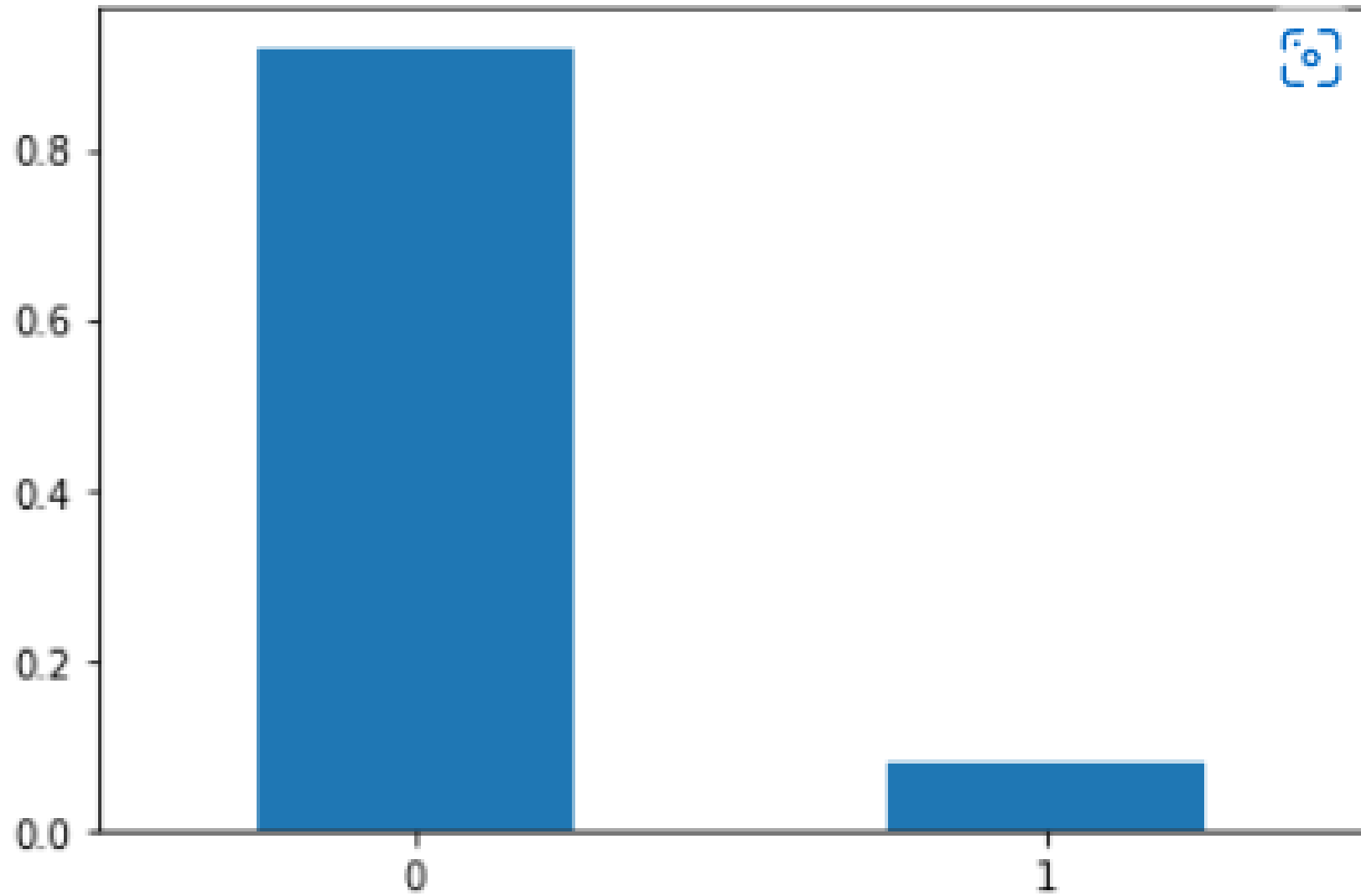


A decorative graphic on the left side of the slide, consisting of a network of orange lines and circles that resemble a circuit board or a stylized tree structure.

# CREDIT EDA CASE STUDY

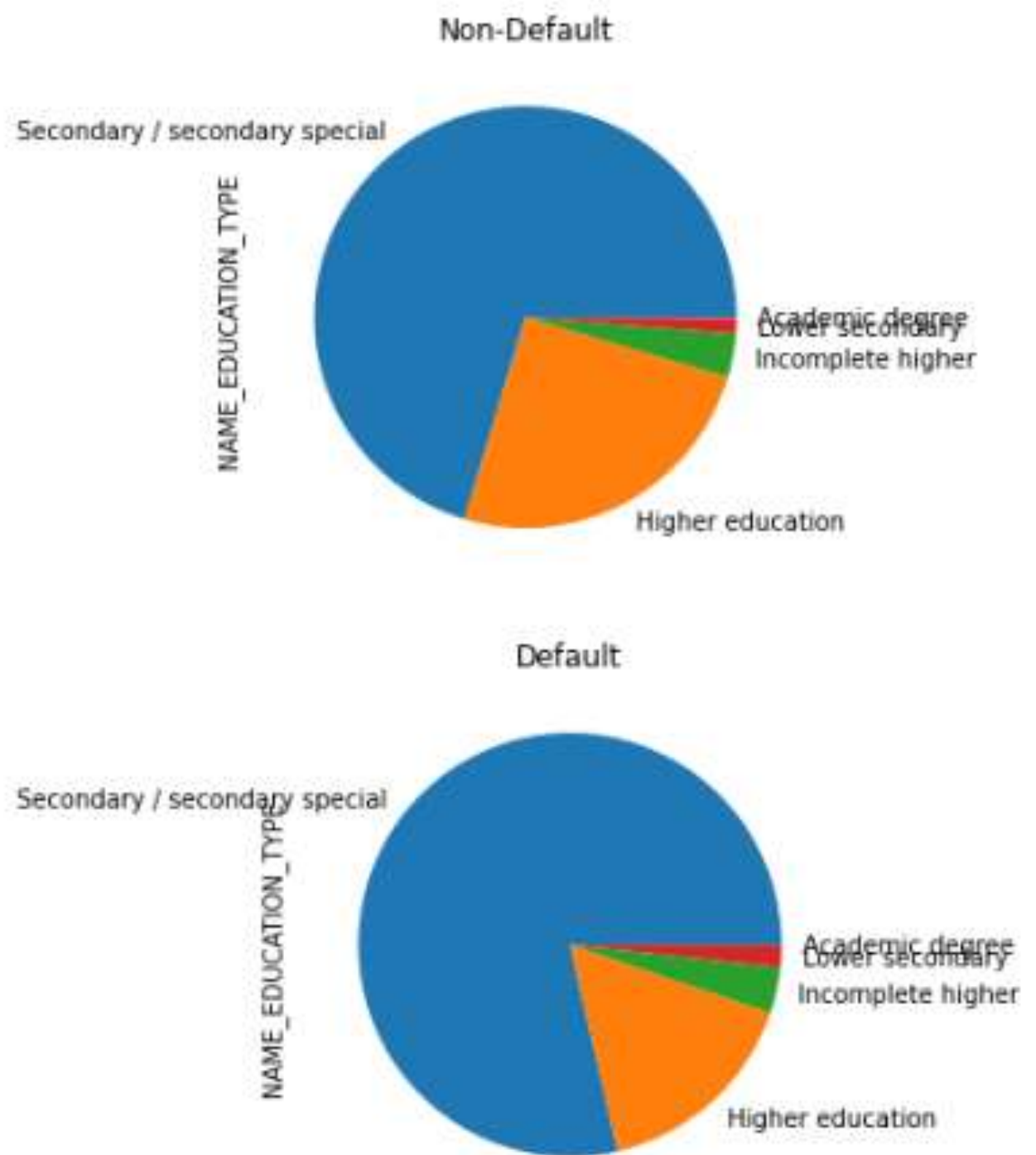
- BY KESHAV GUPTA

THIS IS THE  
TARGET  
GRAPH  
WHERE “0”  
MEANS  
CLIENTS WITH  
NO DEFAULT  
AND “1”  
MEANS  
CLIENTS WITH  
SOME  
DEFAULTS.



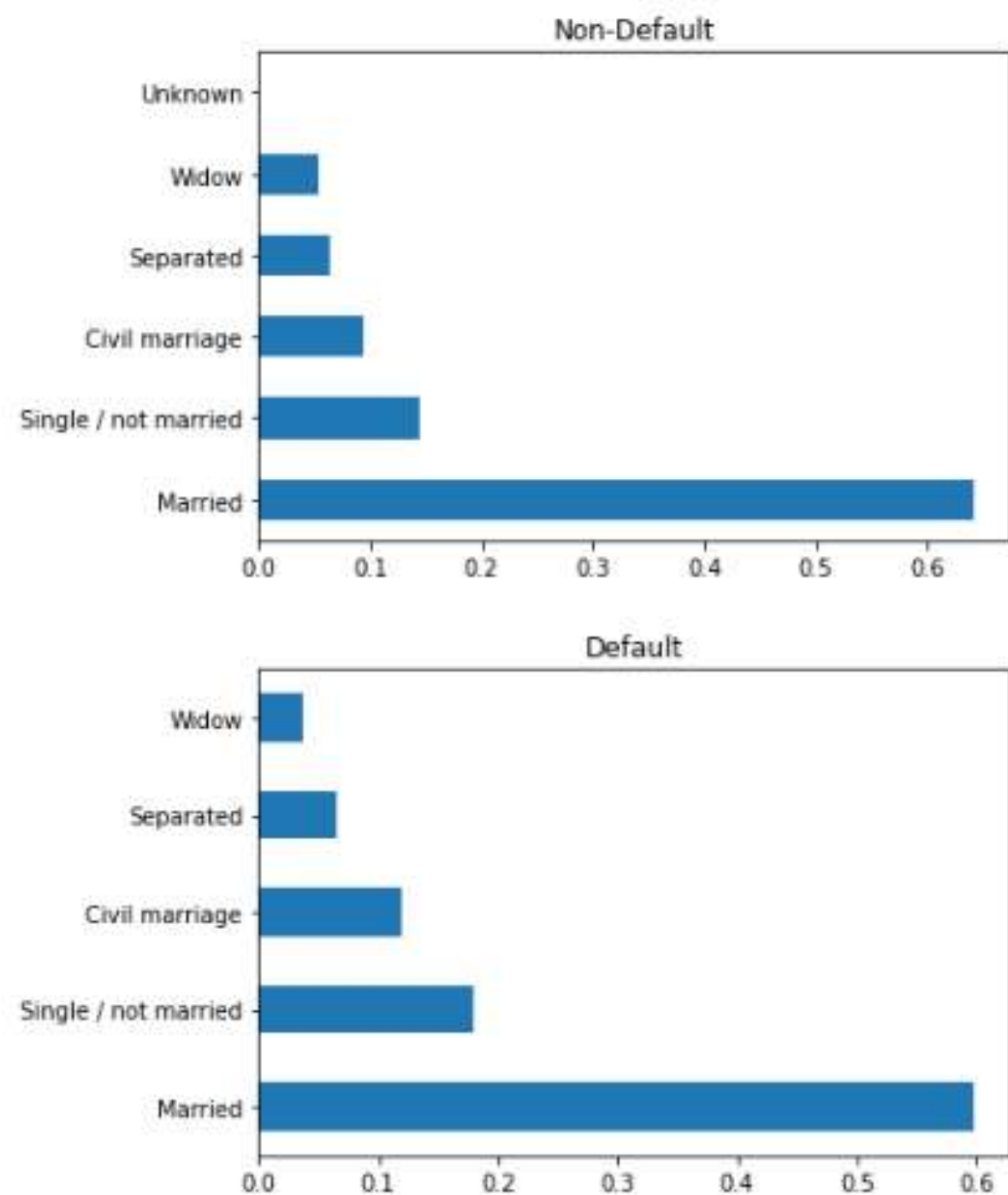
THIS IS THE PIE CHART FOR DESCRIBING THE EDUCATION TYPE OF BOTH THE CATEGORIES (DEFAULTER AND NON DEFAULTERS).

➡ FROM THIS WE CAN CONCLUDE THAT SECONDARY SCHOOL EDUCATED PEOPLE ARE APPLYING MOST FOR THE LOAN.



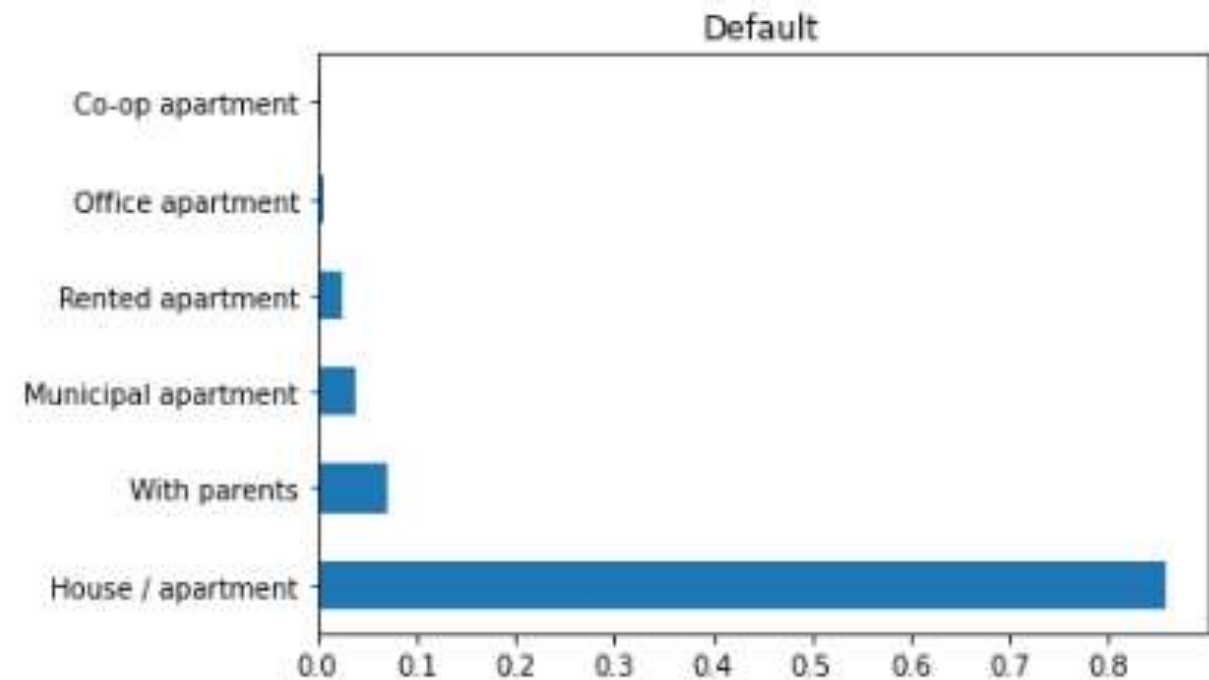
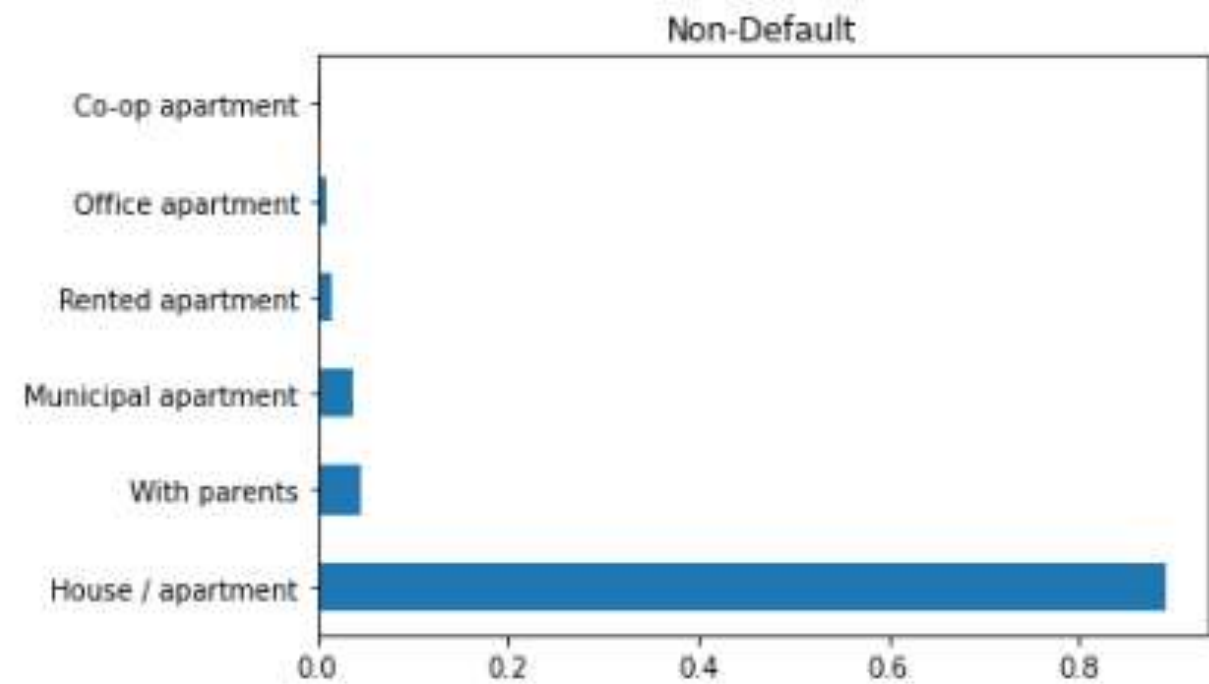
THIS HORIZONTAL BAR GRAPH IS SHOWING THE MARITAL STATUS OF CLIENTS WHO ARE APPLYING FOR THE LOAN.

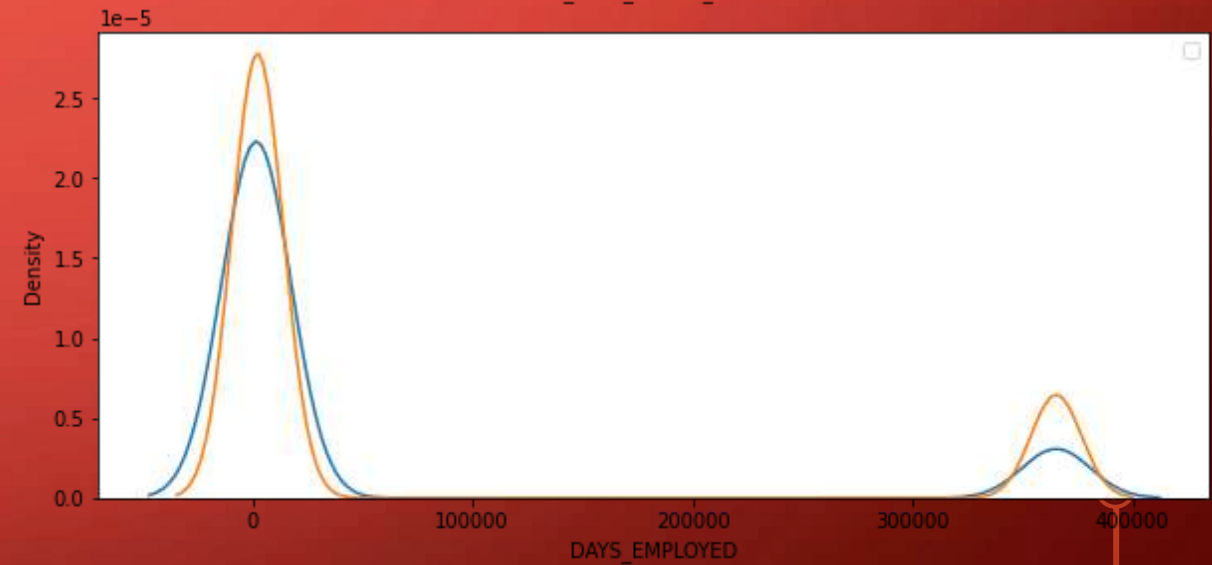
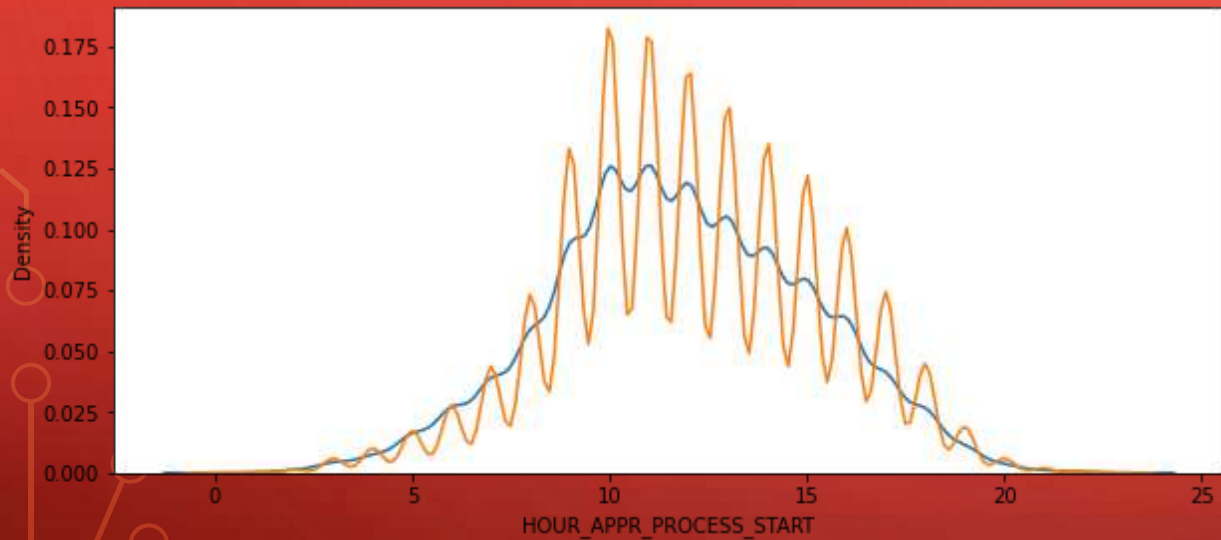
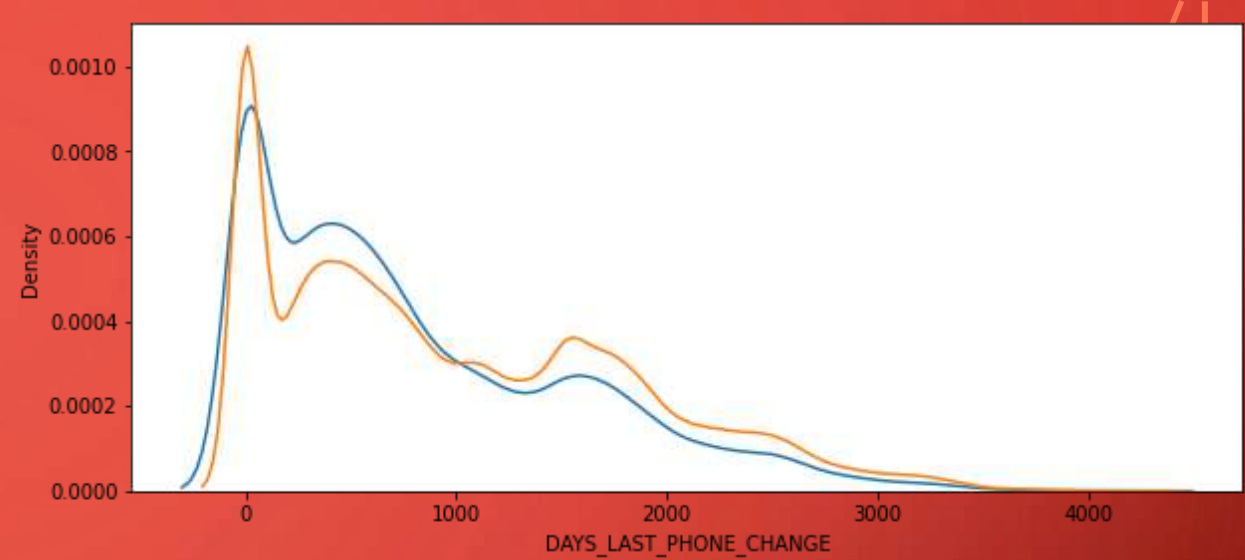
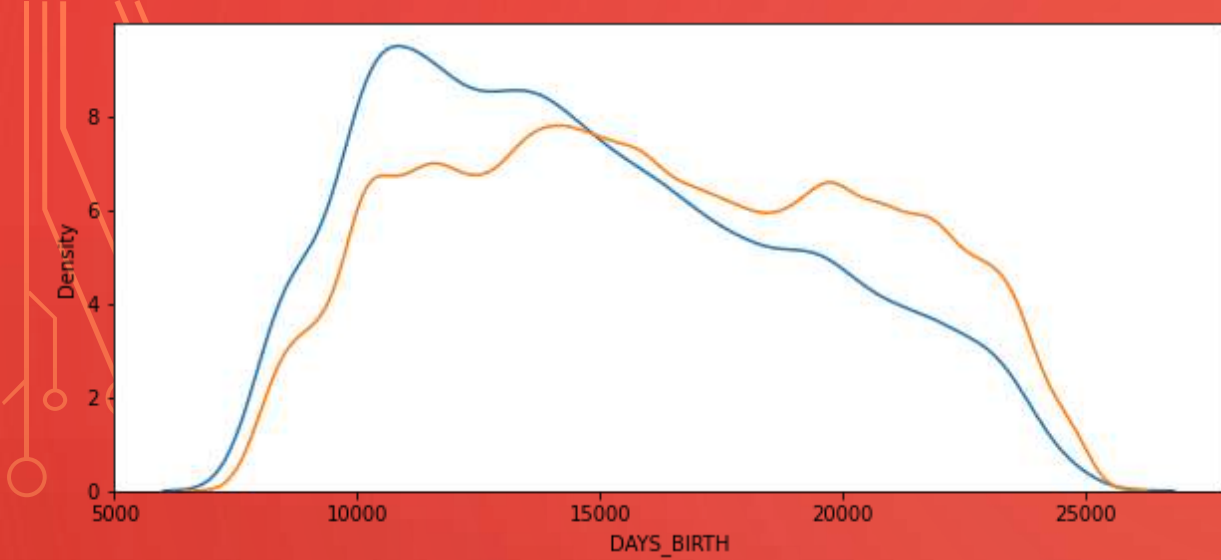
➡ HERE WE CAN SEE THAT THE CLIENTS WHO ARE MARRIED ARE APPLYING FOR THE LOAN MOST AND DEFAULTERS ARE ALSO COMING FROM THE SAME CATEGORY.



THIS HORIZONTAL BAR GRAPH SHOWS THE HOUSING TYPE OF CLIENTS.

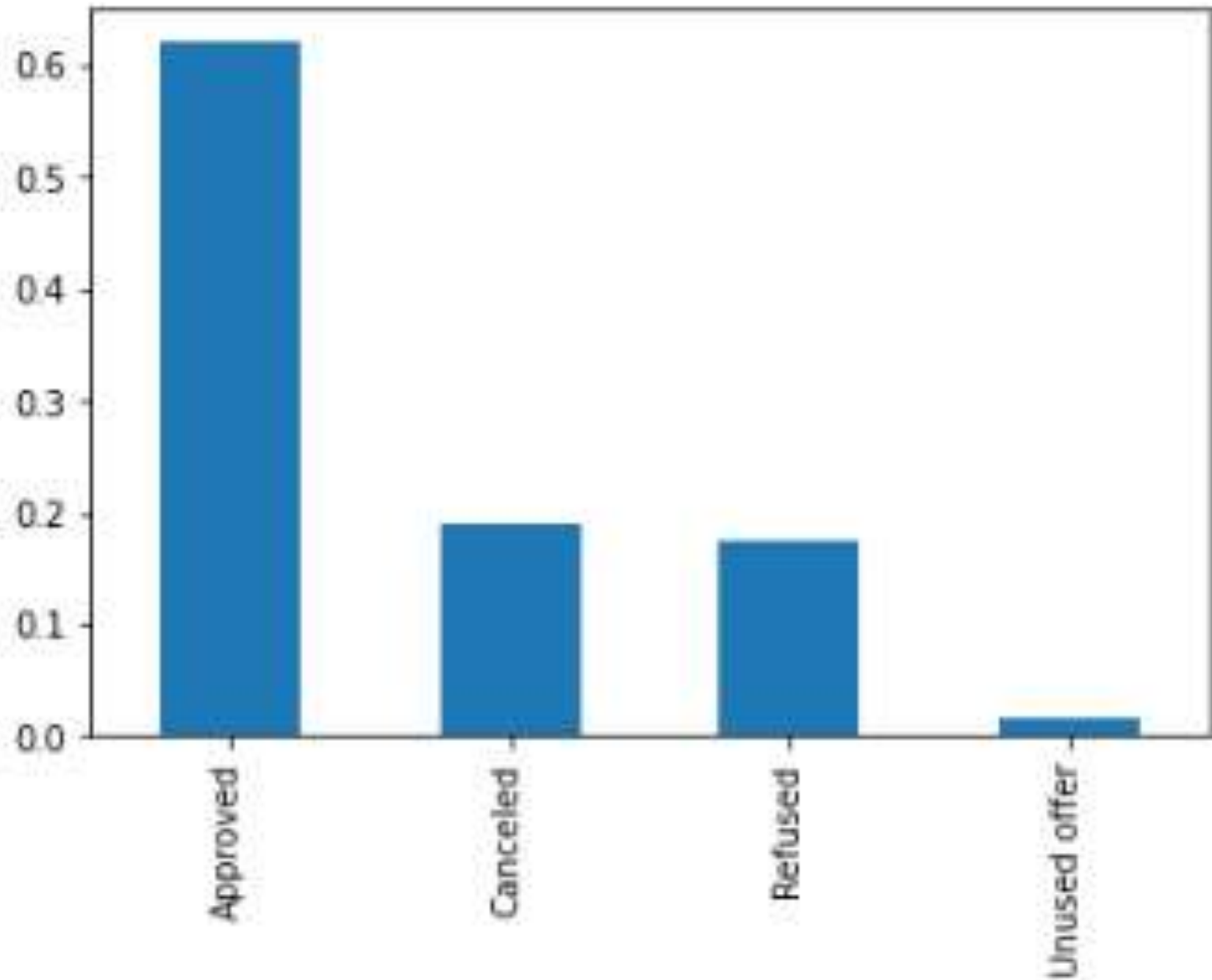
➡ MOST OF THE CLIENTS ARE THOSE WHO HAVE THEIR OWN HOUSE OR APARTMENTS.



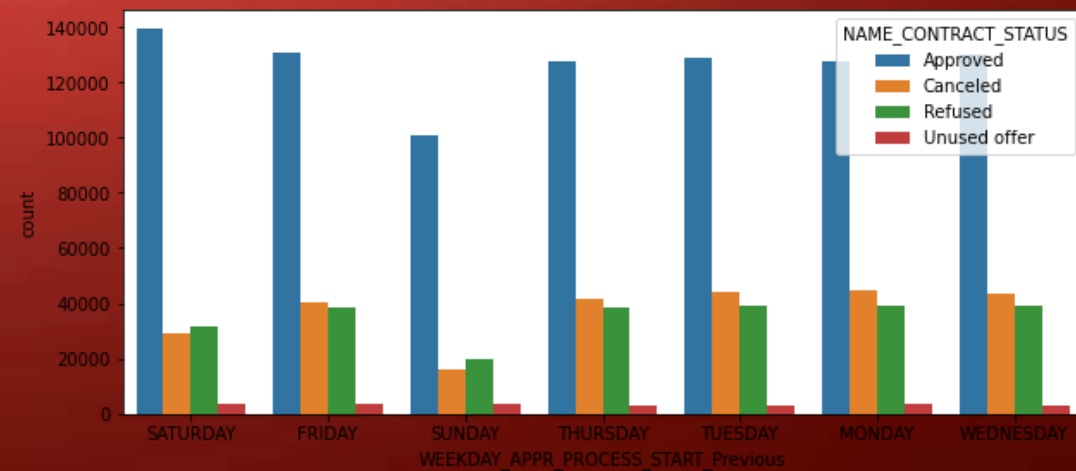
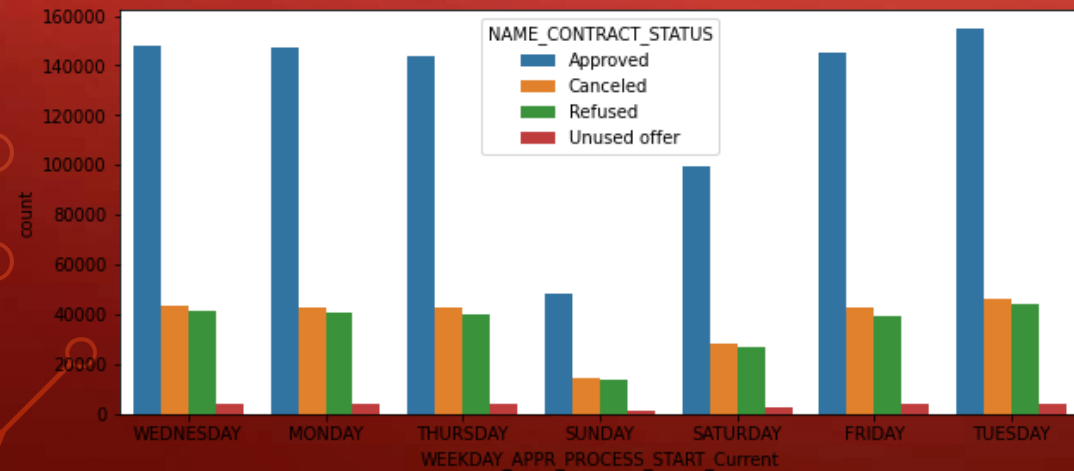
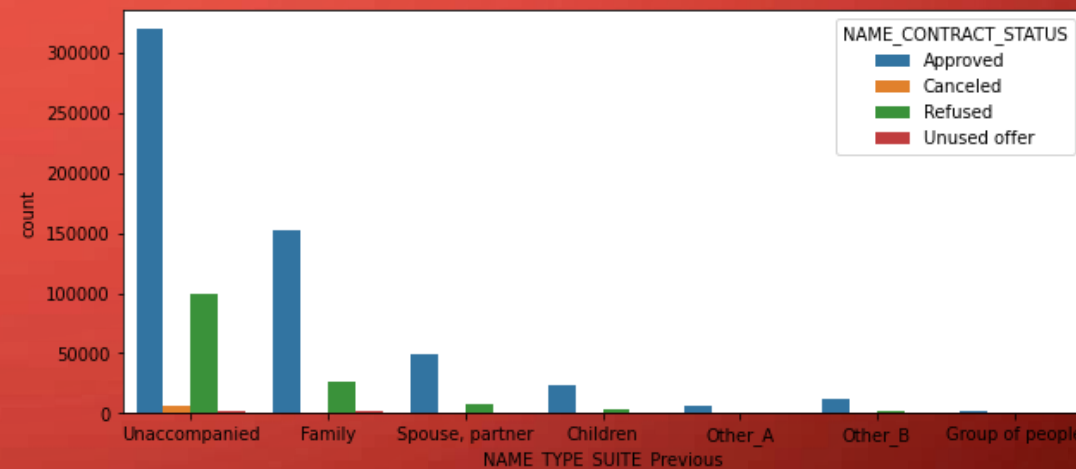
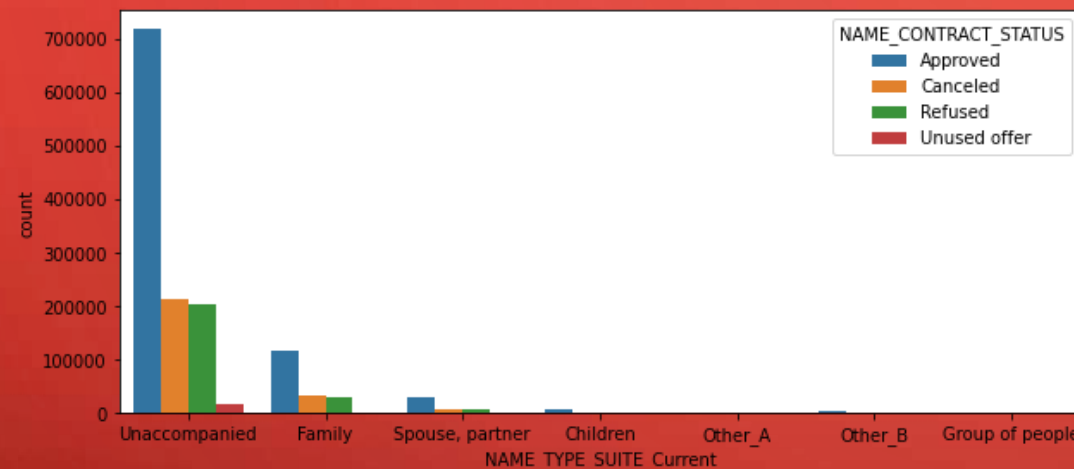
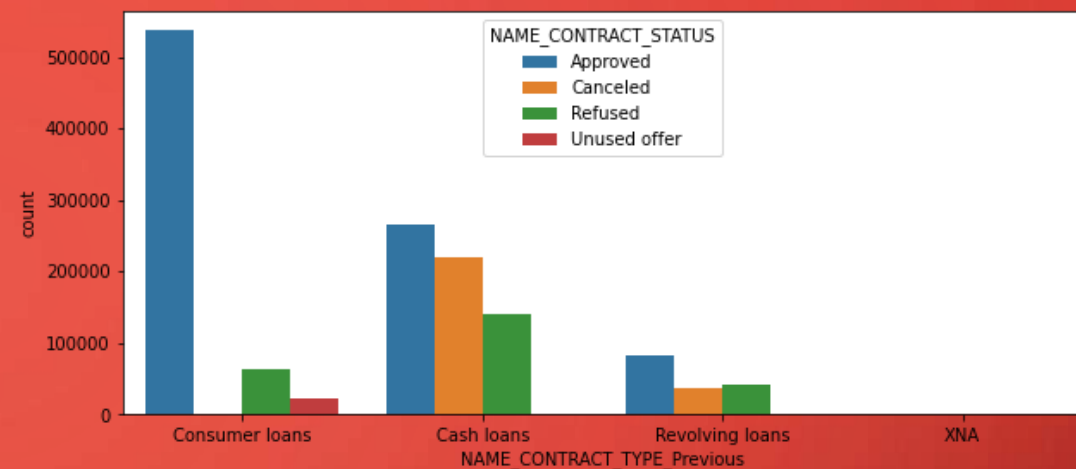
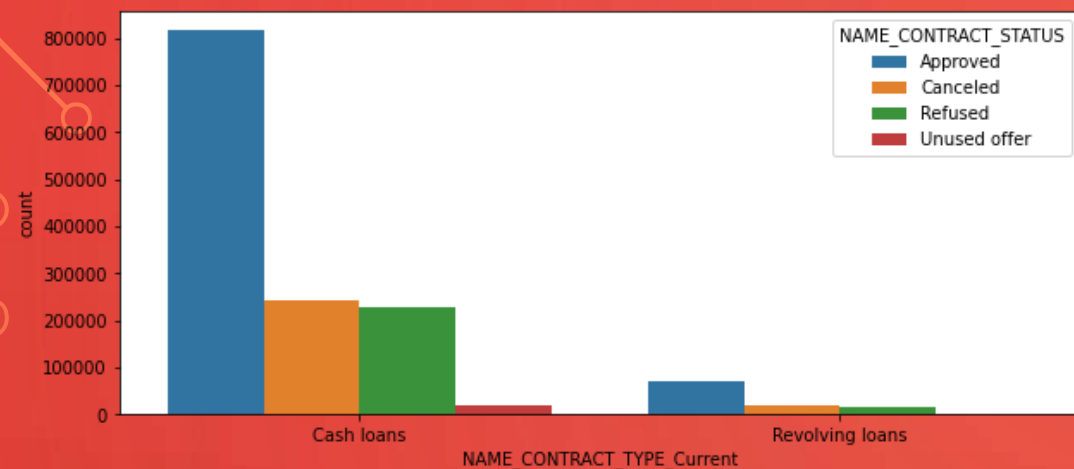


HERE ARE SOME MORE GRAPHS USE TO ANALYZE SOME ELEMENTS LIKE AT WHAT TIME APPLICATION PROCESS START, NO. OF DAYS LAST PHONE CHANGED.

NOW HERE THIS IS THE PREVIOUS DATA OF CLIENTS WHO APPLIED FOR THE LOAN WHERE MAJORITY OF THE APPLICATIONS WERE APPROVED AS SHOWN IN THE BAR GRAPH.











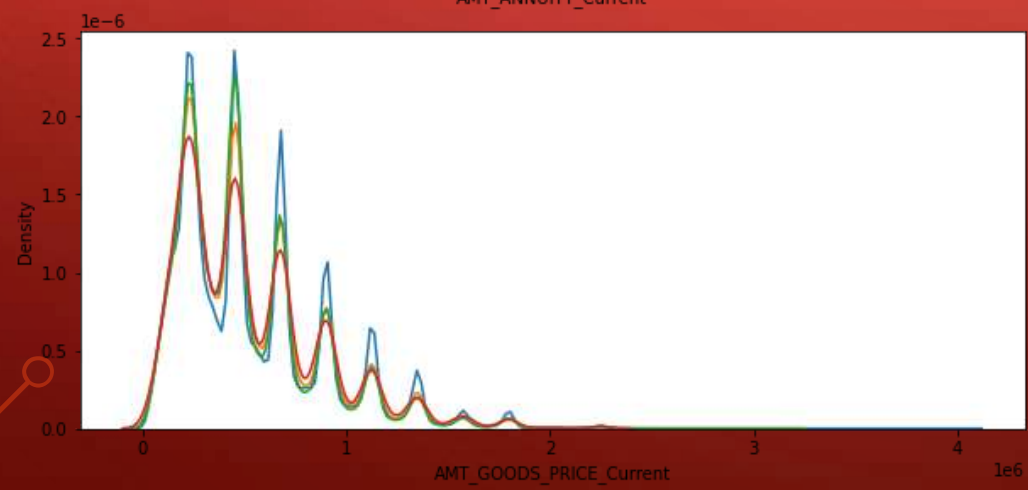
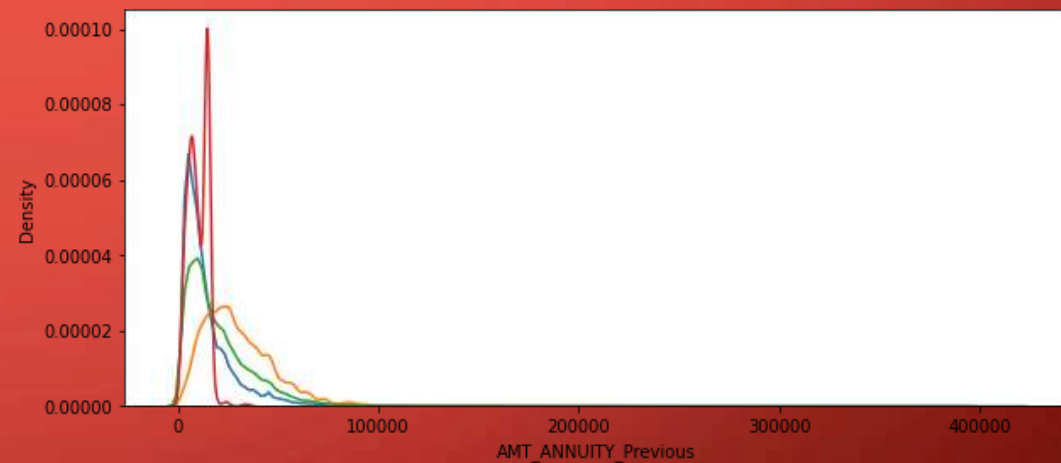
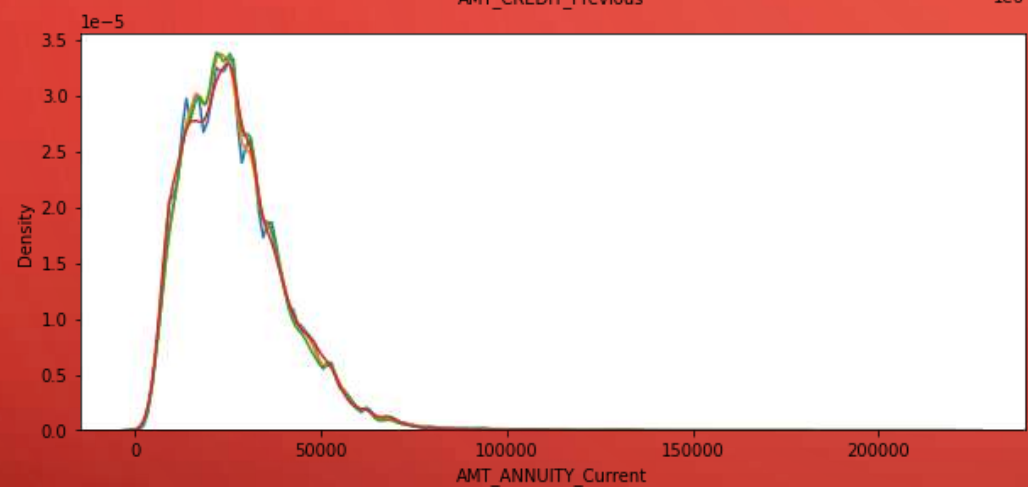
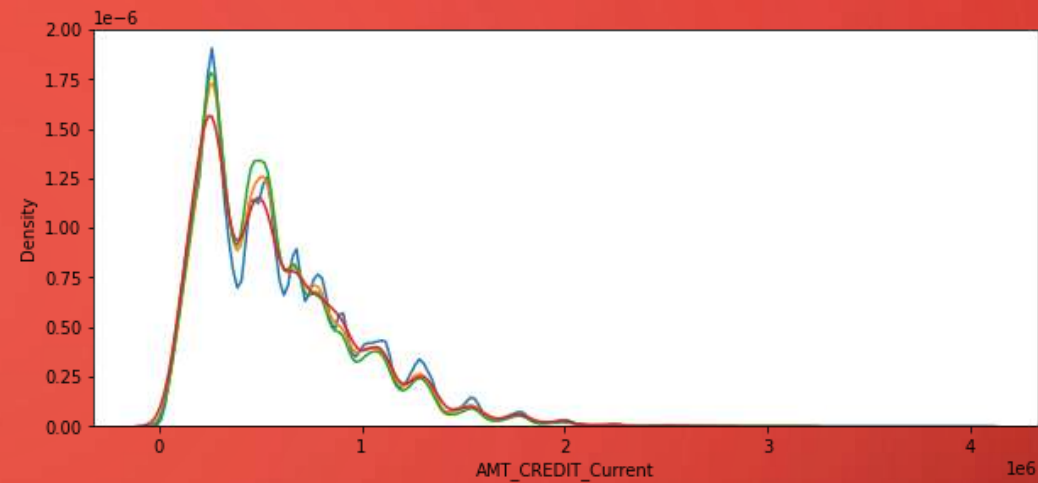
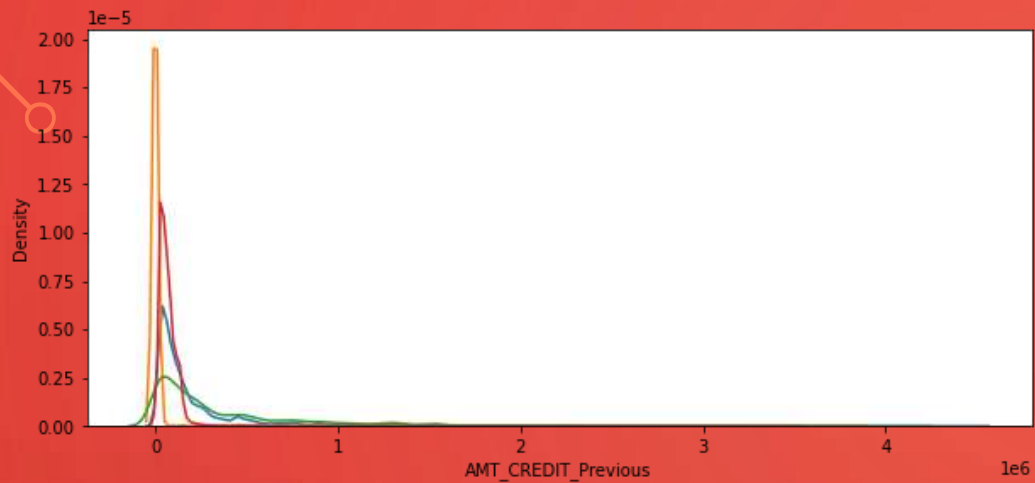
Previous slide showed the following –

→ Cash loans are the most approved loans.

→ Most of the contract status were Consumer Loans.

→ Most of the application process was started on Tuesday.





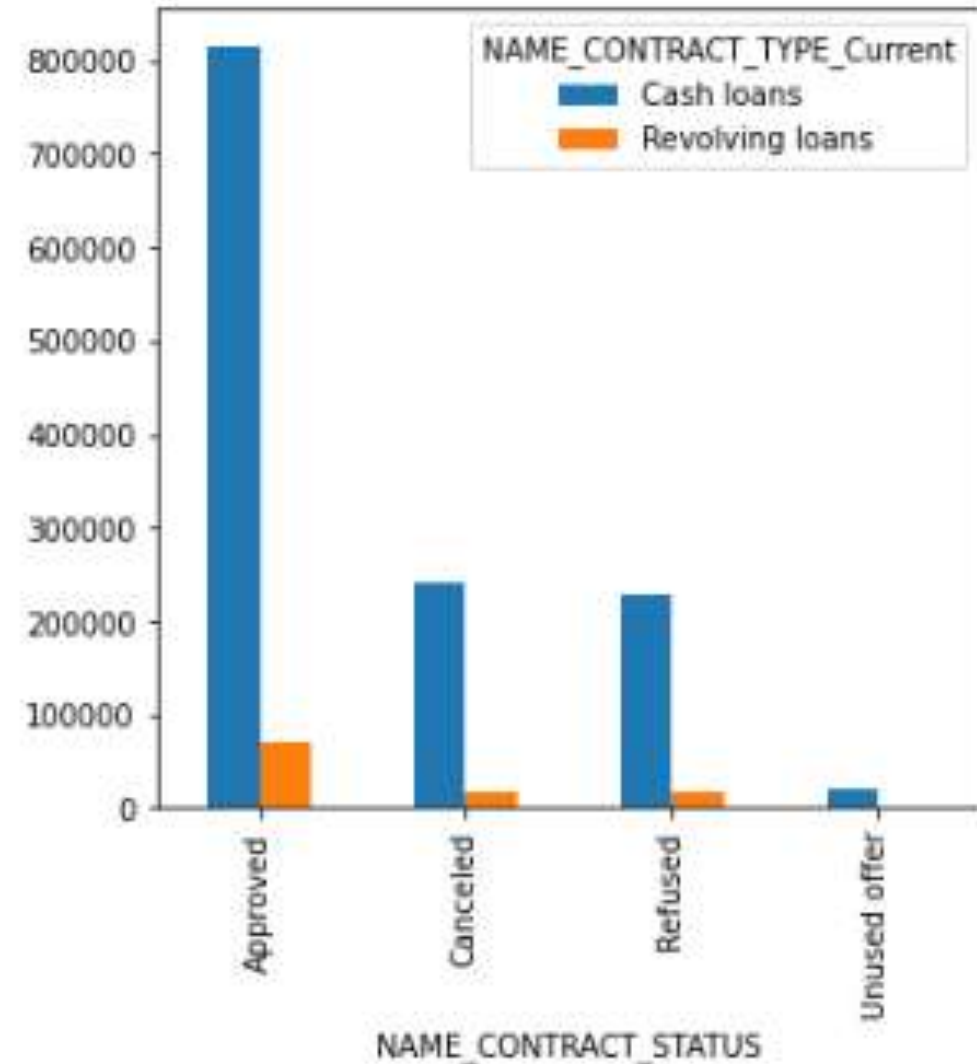
## **From the previous slide we analyzed these facts :-**

- High number of applications are filed in 9 AM to 2 PM for both Current and Previous data.
- So busiest hours for bank are form 9 AM to 2 PM.
- nuclear family tends to take more loans.
- Previously bank had high unused offers but currently refused is high incase of AMT\_GOODS\_PRICE.

# BI-VARIATE CATEGORICAL ANALYSIS

From this graph we can analyze that Cash loans were the most loans which got approved in the previous application.

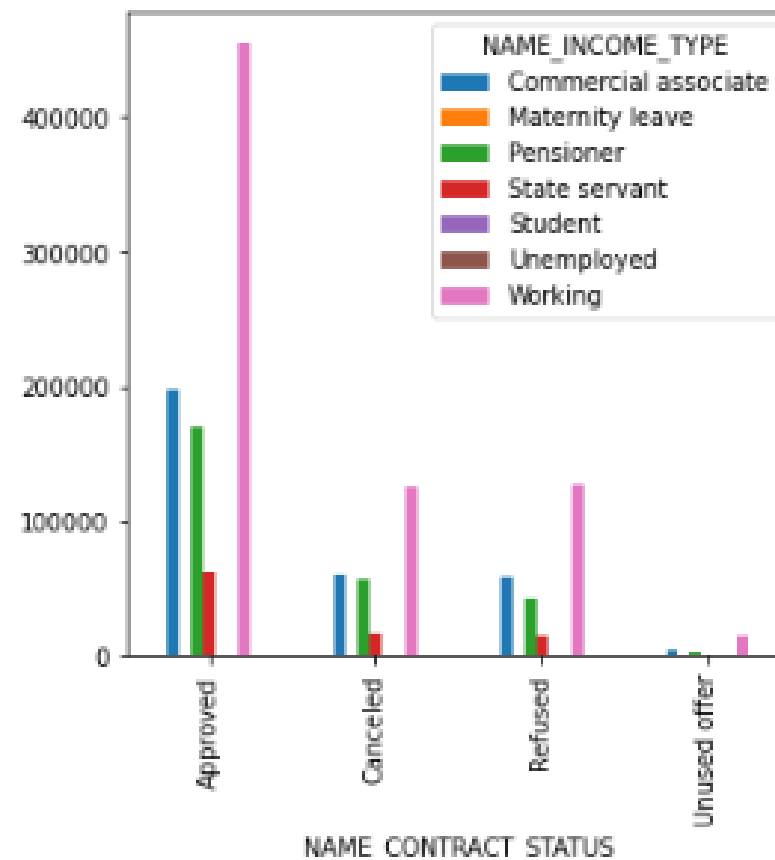
NAME_CONTRACT_TYPE_Current	Cash loans	Revolving loans
NAME_CONTRACT_STATUS		
Approved	816571	69528
Canceled	241552	17889
Refused	228351	17039
Unused offer	20641	2130



Here we can see  
that most of the  
loans are  
approved for  
working  
candidates only.

NAME_INCOME_TYPE	Commercial associate	Maternity leave	Pensioner
NAME_CONTRACT_STATUS			
Approved	198507	10	170144
Canceled	59785	2	57674
Refused	58117	3	43802
Unused offer	5072	1	1924

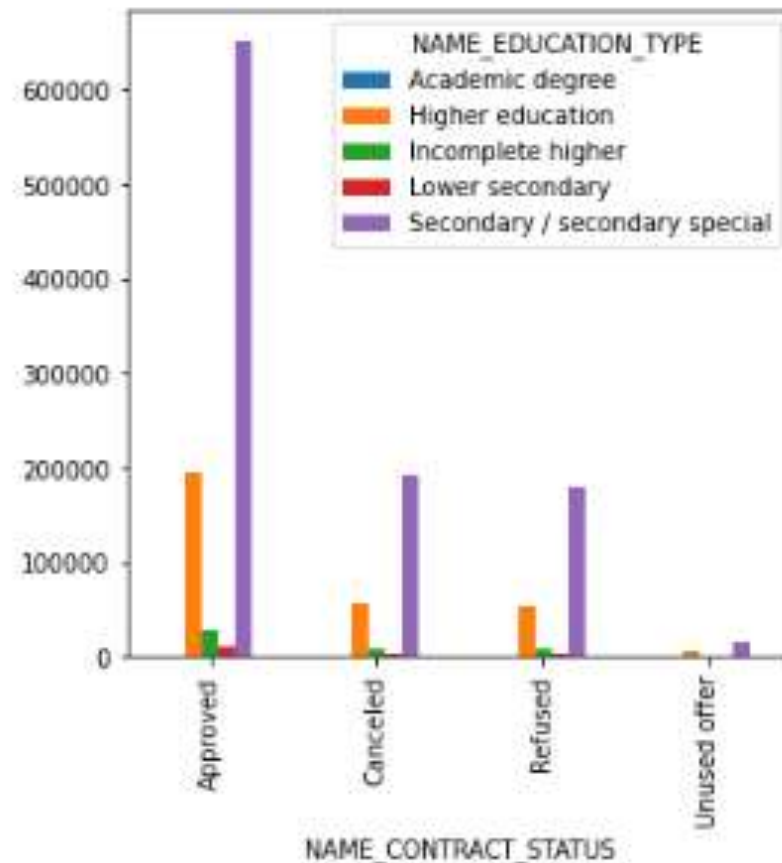
NAME_INCOME_TYPE	State servant	Student	Unemployed	Working
NAME_CONTRACT_STATUS				
Approved	61630	20	68	455720
Canceled	15679	3	16	126282
Refused	15597	1	38	127832
Unused offer	1518	0	1	14255



Clearly, the clients whose education is secondary/secondary special have got their loans approved the most.

NAME_EDUCATION_TYPE	Academic degree	Higher education	Incomplete higher
NAME_CONTRACT_STATUS			
Approved	418	195002	27676
Canceled	64	57074	7917
Refused	91	54051	8635
Unused offer	6	6718	983

NAME_EDUCATION_TYPE	Lower secondary	Secondary / secondary special
NAME_CONTRACT_STATUS		
Approved	10929	652074
Canceled	3099	191287
Refused	2971	179642
Unused offer	165	14899

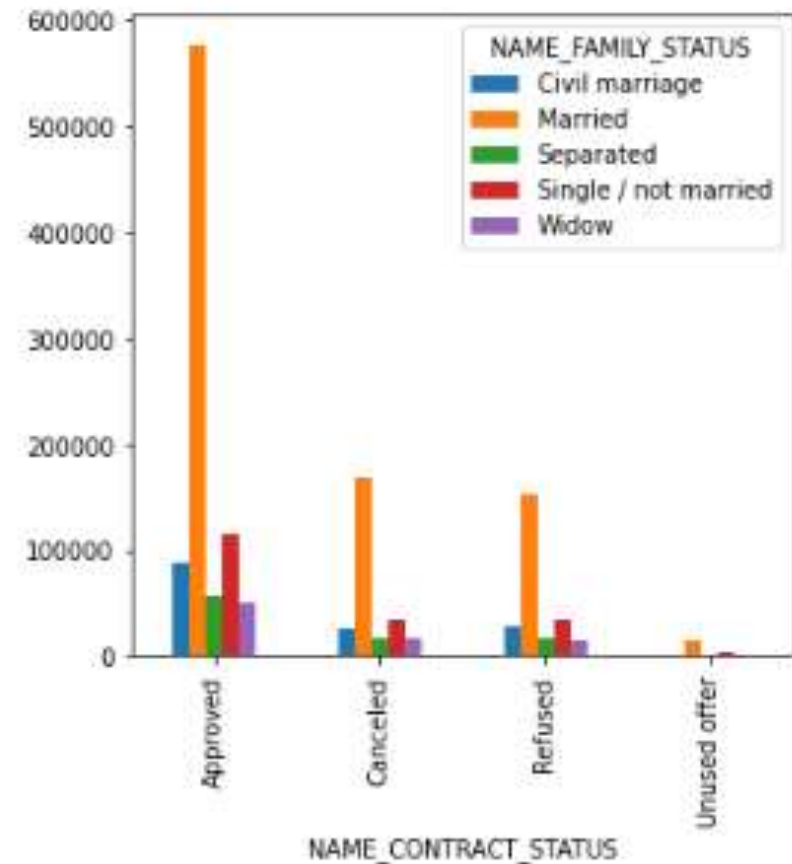




Highest number  
of loan approvals  
come from  
married clients.

NAME_FAMILY_STATUS	Civil marriage	Married	Separated
NAME_CONTRACT_STATUS			
Approved	86827	577137	56750
Canceled	26143	167233	16535
Refused	28226	152167	16453
Unused offer	1961	14373	1600

NAME_FAMILY_STATUS	Single / not married	Widow
NAME_CONTRACT_STATUS		
Approved	114880	50505
Canceled	33403	16127
Refused	34292	14252
Unused offer	4082	755

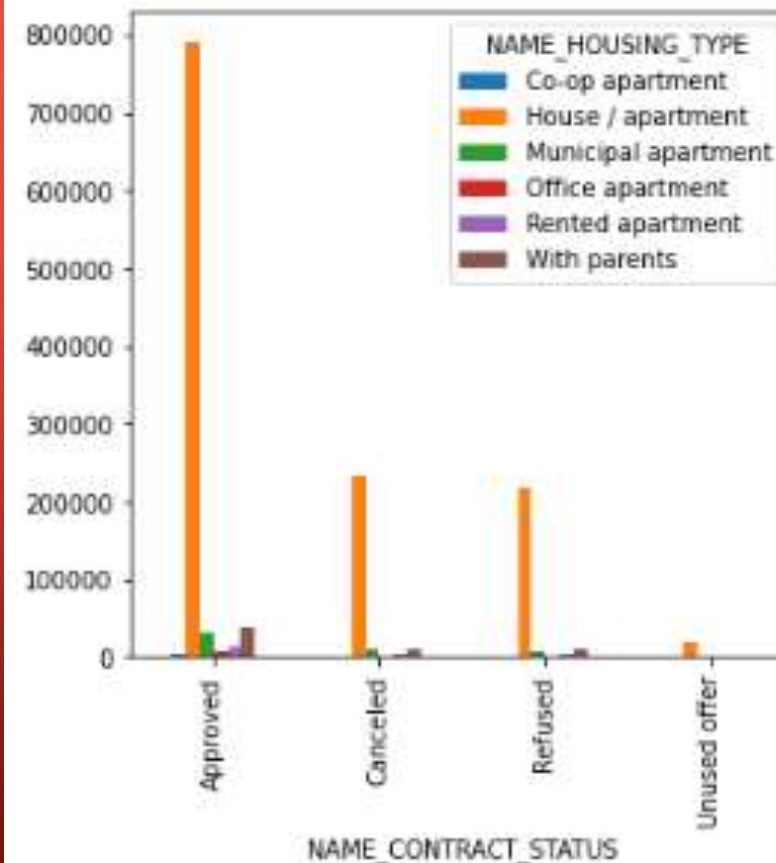




Clients, who have their own house or apartment have the most loan approvals because they have the power to mortgage their property.

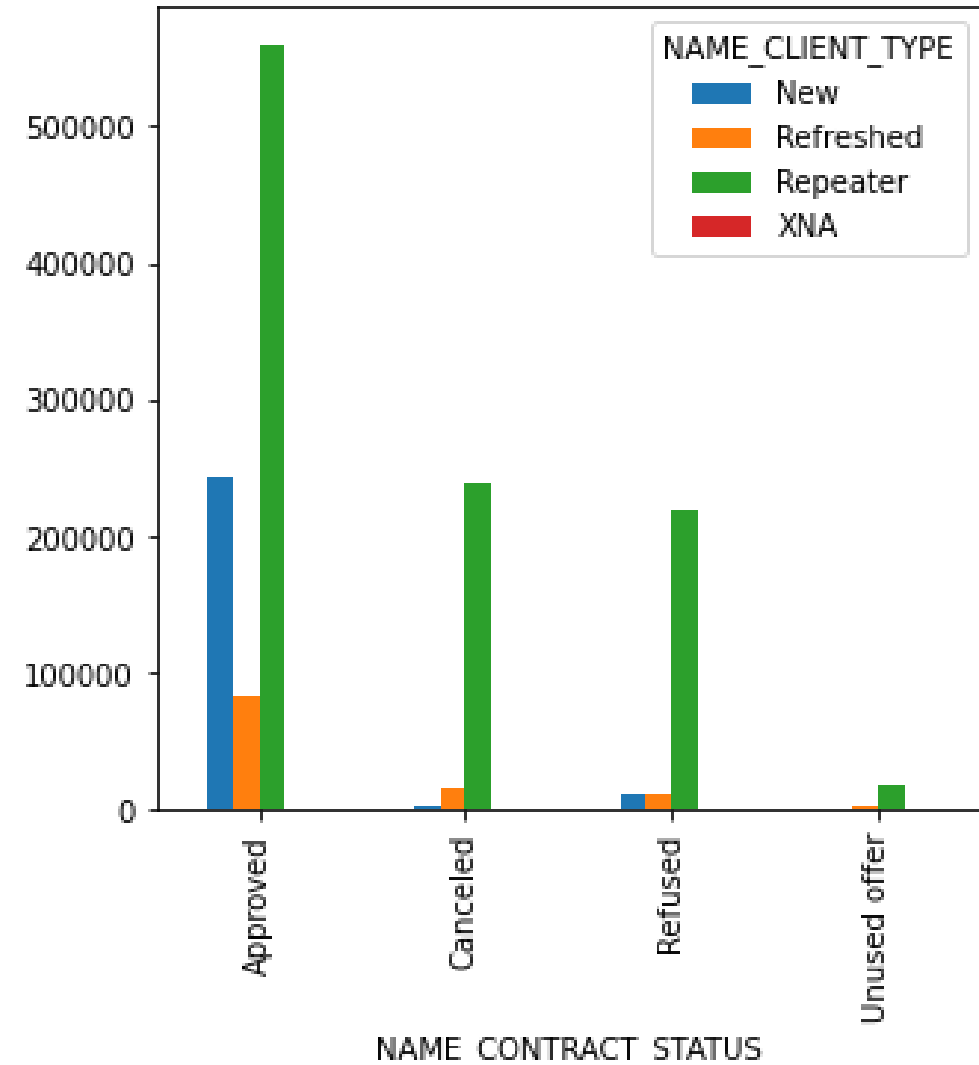
NAME_HOUSING_TYPE	Co-op apartment	House / apartment	Municipal apartment
NAME_CONTRACT_STATUS			
Approved	2788	791667	33138
Canceled	629	234120	9149
Refused	659	219301	8544
Unused offer	313	19864	702

NAME_HOUSING_TYPE	Office apartment	Rented apartment	With parents
NAME_CONTRACT_STATUS			
Approved	7319	12608	38579
Canceled	1926	3385	10232
Refused	2005	3514	11367
Unused offer	178	278	1436



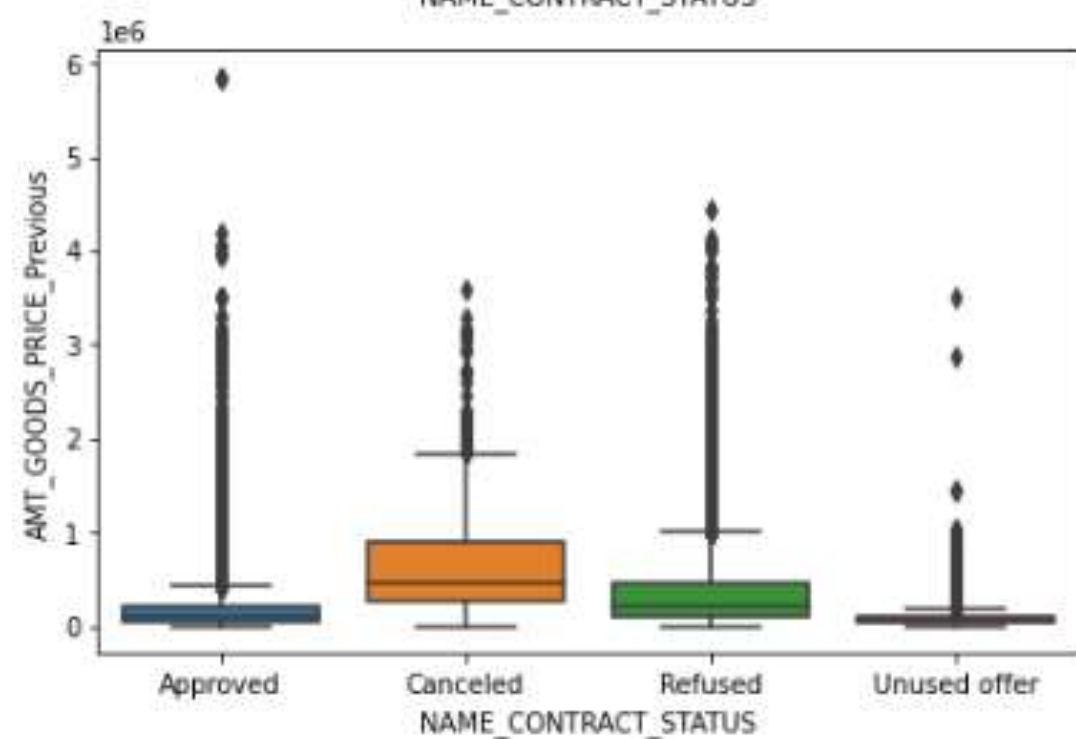
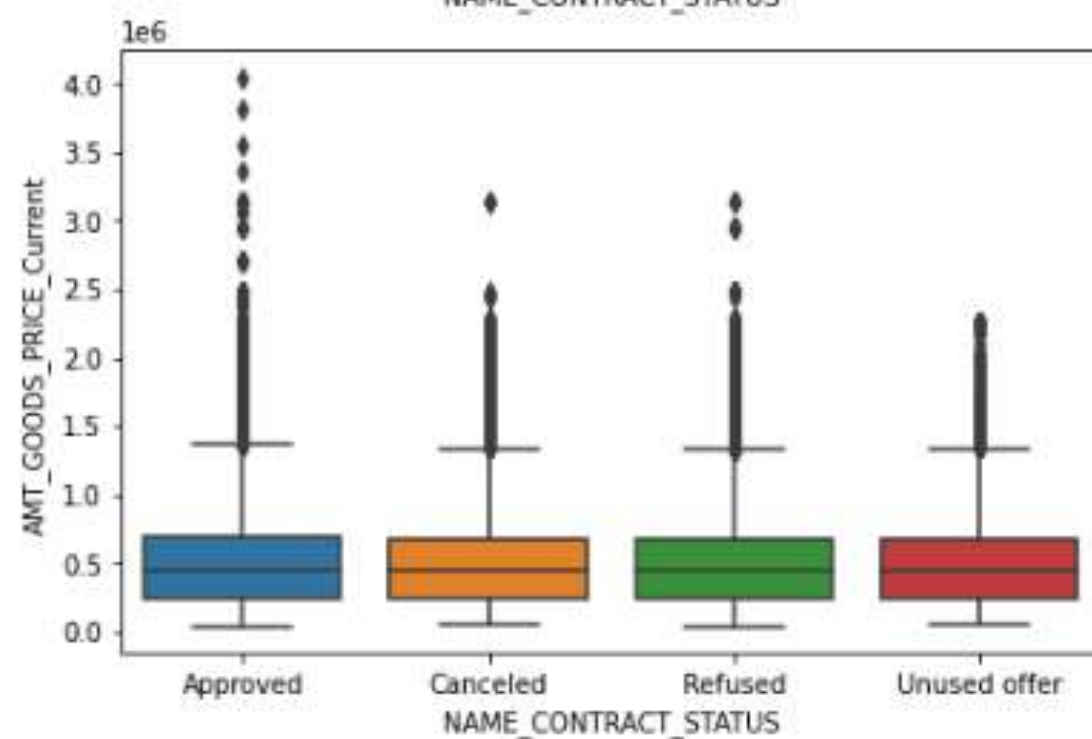
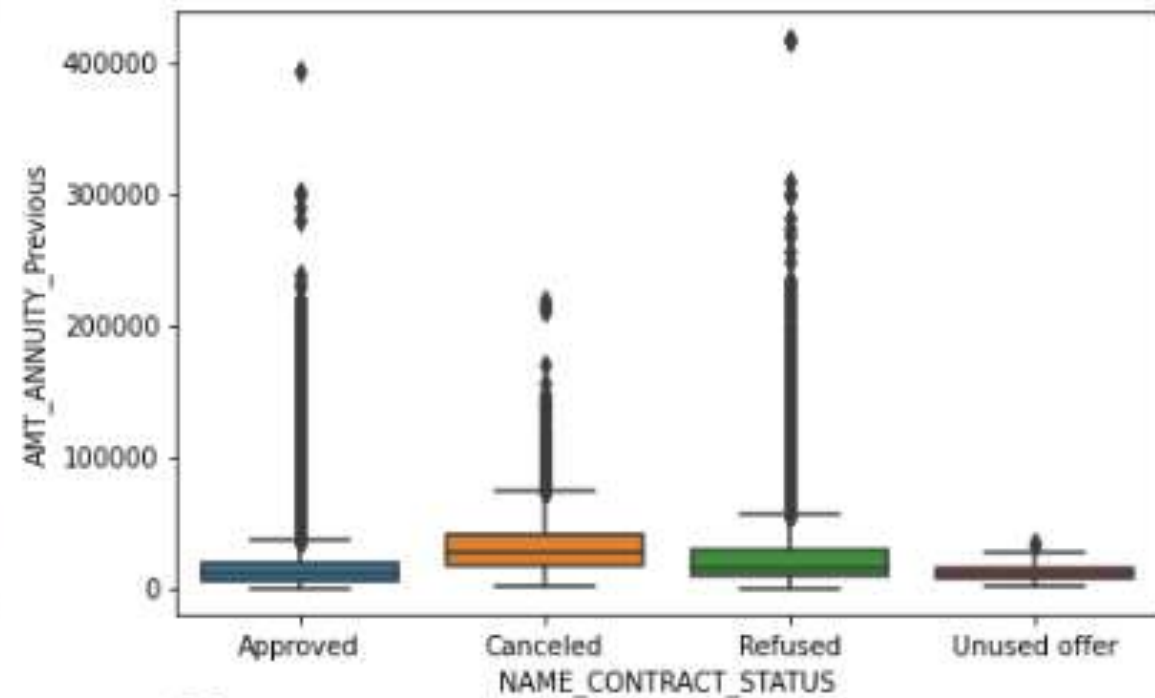
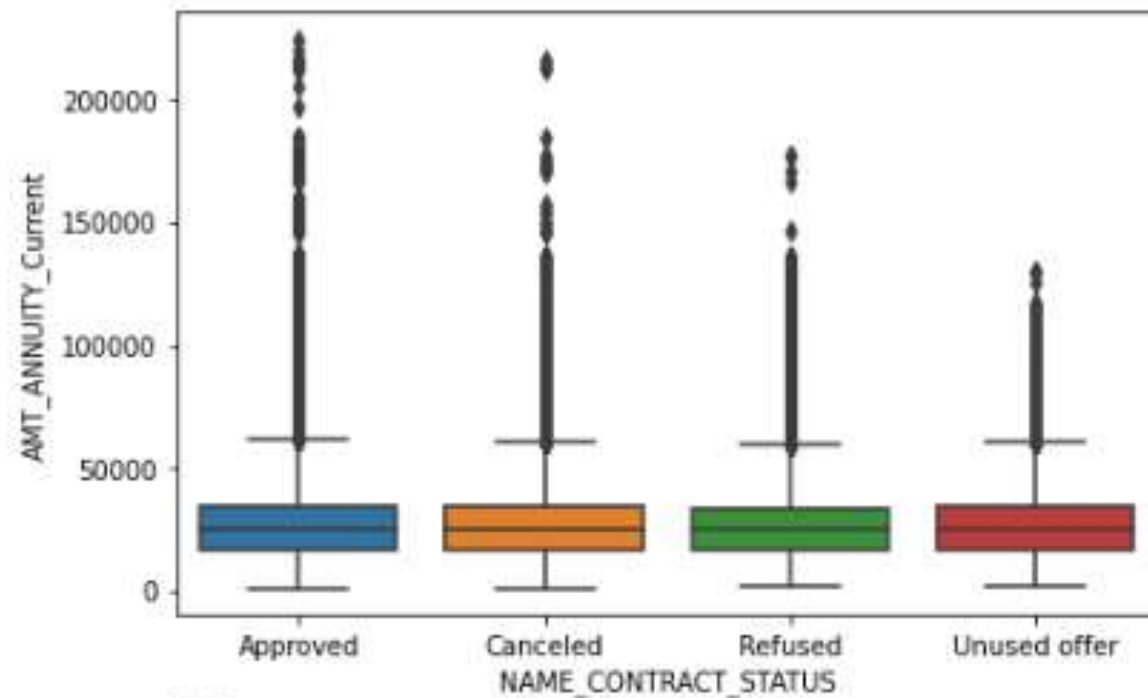
Client those who  
are repeating their  
loans got the  
most loans  
approved.

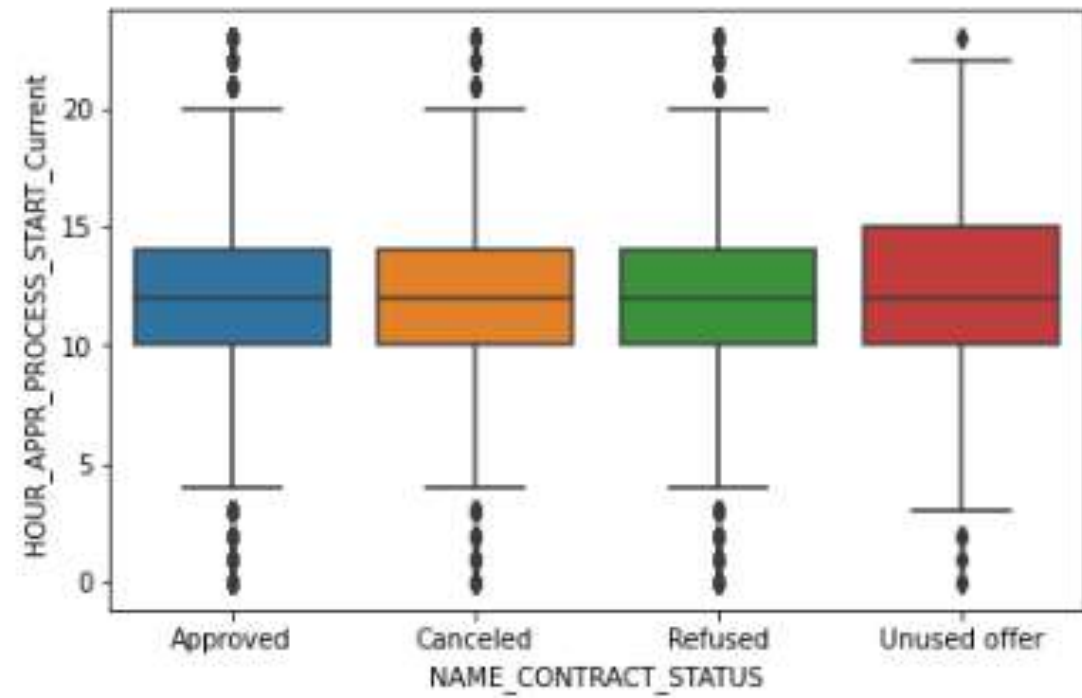
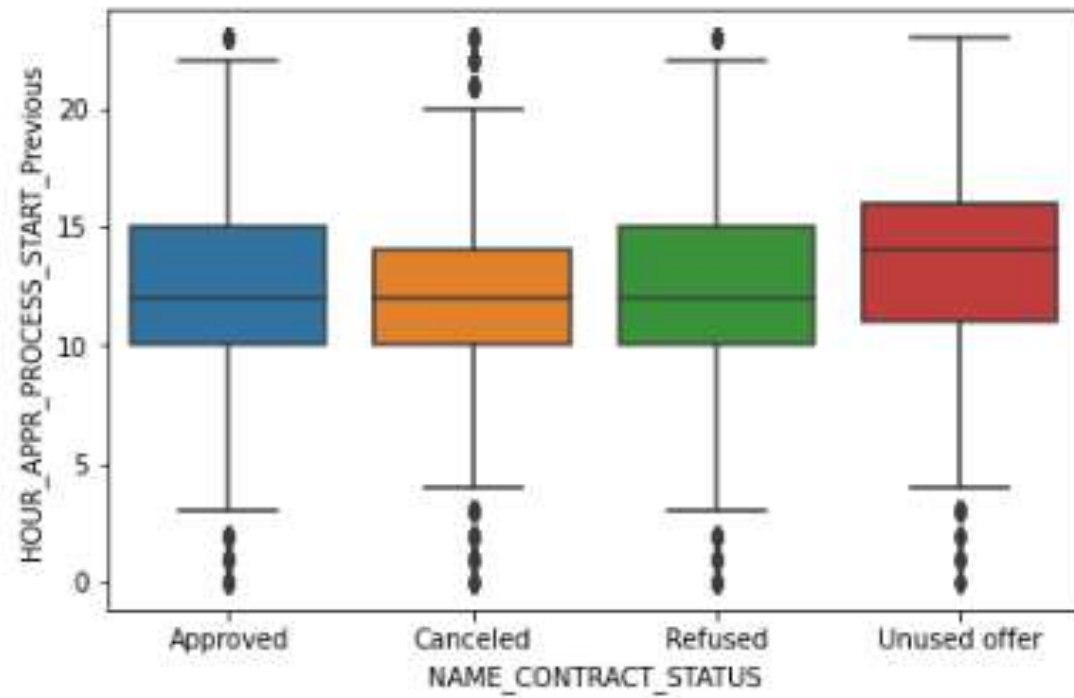
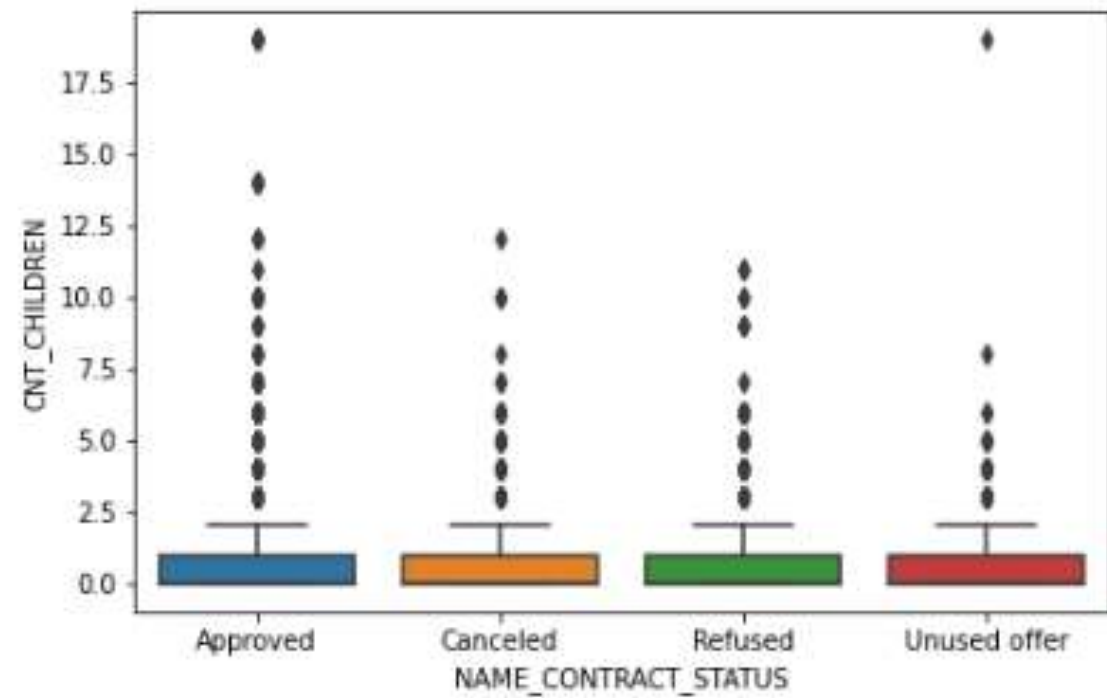
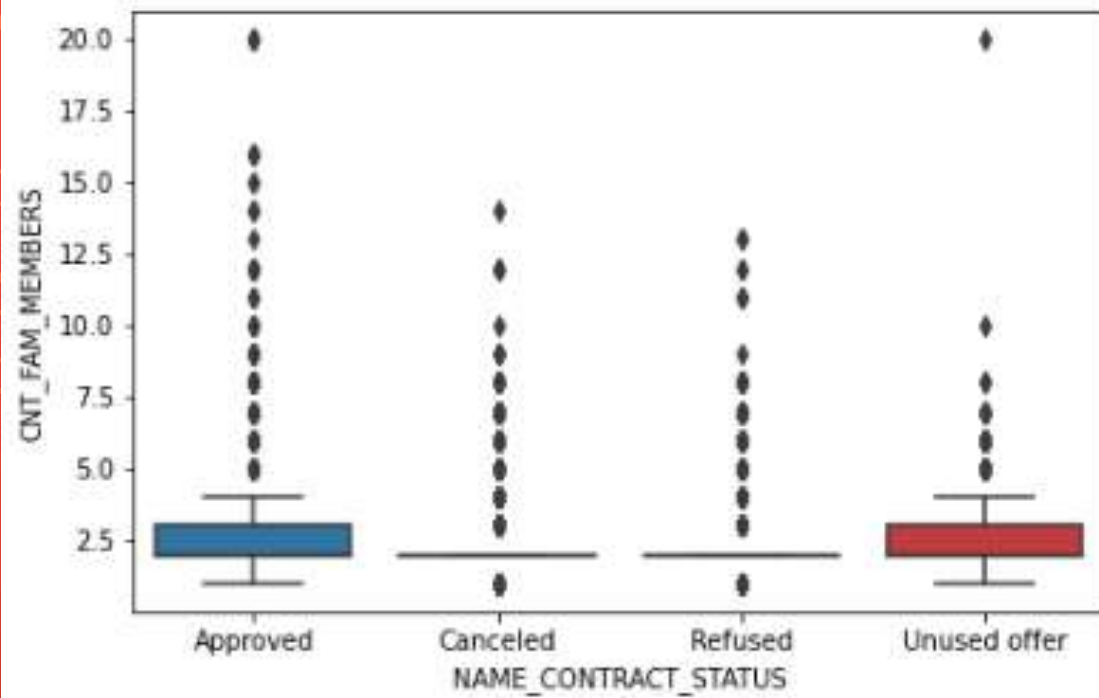
NAME_CLIENT_TYPE	New	Refreshed	Repeater	XNA
NAME_CONTRACT_STATUS				
Approved	242395	82891	560378	435
Canceled	2920	16104	239618	799
Refused	12358	12537	220215	280
Unused offer	1867	3404	17471	29

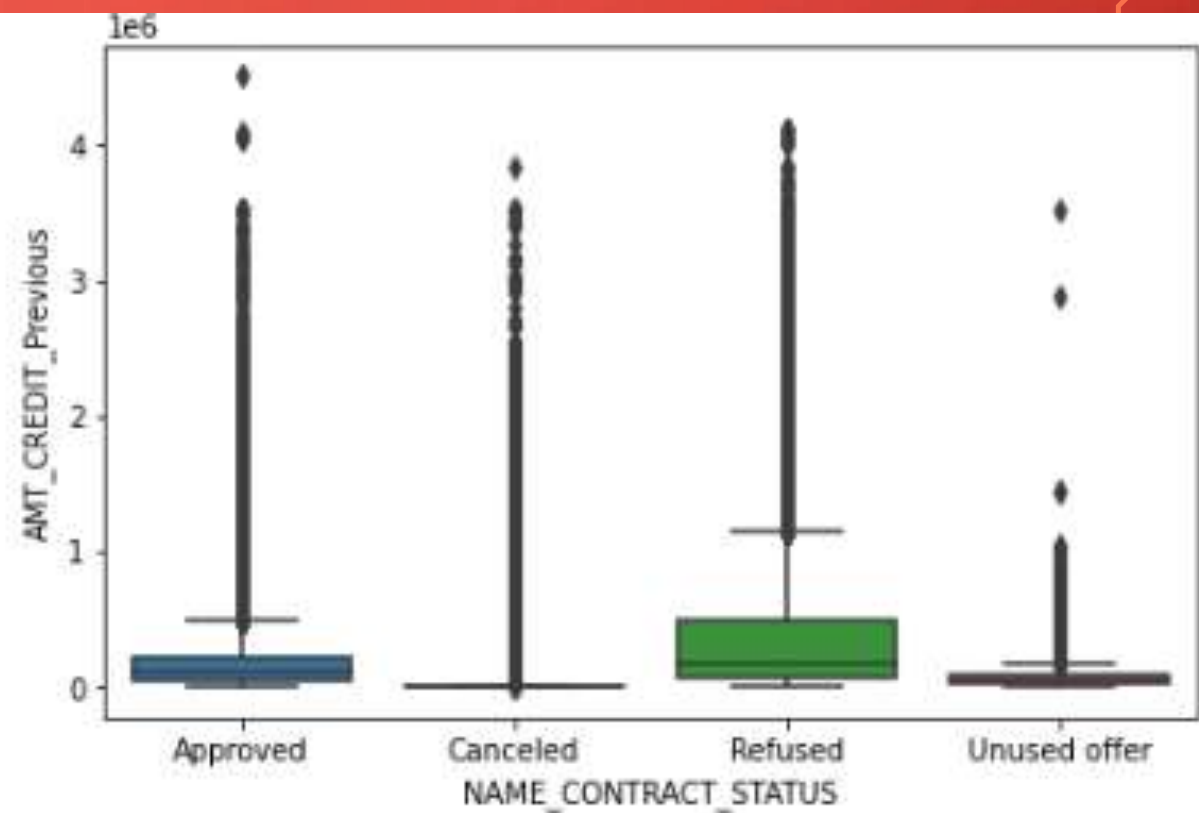
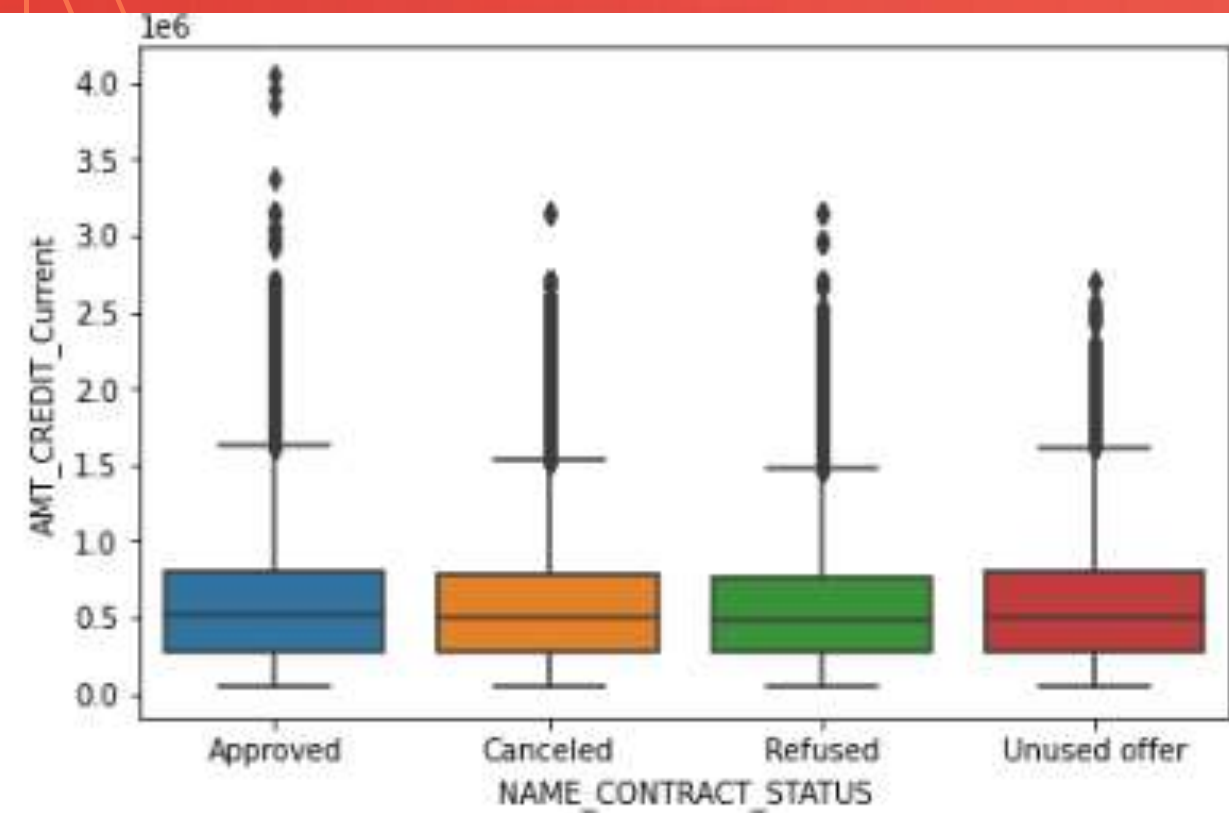


# BI-VARIATE CONTINUOUS PLOTS

From next slide we will analyze some of the bi-variate continuous variables of previous data.









## Insights

- AMT\_CREDIT\_Previous has highest refused cases and AMT\_CREDIT\_Current is similar for all 4 cases.
- Time spent in unused offer is higher as compared to other categories.
- So bank should reduce time spent on unused offer.
- Nuclear family(2-3 people in family) get highest approval.
- Previously most of the applications were cancelled or refused.
- But now Refused/Cancelled/Approved/Unused all four have similar situation for AMT\_GOODS\_PRICE.
- Previously most of the applications were cancelled or refused.
- But now Refused/Cancelled/Approved/Unused all four have similar situation for AMT\_ANNUITY.





# THANK YOU

MADE BY-

(KESHAV GUPTA)

31<sup>ST</sup> MAY 2022