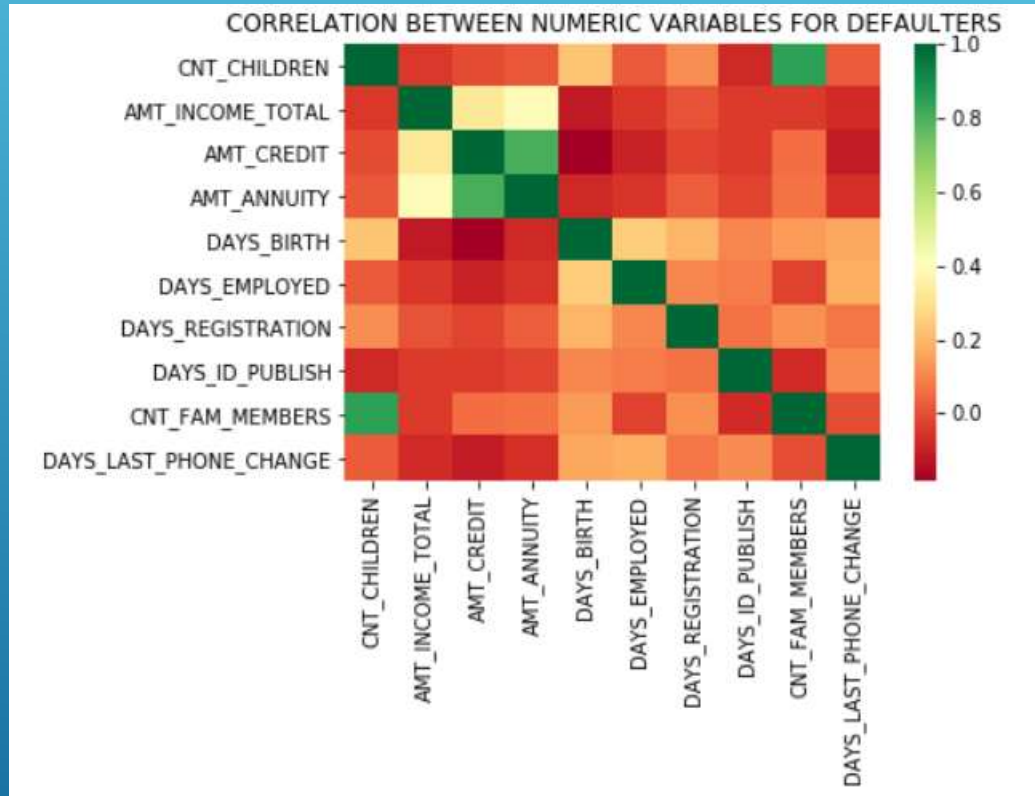
CORRELATION BETWEEN NUMERIC VARIABLES FOR NON DEFAULTERS



TOP 10 CORRELATIONS IN NON DEFAULTERS

	VARIABLE_1	VARIABLE_2	CORRELATION	RELATION
80	CNT_FAM_MEMBERS	CNT_CHILDREN	0.895901	POSITIVE
32	AMT_ANNUITY	AMT_CREDIT	0.748655	POSITIVE
31	AMT_ANNUITY	AMT_INCOME_TOTAL	0.424328	POSITIVE
21	AMT_CREDIT	AMT_INCOME_TOTAL	0.345656	POSITIVE
54	DAYS_EMPLOYED	DAYS_BIRTH	0.333489	POSITIVE
64	DAYS_REGISTRATION	DAYS_BIRTH	0.296192	POSITIVE
40	DAYS_BIRTH	CNT_CHILDREN	0.279163	POSITIVE
84	CNT_FAM_MEMBERS	DAYS_BIRTH	0.230553	POSITIVE
60	DAYS_REGISTRATION	CNT_CHILDREN	0.169748	POSITIVE
65	DAYS_REGISTRATION	DAYS_EMPLOYED	0.168354	POSITIVE

CORRELATION BETWEEN NUMERIC VARIABLES FOR DEFAULTERS



TOP 10 CORRELATIONS FOR DEFAULTERS

	VARIABLE_1	VARIABLE_2	CORRELATION	RELATION
80	CNT_FAM_MEMBERS	CNT_CHILDREN	0.895919	POSITIVE
32	AMT_ANNUITY	AMT_CREDIT	0.739689	POSITIVE
54	DAYS_EMPLOYED	DAYS_BIRTH	0.292894	POSITIVE
64	DAYS_REGISTRATION	DAYS_BIRTH	0.238782	POSITIVE
40	DAYS_BIRTH	CNT_CHILDREN	0.217488	POSITIVE
42	DAYS_BIRTH	AMT_CREDIT	0.176947	NEGATIVE
94	DAYS_LAST_PHONE_CHANGE	DAYS_BIRTH	0.170118	POSITIVE
95	DAYS_LAST_PHONE_CHANGE	DAYS_EMPLOYED	0.165773	POSITIVE
84	CNT_FAM_MEMBERS	DAYS_BIRTH	0.157711	POSITIVE
65	DAYS_REGISTRATION	DAYS_EMPLOYED	0.142984	POSITIVE

SOME OBSERVATIONS FROM THE TWO HEAT MAPS

1-THE INVERSE PROPORTIONALITY IN COUNT OF CHILDREN VS TOTAL INCOME IS HIGHER IN DEFAULTERS THAN THAT OF NON DEFAULTERS WHICH SHOWS THAT IF THERE IS HIGH DEGREE OF INVERSE PROPORTIONALITY IN COUNT OF CHILDREN VS TOTAL INCOME THEN THE CLIENT IS VERY LIKELY TO DEFAULT

2-THE INVERSE PROPORTIONALITY IN COUNT OF CHILDREN VS TOTAL CREDIT IS HIGHER IN DEFAULTERS THAN THAT OF NON DEFAULTERS WHICH SHOWS THAT IF THERE IS HIGH DEGREE OF INVERSE PROPORTIONALITY IN COUNT OF CHILDREN VS TOTAL CREDIT THEN THE CLIENT IS VERY LIKELY TO DEFAULT

3-THE INVERSE PROPORTIONALITY IN COUNT OF CHILDREN VS ANNUITY IS HIGHER IN DEFAULTERS THAN THAT OF NON DEFAULTERS WHICH SHOWS THAT IF THERE IS HIGH DEGREE OF INVERSE PROPORTIONALITY IN COUNT OF CHILDREN VS ANNUITY THEN THE CLIENT IS VERY LIKELY TO DEFAULT

4-THE INVERSE PROPORTIONALITY IN INCOME VS CREDIT IS HIGHER IN DEFAULTERS THAN THAT OF NON DEFAULTERS WHICH MEANS THAT IF THERE IS HIGH DEGREE OF INVERSE PROPORTIONALITY IN INCOME VS CREDIT AMOUNT THEN THERE IS HIGH CHANCE THAT CLIENT MAY DEFAULT

5-THE INVERSE PROPORTIONALITY IN INCOME VS ANNUITY MEANS IN DEFAULTERS AS INCOME IS MORE THEIR INVESTMENTS RETURN PER ANNUM IS LESS. ALSO IT IS SHADED LIGHTLY GREEN IN NON DEFAULTERS WHICH SHOWS THAT FOR NON DEFAULTERS AS INCOME INCREASES THEIR INVESTMENT RETURN ALSO INCREASE

DISTRIBUTION OF LOAN PURPOSE WITH CONTRACT STATUS

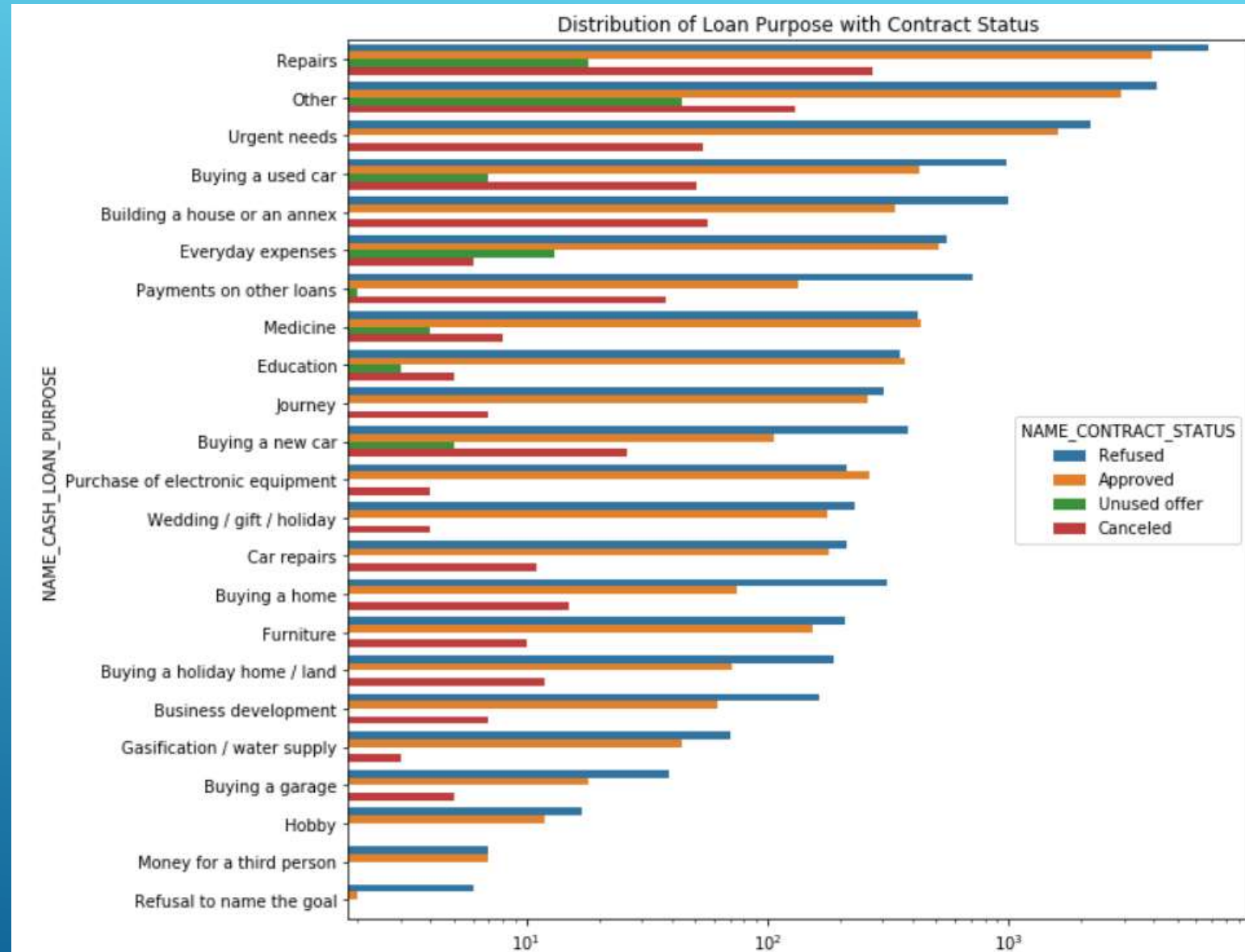
1- PURPOSES OF LOAN LIKE REPAIRS,URGENT NEEDS HAVE BEEN THE MOST APPROVED

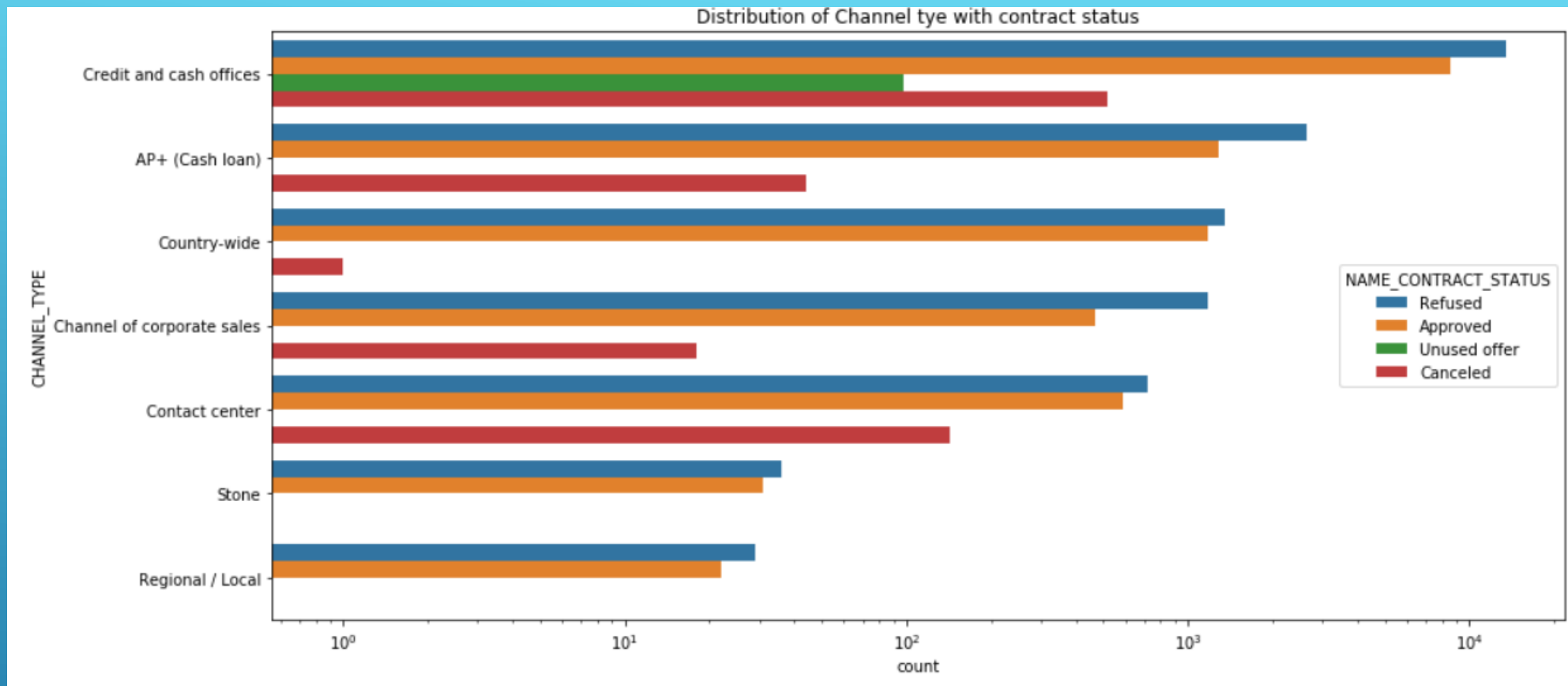
2- PURPOSES OF LOAN LIKE REFUSAL TO NAME THE GOAL,MONEY FOR THIRD PERSON HAVE BEEN THE LEAST APPROVED

3- FOR EDUCATION AND JOURNEY PURPOSE LOANS WERE BOTH EQUALLY APPROVED AND REJECTED

4- PAYING FOR OTHERS AND REPAIRS HAS THE HIGHEST NUMBER OF REJECTIONS

5- PURCHASE OF ELECTRONIC EQUIPMENT HAS LEAST NUMBER OF CANCELLATIONS





DISTRIBUTION OF CHANNEL TYPE WITH CONTRACT STATUS

1- UPON OBSERVING THE PLOT CLIENTS WHO ARE CONTACTED THROUGH CREDIT AND CASH OFFICES,COUNTRY WIDE CHANNELS,AP+ CASH LOANS HAVE HIGHEST NUMBER OF APPROVALS FOR LOANS

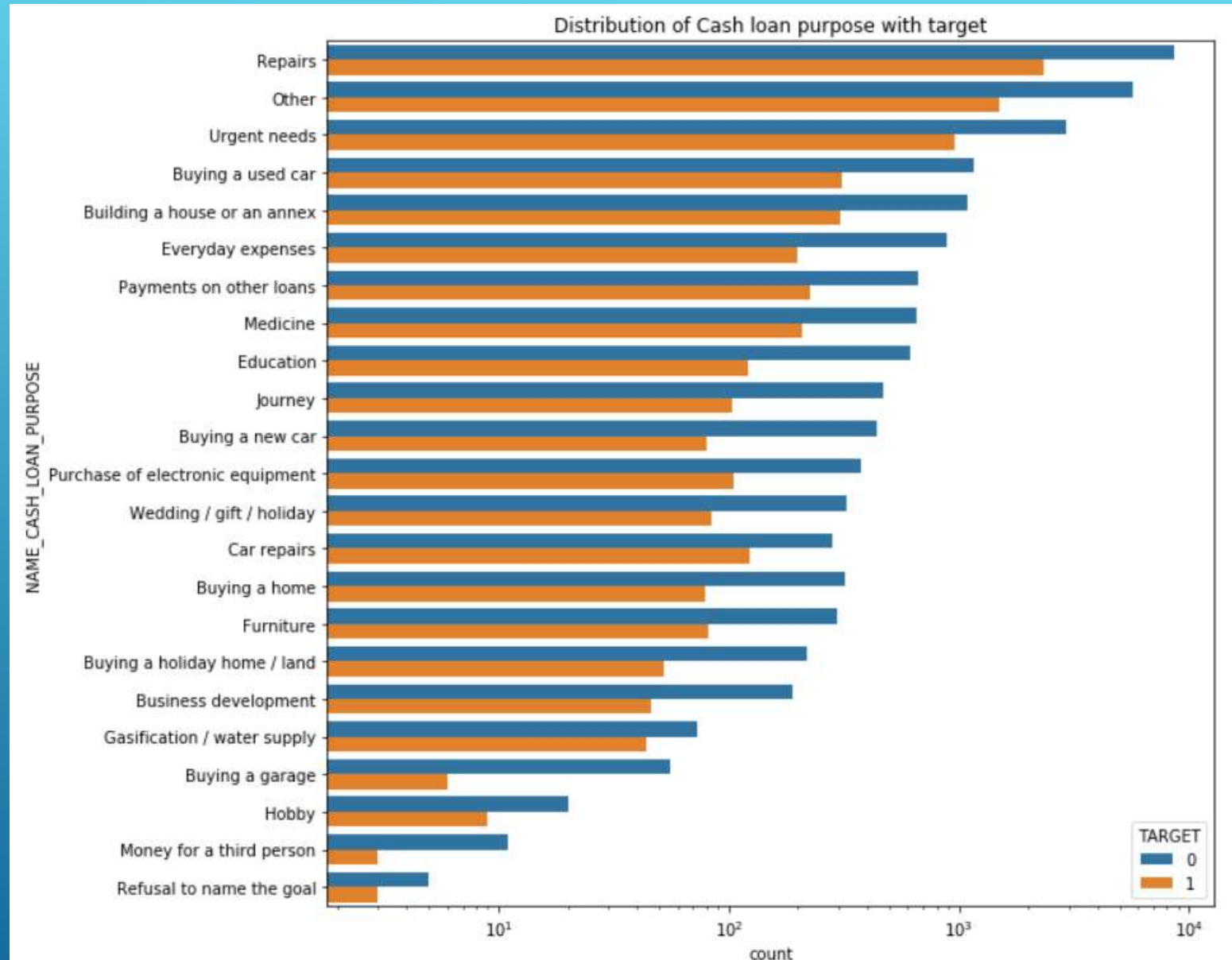
2- HIGHEST NUMBER OF CANCELLATIONS ARE GIVEN TO CLIENTS WHO HAVE BEEN CONTACTED THROUGH CREDIT AND CASH OFFICES

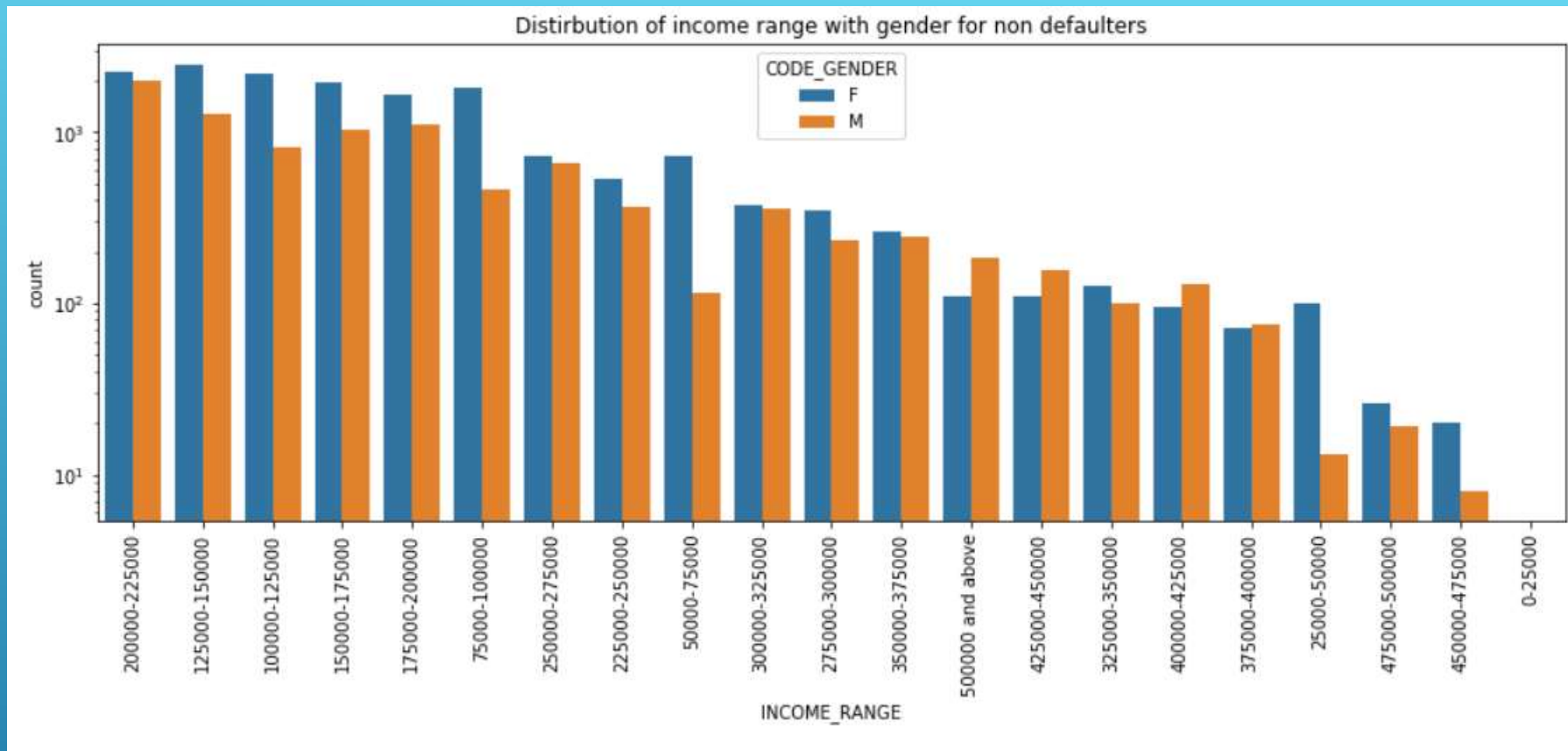
DISTRIBUTION OF LOAN PURPOSE WITH TARGET

1- REPAIRS,PAYING OTHER LOANS,URGENT NEEDS HAVE HIGHEST NUMBER OF DEFAULTERS

2- DEFAULTING RATE IS SMILAR IN BUYING A USED CAR AND BUILDING A HOME CATEOGRY

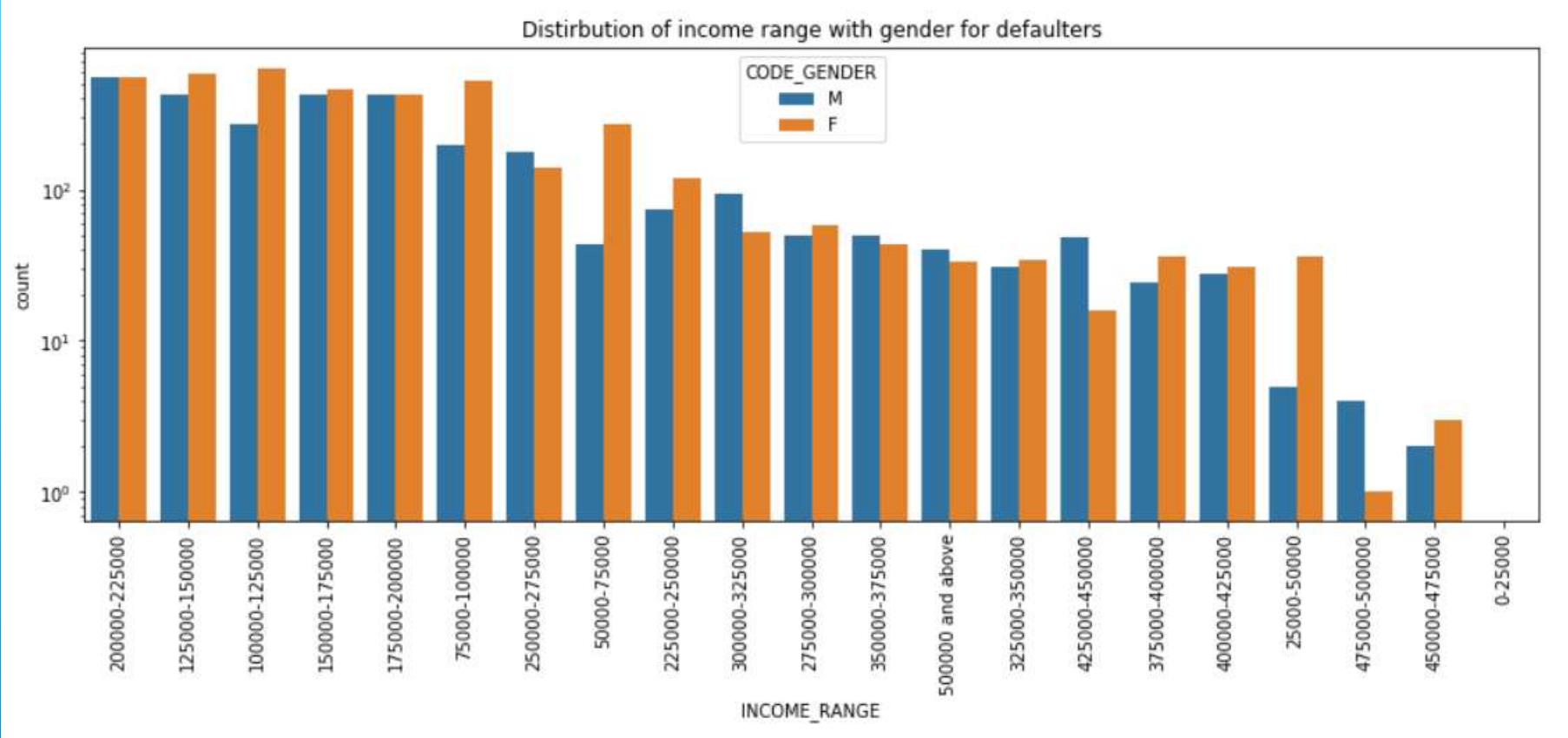
3- FOR BUYING A NEW CAR PURPOSE RATIO OF NON DEFAULTERS TO DEFAULTERS IS MORE THAN ANY OTHER CATEGORY





DISTRIBUTION OF INCOME RANGE WITH GENDER FOR NON DEFAULTERS

- 1- COUNTS OF MALE IS LESSER THAN FEMALES IN MOST OF THE INCOME RANGES
- 2- THERE ARE NO CLIENTS IN RANGE OF INCOME 0-25000
- 3- THERE ARE MORE MALES THAN FEMALES IN INCOME RANGES : 500000 AND ABOVE,425000-450000,400000-425000,375000-400000

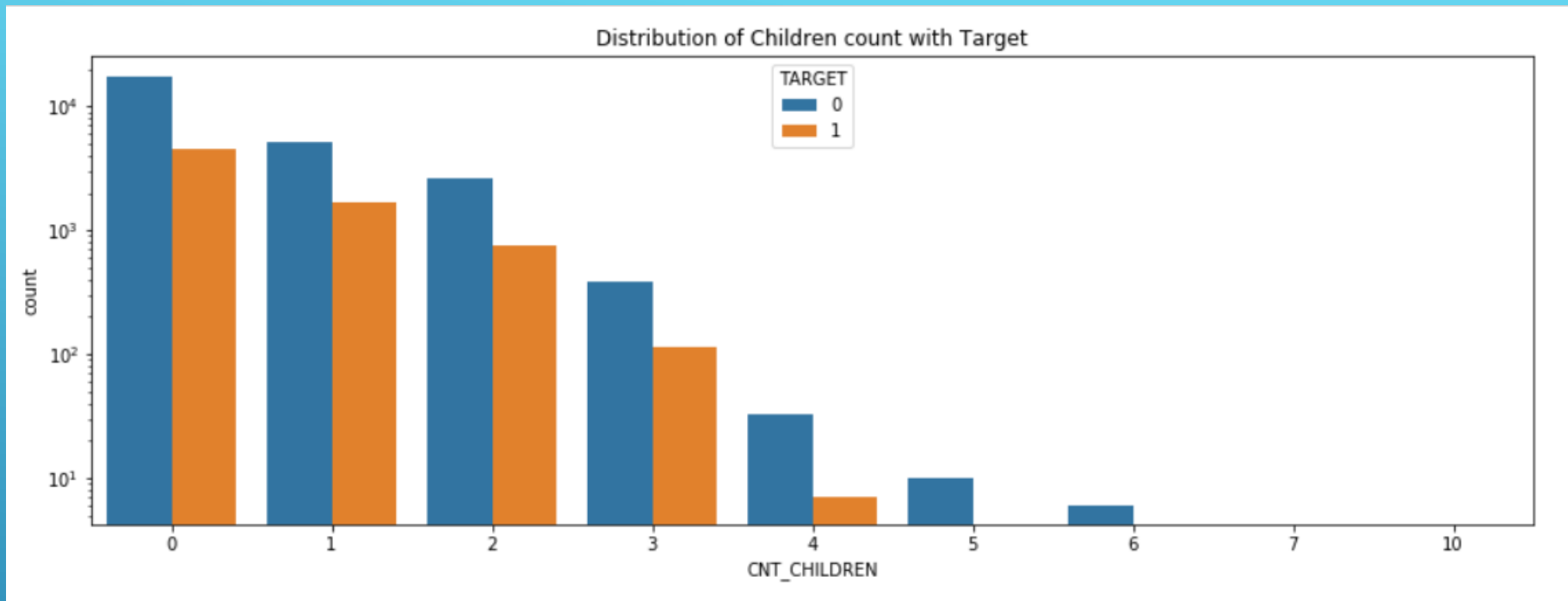


DISTRIBUTION OF INCOME RANGE WITH GENDERS FOR DEFAULTERS

1- IN CONTRAST TO THE NON DEFAULTERS HERE MOST OF THE COLUMNS HAVE MALE COUNTS HIGHER THAN FEMALES

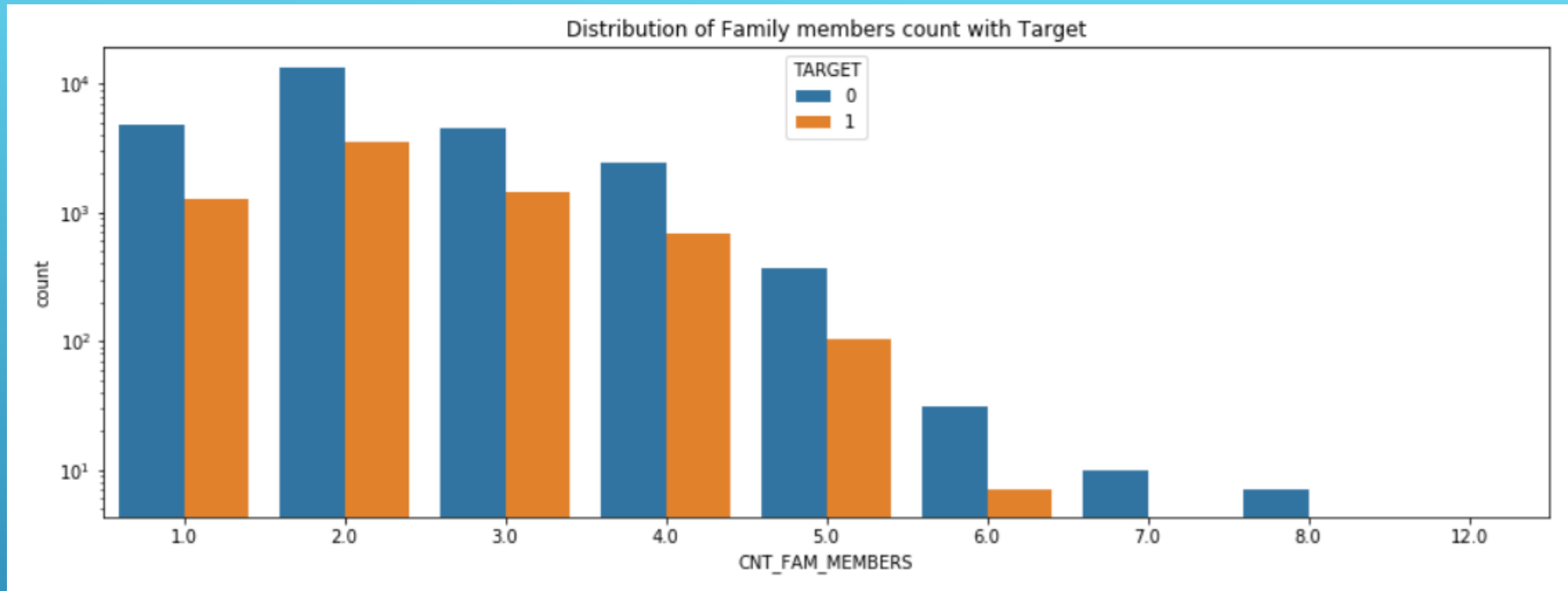
2- THERE ARE NO CLIENTS IN 0-25000 RANGE

3- IN DEFAULTERS IT IS OBSERVED THAT 450000-475000,475000-500000,50000-75000,75000-100000 INCOME RANGES HAVE FEMALES MORE IN NUMBER THAN MALES



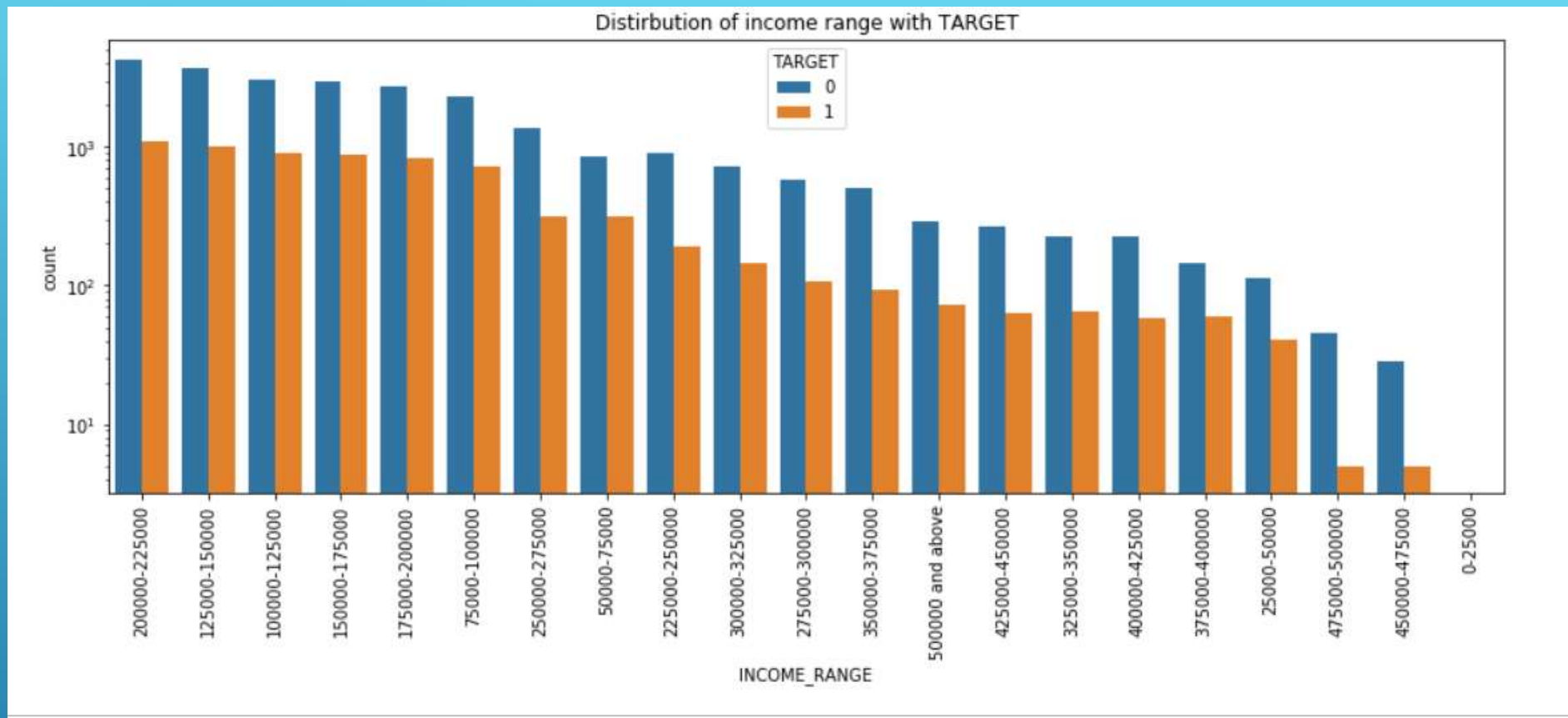
DISTRIBUTION OF CHILDREN COUNT WITH TARGET

THEREFORE CLIENTS WITH NO CHILDREN ARE OBSERVED TO PAY BACK THE LOANS WITHOUT ANY DIFFICULTIES



DISTRIBUTION OF FAMILY MEMBERS WITH TARGET

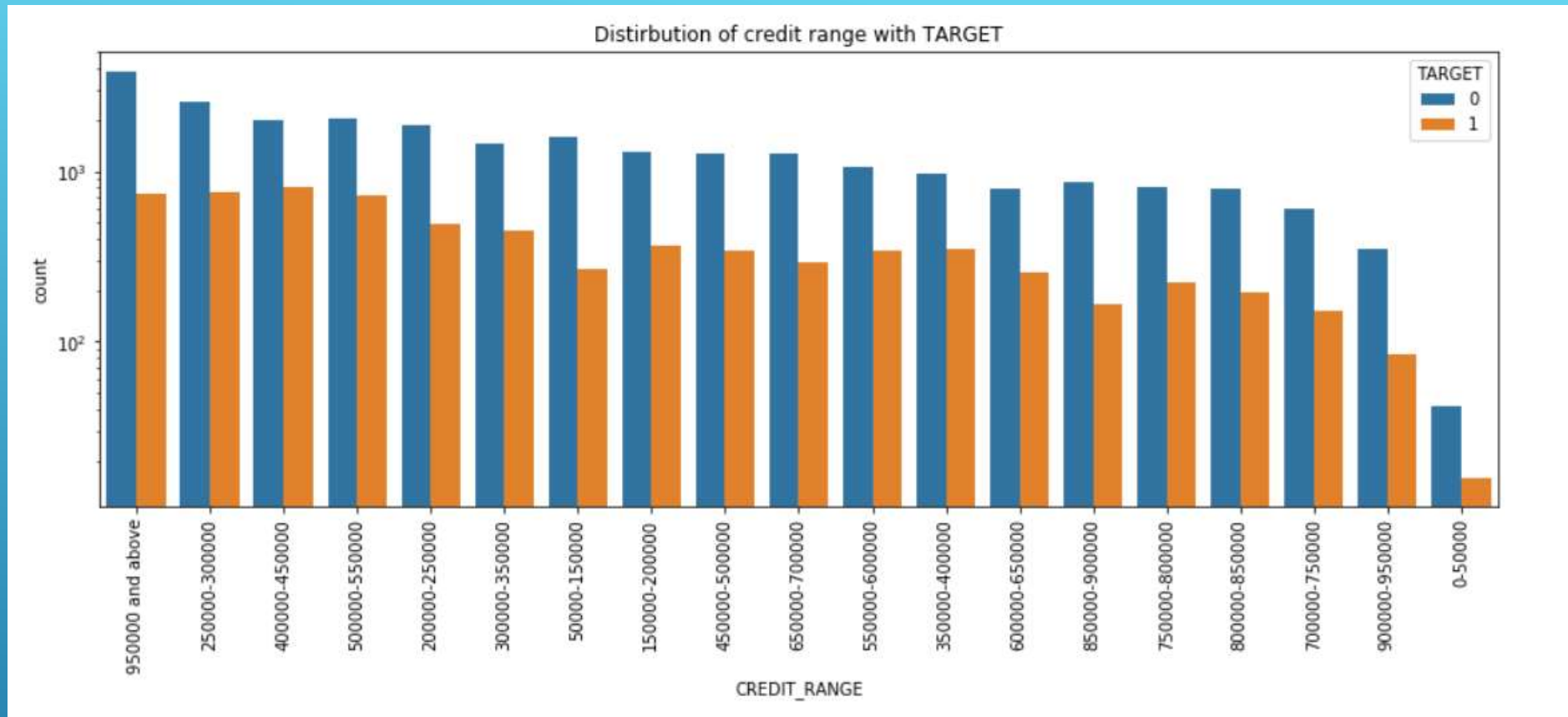
IT IS OBSERVED FROM THE PLOT THAT CLIENTS WITH 2 FAMILY MEMBERS ARE MOSTLY OBSERVED TO PAY BACK LOANS WITHOUT ANY DIFFICULTIES



DISTRIBUTION OF INCOME RANGE WITH TARGET

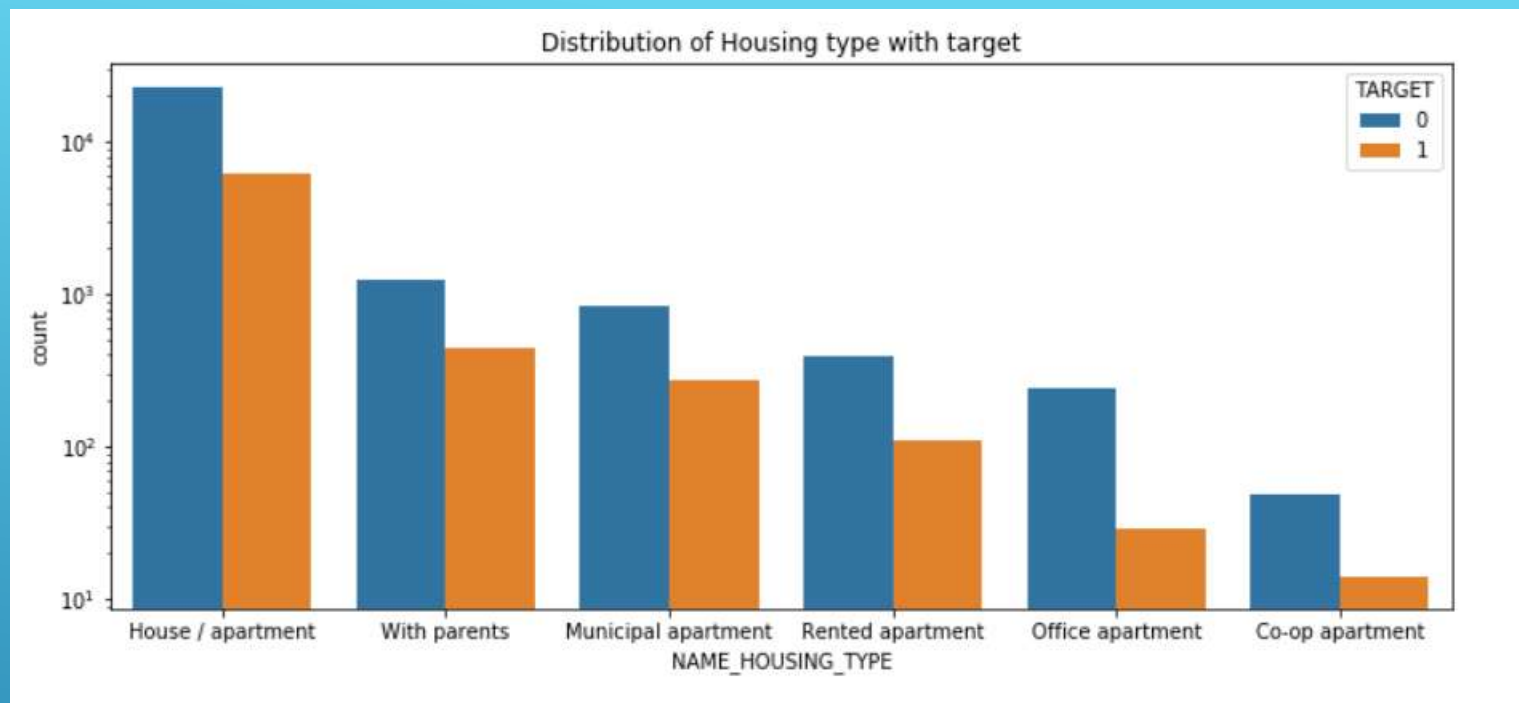
1- FROM THE PLOT ABOVE IT IS OBSERVED THAT MORE NUMBER OF DEFAULTERS HAVE INCOMES IN THE RANGES 20000-225000,125000-150000,100000-125000 THAN OTHER RANGES

2- CLIENTS WHOSE INCOMES IN THE RANGE OF 450000 - 500000 HAVE LESS NO OF DEFAULTERS IT MEANS THEY HAVE LESS CHANCE OF DEFAULTING



DISTRIBUTION OF CREDIT RANGE WITH TARGET

- 1- CLIENTS WITH CREDIT AMOUNT 400000-450000 DEFAULTED MORE THAN OTHER CREDIT RANGES
- 2- CLIENTS WITH CREDIT AMOUNT 950000 AND ABOVE, 250000-300000 DO NOT HAVE PAYMENT DIFFICULTIES



DISTRIBUTION OF HOUSING TYPE WITH TARGET

1- MORE DEFAULTERS HAVE HOUSING TYPE AS HOUSE OR APARTMENT

2- CLIENTS WHO LIVE WITH PARENTS AND LIVE IN MUNICIPAL APARTMENTS HAVE LESS DEFAULTERS