

# **BANK LOAN CASE STUDY**

## **Final Project-2**

### **Description:**

Imagine you're a data analyst at a finance company that specializes in lending various types of loans to urban customers. Your company faces a challenge: some customers who don't have a sufficient credit history take advantage of this and default on their loans. Your task is to use Exploratory Data Analysis (EDA) to analyze patterns in the data and ensure that capable applicants are not rejected.

### **Problems:**

**When a customer applies for a loan, your company faces two risks:**

1. If the applicant can repay the loan but is not approved, the company loses business.
2. If the applicant cannot repay the loan and is approved, the company faces a financial loss.

The dataset you'll be working with contains information about loan applications. It includes two types of scenarios:

1. Customers with payment difficulties: These are customers who had a late payment of more than X days on at least one of the first Y installments of the loan.
2. All other cases: These are cases where the payment was made on time.

**When a customer applies for a loan, there are four possible outcomes:**

**Approved:** The company has approved the loan application.

**Cancelled:** The customer cancelled the application during the approval process.

**Refused:** The company rejected the loan.

**Unused Offer:** The loan was approved but the customer did not use it.

### **Business Objectives:**

The main aim of this project is to identify patterns that indicate if a customer will have difficulty paying their installments. This information can be used to make decisions such as denying the loan, reducing the amount of loan, or lending at a higher interest rate to risky applicants. The company wants to understand the key factors behind loan default so it can make better decisions about loan approval.

### **Approach:**

- Download the given dataset
- Clean the dataset.
- Analyse the task with Microsoft excel
- Use functions to find statistics.
- Use graphs and charts for better results.

**Tech Stack Used:** Microsoft Excel

## Insights:

### Data Analytics Tasks:

**A. Identify Missing Data and Deal with it Appropriately:** As a data analyst, you come across missing data in the loan application dataset. It is essential to handle missing data effectively to ensure the accuracy of the analysis.

**Task:** Identify the missing data in the dataset and decide on an appropriate method to deal with it using Excel built-in functions and features.

**B. Identify Outliers in the Dataset:** Outliers can significantly impact the analysis and distort the results. You need to identify outliers in the loan application dataset.

**Task:** Detect and identify outliers in the dataset using Excel statistical functions and features, focusing on numerical variables.

**C. Analyze Data Imbalance:** Data imbalance can affect the accuracy of the analysis, especially for binary classification problems. Understanding the data distribution is crucial for building reliable models.

**Task:** Determine if there is data imbalance in the loan application dataset and calculate the ratio of data imbalance using Excel functions.

### **D. Perform Univariate, Segmented Univariate, and Bivariate**

**Analysis:** To gain insights into the driving factors of loan default, it is important to conduct various analyses on consumer and loan attributes.

**Task:** Perform univariate analysis to understand the distribution of individual variables, segmented univariate analysis to compare variable distributions for different scenarios, and bivariate analysis to explore relationships between variables and the target variable using Excel functions and features.

## E. Identify Top Correlations for Different Scenarios:

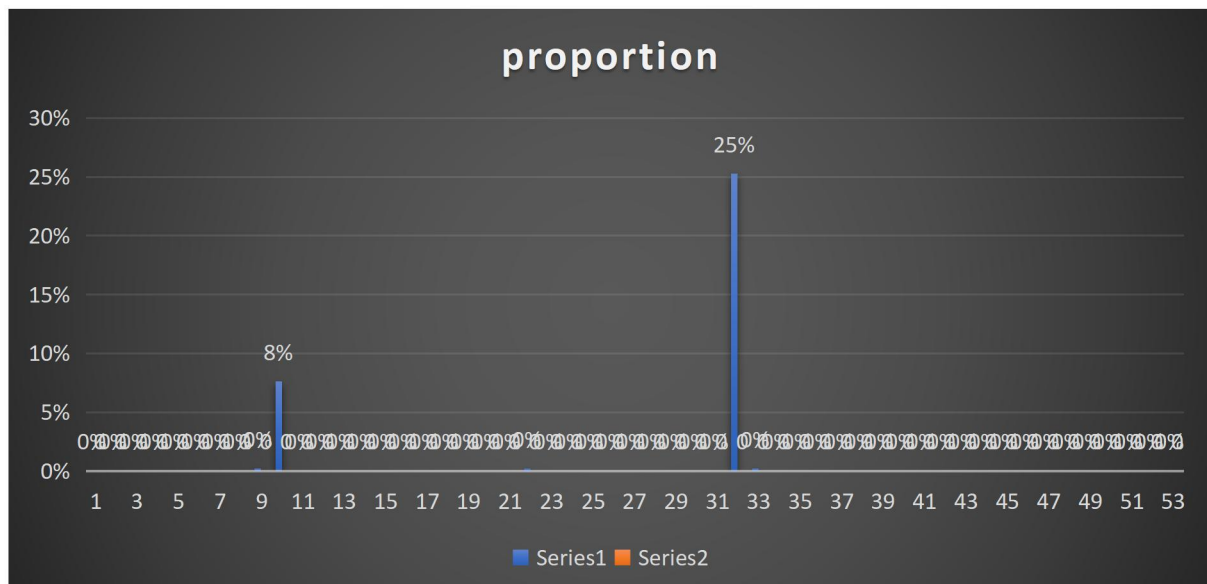
Understanding the correlation between variables and the target variable can provide insights into strong indicators of loan default.

**Task:** Segment the dataset based on different scenarios (e.g., clients with payment difficulties and all other cases) and identify the top correlations for each segmented data using Excel functions.

### Results:

#### 1. Identify Missing Data and Deal with it Appropriately:

- To handle missing data we need to count blank cells in each column using COUNTBLANK(range) function.
- After we need to find percentage of blank cells and to delete columns which are 30% above.
- Delete text columns.
- After deleting the unwanted columns and replace the numeric column of missing data with median using MEDIAN(range) function.
- I have provided statistics of 30% missing data.



	A	B	C	D	E	F	G	H	I	J	K	L
percentage of blank cells	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
median	129076	0	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	0	145800	514777.5	24939	
boolean	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	
	SK_ID_CURR	TARGET	NAME_CONTRACT_TYPE	CODE_GENDER	FLAG_OWN_CAR	FLAG_OWN_REALTY	CNT_CHILDREN	AMT_INCOME_TOTAL	AMT_CREDIT	AMT_ANNUITY	AMT_GOODS	
1	100002	1	Cash loans	M	N	Y	0	202500	406597.5	24700.5		
2	100003	0	Cash loans	F	N	N	0	270000	1293502.5	35698.5		
3	100004	0	Revolving loans	M	Y	Y	0	67500	135000	6750		
4	100006	0	Cash loans	F	N	Y	0	135000	312682.5	29686.5		
5	100007	0	Cash loans	M	N	Y	0	121500	513000	21865.5		
6	100008	0	Cash loans	M	N	Y	0	99000	480495.5	27517.5		
7	100009	0	Cash loans	F	Y	Y	1	171000	1560726	41301		
8	100010	0	Cash loans	M	Y	Y	0	360000	1530000	42075		
9	100011	0	Cash loans	F	N	Y	0	112500	1019610	33826.5		
10	100012	0	Revolving loans	M	N	Y	0	135000	405000	20250		
11	100014	0	Cash loans	F	N	Y	1	112500	652500	21177		
12	100015	0	Cash loans	F	N	Y	0	38419.155	148365	10678.5		
13	100016	0	Cash loans	F	N	Y	0	67500	80865	5881.5		
14	100017	0	Cash loans	M	Y	N	1	225000	918468	28966.5		
15	100018	0	Cash loans	F	N	Y	0	189000	773680.5	32778		
16	100019	0	Cash loans	M	Y	Y	0	157500	299772	20160		
17	100020	0	Cash loans	M	N	N	0	108000	509602.5	26149.5		
18	100021	0	Revolving loans	F	N	Y	1	81000	270000	13500		
19	100022	0	Revolving loans	F	N	Y	0	112500	157500	7875		
20	100023	0	Cash loans	F	N	Y	1	90000	544491	17563.5		
21	100024	0	Revolving loans	M	Y	Y	0	135000	427500	21375		
22	100025	0	Cash loans	F	Y	Y	1	202500	1132573.5	37561.5		

Highlighted columns are unwanted and also removed to handle data.

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PasteCutCopyFormat Painter		Calibri11A <sup>+</sup> Wrap Text			General%		Conditional FormattingFormat as TableCell Styles		InsertDeleteFormat		AutoSumFillClear		Sort & FilterFind & Select		Add-ins			
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TRUE		FALSE		FALSE		FALSE		FALSE										
NAME_TYPE_SUITE		NAME_INCOME_TYPE		NAME_EDUCATION_TYPE		NAME_FAMILY_STATUS		NAME_HOUSING_TYPE		REGION_POPULATION_RELATIVE		DAYS_BIRTH		DAYS_EMPLOYED		DAYS_REGISTRATION		
DAYS_ID																		
Unaccompanied		Working		Secondary / secondary special		Single / not married		House / apartment		0.018801		-9461		-637		-3648		
Family		State servant		Higher education		Married		House / apartment		0.003541		-16765		-1188		-1186		
Unaccompanied		Working		Secondary / secondary special		Single / not married		House / apartment		0.010032		-19046		-225		-4260		
Unaccompanied		Working		Secondary / secondary special		Civil marriage		House / apartment		0.008019		-19005		-3039		-9833		
Unaccompanied		Working		Secondary / secondary special		Single / not married		House / apartment		0.028663		-19932		-3038		-4311		
Spouse, partner		State servant		Secondary / secondary special		Married		House / apartment		0.035792		-16941		-1588		-4970		
Unaccompanied		Commercial associate		Higher education		Married		House / apartment		0.035792		-13778		-3130		-1213		
Unaccompanied		State servant		Higher education		Married		House / apartment		0.003122		-18850		-449		-4597		
Children		Pensioner		Secondary / secondary special		Married		House / apartment		0.018634		-20099		365243		-7427		
Unaccompanied		Working		Secondary / secondary special		Single / not married		House / apartment		0.019689		-14469		-2019		-14437		
Unaccompanied		Working		Higher education		Married		House / apartment		0.0228		-10197		-679		-4427		
Children		Pensioner		Secondary / secondary special		Married		House / apartment		0.015221		-20417		365243		-5246		
Unaccompanied		Working		Secondary / secondary special		Married		House / apartment		0.031329		-13439		-2717		-311		
Unaccompanied		Working		Secondary / secondary special		Married		House / apartment		0.016612		-14086		-3028		-643		
Unaccompanied		Working		Secondary / secondary special		Married		House / apartment		0.010006		-14583		-203		-615		
Family		Working		Secondary / secondary special		Single / not married		Rented apartment		0.020713		-8728		-1157		-3494		
Unaccompanied		Working		Secondary / secondary special		Married		House / apartment		0.018634		-12931		-1317		-6392		
Unaccompanied		Working		Secondary / secondary special		Married		House / apartment		0.010966		-9776		-191		-4143		
Other_A		Working		Secondary / secondary special		Widow		House / apartment		0.04622		-17718		-7804		-8751		
Unaccompanied		State servant		Higher education		Single / not married		House / apartment		0.015221		-11348		-2038		-1021		
Unaccompanied		Working		Secondary / secondary special		Married		House / apartment		0.015221		-18252		-4286		-298		
Unaccompanied		Commercial associate		Secondary / secondary special		Married		House / apartment		0.025164		-14615		-1652		-2299		
Unaccompanied		Working		Secondary / secondary special		Married		House / apartment		0.020713		-8728		-1157		-3494		
application_data											Sheet1							

SK_ID_CURR	TARGET	CODE_GENDER	FLAG_OWN_CAR	FLAG_OWN_REALTY	CNT_CHILDREN	AMT_INCOME_TOTAL	AMT_CREDIT	AMT_ANNUITY	AMT_GOODS_PRICE	REGION_POPULATION_RELATIVE	DAYS_BIR
100003	0	F	N	N	0	270000	1293502.5	35698.5	1129500	0.003541	-1
100004	0	M	Y	Y	0	67500	135000	6750	135000	0.010032	-1
100006	0	F	N	Y	0	135000	312682.5	29686.5	297000	0.008019	-1
100007	0	M	N	Y	0	121500	513000	21865.5	513000	0.028663	-1
100008	0	M	N	Y	0	99000	490495.5	27517.5	454500	0.035792	-1
100009	0	F	Y	Y	1	171000	1560726	41301	1395000	0.035792	-1
100010	0	M	Y	Y	0	360000	1530000	42075	1530000	0.003122	-1
100011	0	F	N	Y	0	112500	1019610	33826.5	913500	0.018634	-2
100012	0	M	N	Y	0	135000	405000	20250	405000	0.019689	-1
100014	0	F	N	Y	1	112500	652500	21177	652500	0.0228	-1
100015	0	F	N	Y	0	38419.155	148365	10678.5	135000	0.015221	-2
100016	0	F	N	Y	0	67500	80865	5881.5	67500	0.031329	-1
100017	0	M	Y	N	1	225000	918468	28966.5	697500	0.016612	-1
100018	0	F	N	Y	0	189000	773680.5	32778	679500	0.010006	-1
100019	0	M	Y	Y	0	157500	299772	20160	247500	0.020713	-1
100020	0	M	N	N	0	108000	509602.5	26149.5	387000	0.018634	-1
100021	0	F	N	Y	1	81000	270000	13500	270000	0.010966	-1
100022	0	F	N	Y	0	112500	157500	7875	157500	0.04622	-1
100023	0	F	N	Y	1	90000	544491	17563.5	454500	0.015221	-1
100024	0	M	Y	Y	0	135000	427500	21375	427500	0.015221	-1
100025	0	F	Y	Y	1	202500	1132573.5	37561.5	927000	0.025164	-1
100026	0	F	N	N	1	450000	497520	32521.5	450000	0.020713	-1
100027	0	F	N	Y	0	83250	239850	23850	225000	0.006296	-2
100029	0	M	Y	N	2	135000	247500	12703.5	247500	0.026392	-1
100030	0	F	N	Y	0	90000	225000	11074.5	225000	0.028663	-1
100032	0	M	N	Y	1	112500	327024	23827.5	270000	0.019101	-1

## Final Data Set

I have attached the handling of missing datasets and final dataset. Full view of excel sheet is provided in google drive link.

## 2. Identify Outliers in the Dataset:

- Find Quartile, IQR and conditional format.
- Visualize data of outliers using scatter plot.

## Functions performed:

Quartile 1 = `Quartile.inc(range,value)`

Quartile 2 = `Quartile.inc(range,value)`

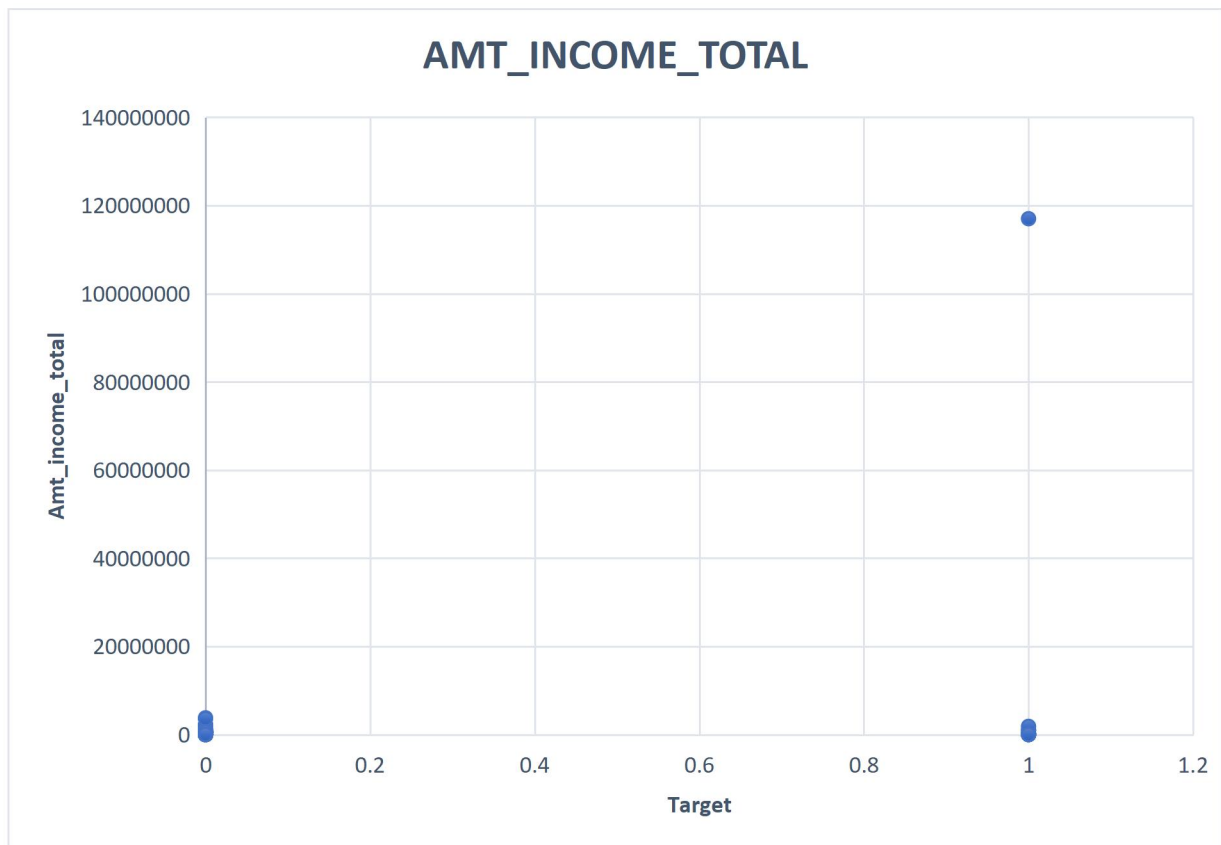
IQR = Quartile 1 – Quartile 2

Upper limit =  $BD4 + (1.5 * BD5)$

$$\text{Lower limit} = \text{BD3} - (1.5 * \text{BD5})$$

### Function results:

Quartile 1	112500
Quartile 3	202500
IQR	90000
Upper limit	337500
lower limit	-22500



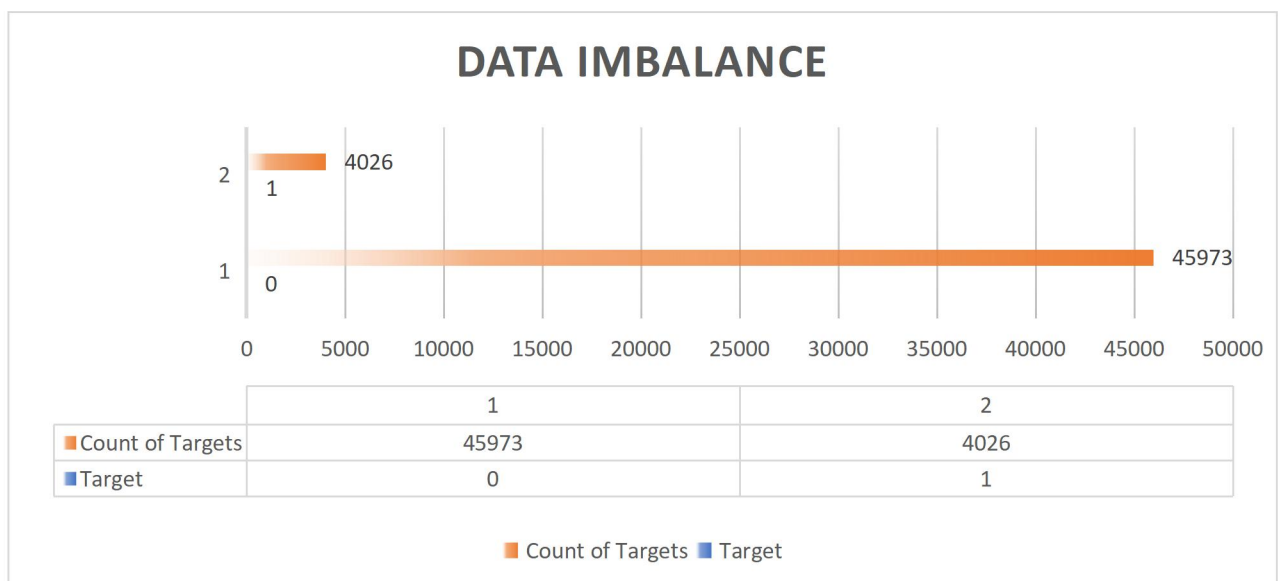




### 3. Analyze Data Imbalance:

- I have selected Target column to find data imbalance.
- Using pivot table analysis count no.of classes and total.
- To count no.of classes use COUNTIF(range,criteria) function.
- To sum use Sum(range) function.
- Visualize data imbalance frequency using bar chart.

Target	Count of Targets	ratio
0	45973	11.42
1	4026	
total	49999	



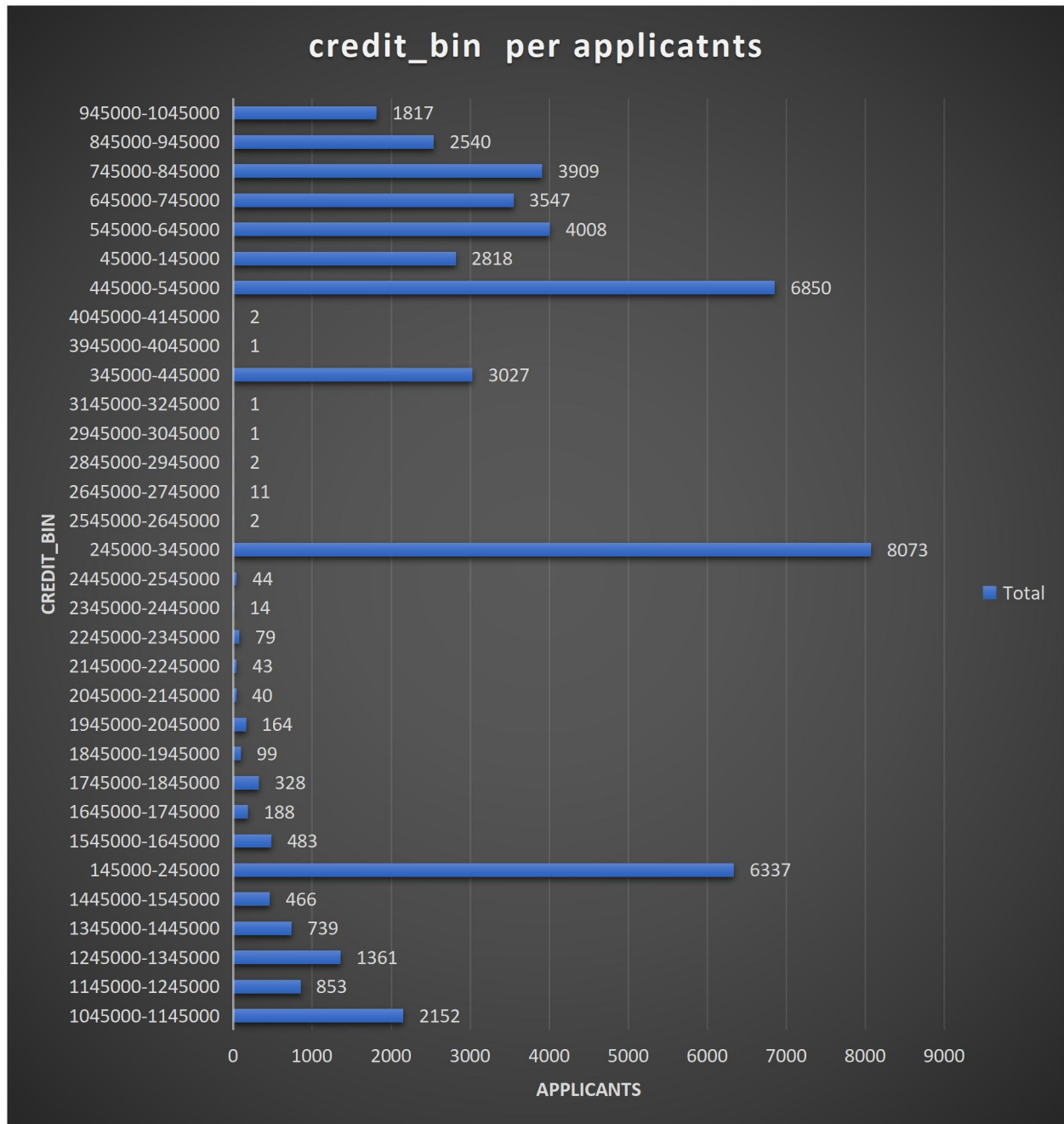
#### 4. Perform Univariate, Segmented Univariate, and Bivariate Analysis:

- I have analysed univariate analysis for individual variables using pivot table and count function.
- I have analysed bivariate analysis to explore relationships between variables and the target variables using pivot table analysis and count function. I have analysed the target for each variables.
- I have analysed segmented analysis to compare variable distributions for different scenarios.

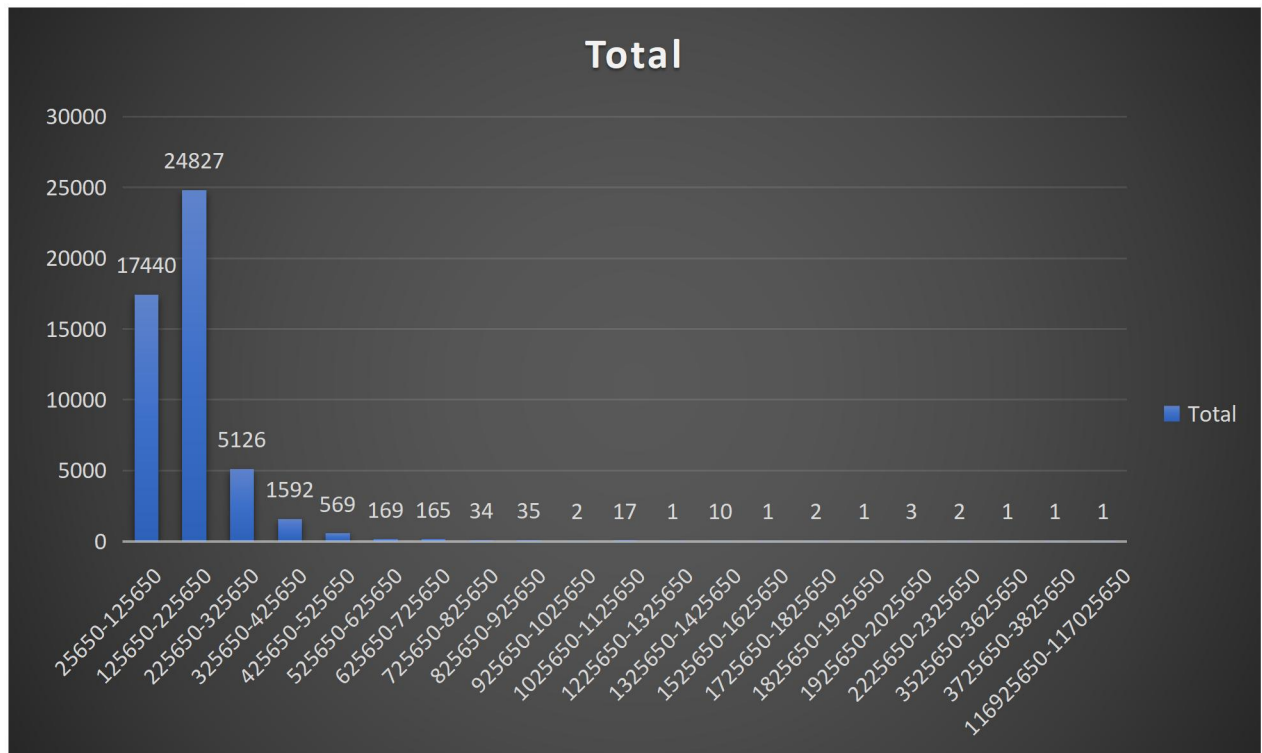
#### Univariate analysis:

Credit-bin	Count of AMT_CREDIT
1045000-1145000	2152
1145000-1245000	853
1245000-1345000	1361
1345000-1445000	739
1445000-1545000	466
145000-245000	6337
1545000-1645000	483
1645000-1745000	188
1745000-1845000	328
1845000-1945000	99
1945000-2045000	164
2045000-2145000	40
2145000-2245000	43
2245000-2345000	79
2345000-2445000	14
2445000-2545000	44
245000-345000	8073
2545000-2645000	2
2645000-2745000	11
2845000-2945000	2
2945000-3045000	1
3145000-3245000	1
345000-445000	3027
3945000-4045000	1
4045000-4145000	2
445000-545000	6850
45000-145000	2818
545000-645000	4008
645000-745000	3547
745000-845000	3909

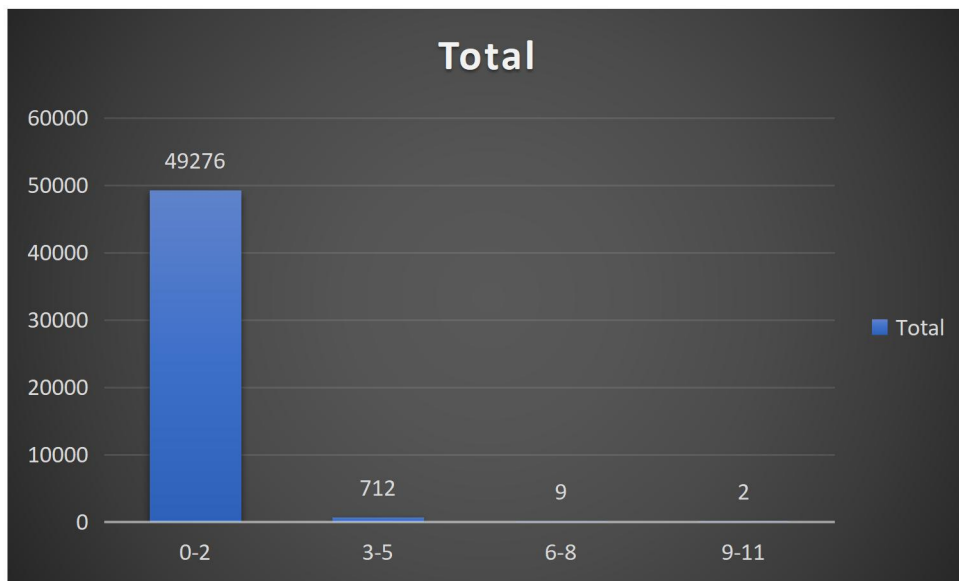
845000-945000	2540
945000-1045000	1817
<b>Grand Total</b>	<b>49999</b>



income bin	Count of AMT_INCOME_TOTAL
25650-125650	17440
125650-225650	24827
225650-325650	5126
325650-425650	1592
425650-525650	569
525650-625650	169
625650-725650	165
725650-825650	34
825650-925650	35
925650-1025650	2
1025650-1125650	17
1225650-1325650	1
1325650-1425650	10
1525650-1625650	1
1725650-1825650	2
1825650-1925650	1
1925650-2025650	3
2225650-2325650	2
3525650-3625650	1
3725650-3825650	1
116925650-117025650	1
<b>Grand Total</b>	<b>49999</b>



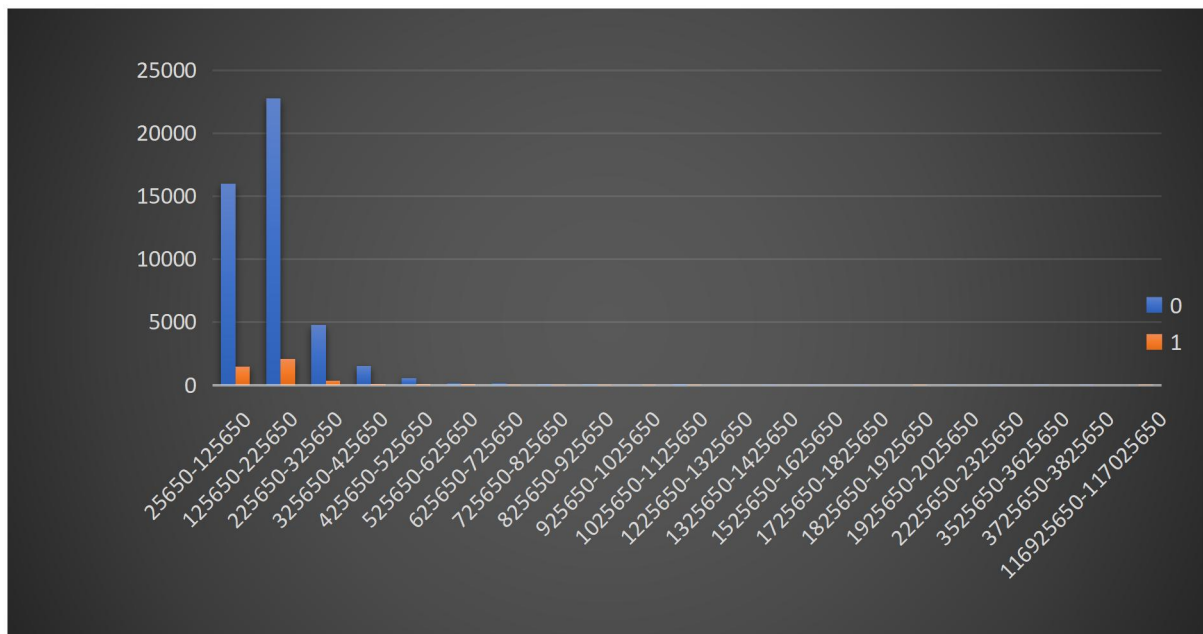
CNT_children	Count of CNT_CHILDREN
0-2	49276
3-5	712
6-8	9
9-11	2
<b>Grand Total</b>	<b>49999</b>



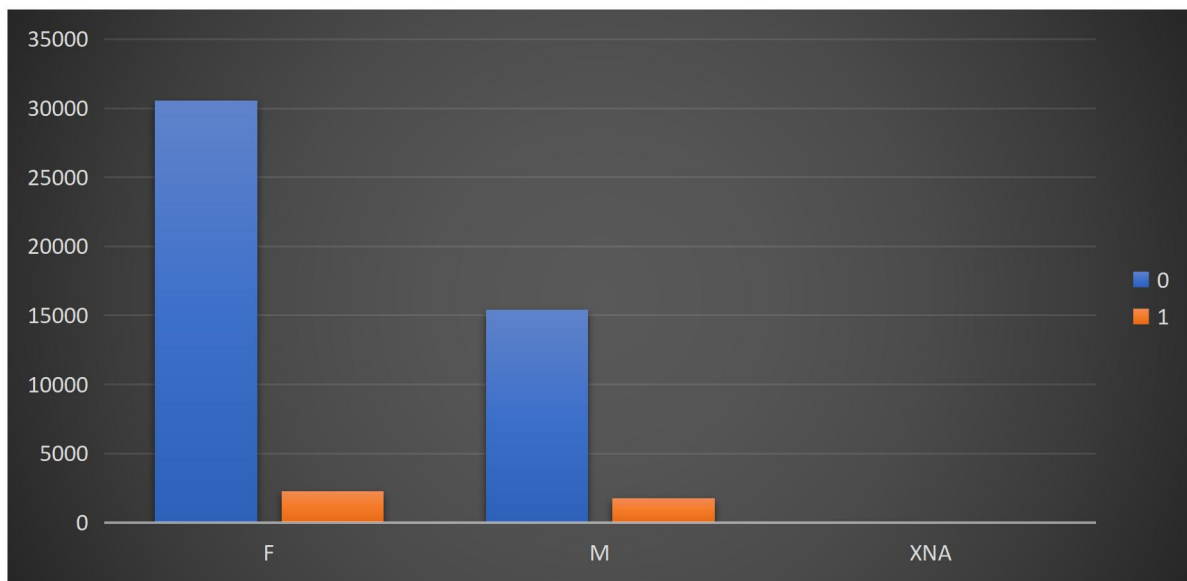
## Bivariate Analysis:

Count of TARGET	Column Labels		Grand Total
Row Labels	0	1	
25650-125650	15975	1465	17440
125650-225650	22768	2059	24827
225650-325650	4794	332	5126
325650-425650	1494	98	1592
425650-525650	528	41	569
525650-625650	155	14	169
625650-725650	155	10	165
725650-825650	32	2	34
825650-925650	34	1	35
925650-1025650	1	1	2
1025650-1125650	16	1	17
1225650-1325650	1		1

1325650-			
1425650	10		10
1525650-			
1625650	1		1
1725650-			
1825650	2		2
1825650-			
1925650		1	1
1925650-			
2025650	3		3
2225650-			
2325650	2		2
3525650-			
3625650	1		1
3725650-			
3825650	1		1
116925650-117025650		1	1
<b>Grand Total</b>	<b>45973</b>	<b>4026</b>	<b>49999</b>

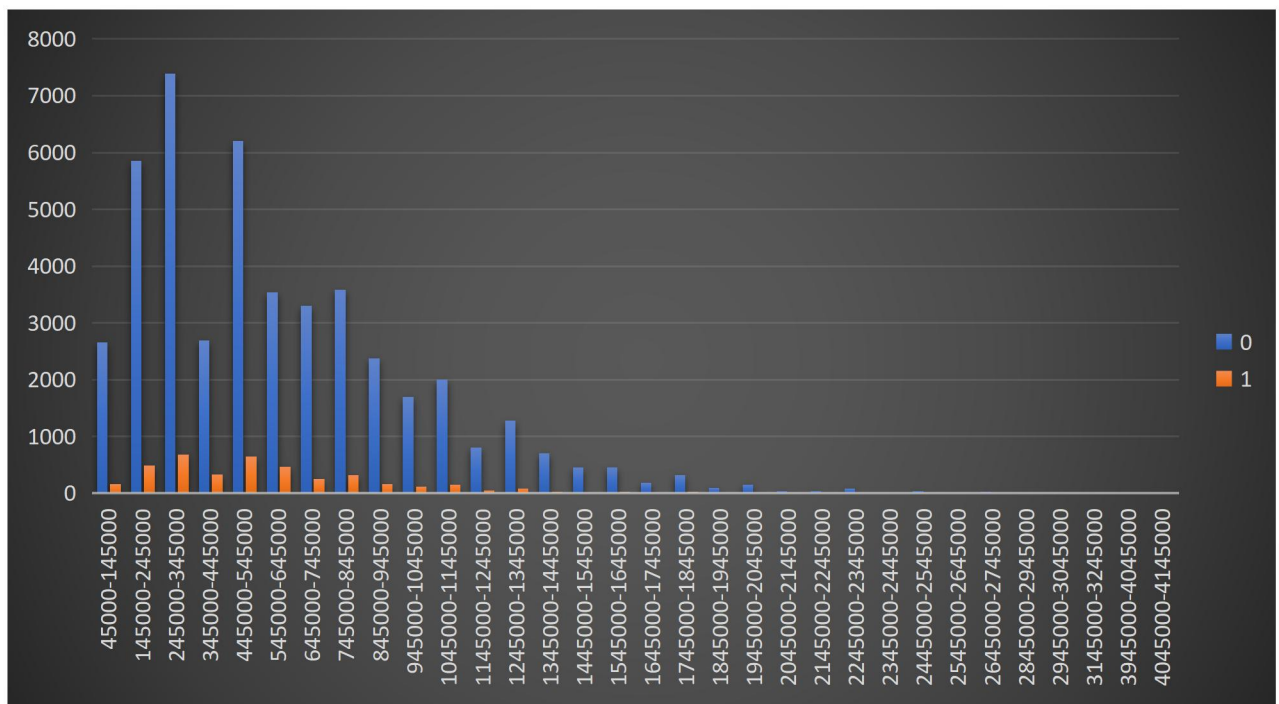


Count of TARGET	Column Labels		
Row Labels	0	1	Grand Total
F	30559	2264	32823
M	15412	1762	17174
XNA	2		2
<b>Grand Total</b>	<b>45973</b>	<b>4026</b>	<b>49999</b>



Count of TARGET	Column Labels		Grand Total
	0	1	
Row Labels			
45000-145000	2654	164	2818
145000-245000	5850	487	6337
245000-345000	7388	685	8073
345000-445000	2697	330	3027
445000-545000	6207	643	6850
545000-645000	3537	471	4008
645000-745000	3300	247	3547
745000-845000	3585	324	3909
845000-945000	2375	165	2540
945000-1045000	1698	119	1817
1045000-1145000	1999	153	2152
1145000-1245000	805	48	853
1245000-1345000	1283	78	1361
1345000-1445000	708	31	739
1445000-1545000	451	15	466
1545000-1645000	457	26	483
1645000-1745000	179	9	188
1745000-1845000	317	11	328

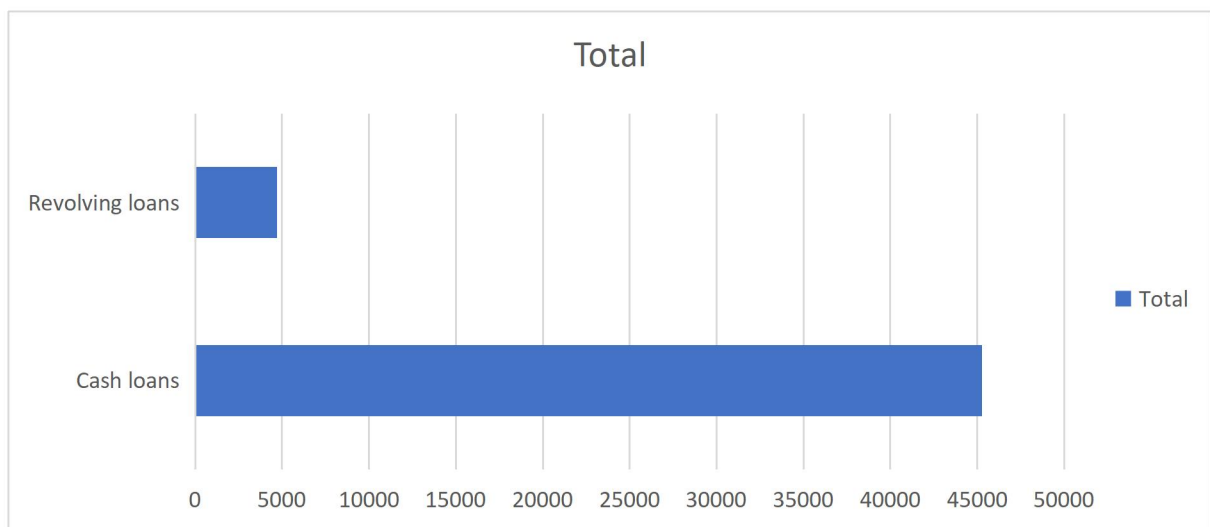
1845000			
1845000-			
1945000	94	5	99
1945000-			
2045000	155	9	164
2045000-			
2145000	39	1	40
2145000-			
2245000	41	2	43
2245000-			
2345000	79		79
2345000-			
2445000	13	1	14
2445000-			
2545000	43	1	44
2545000-			
2645000	2		2
2645000-			
2745000	11		11
2845000-			
2945000	2		2
2945000-			
3045000		1	1
3145000-			
3245000	1		1
3945000-			
4045000	1		1
4045000-			
4145000	2		2
<b>Grand Total</b>	<b>45973</b>	<b>4026</b>	<b>49999</b>



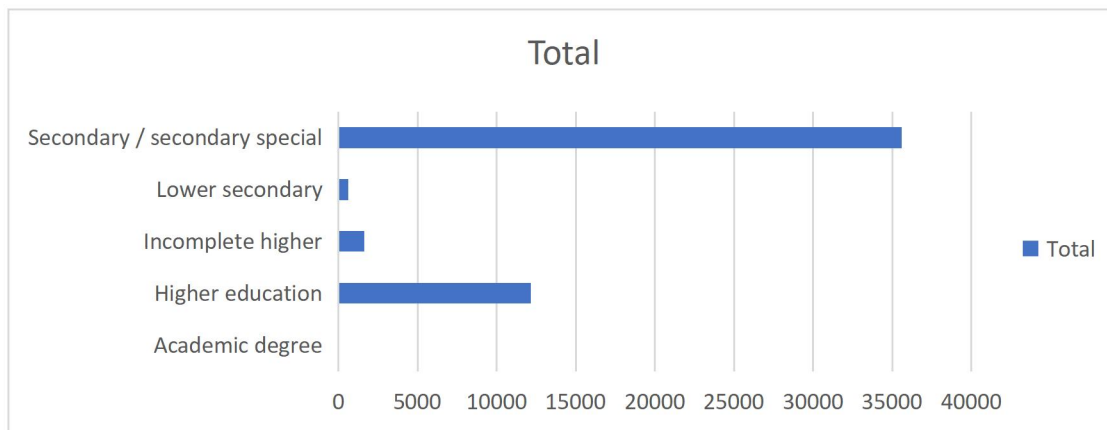


## Segmented Analysis:

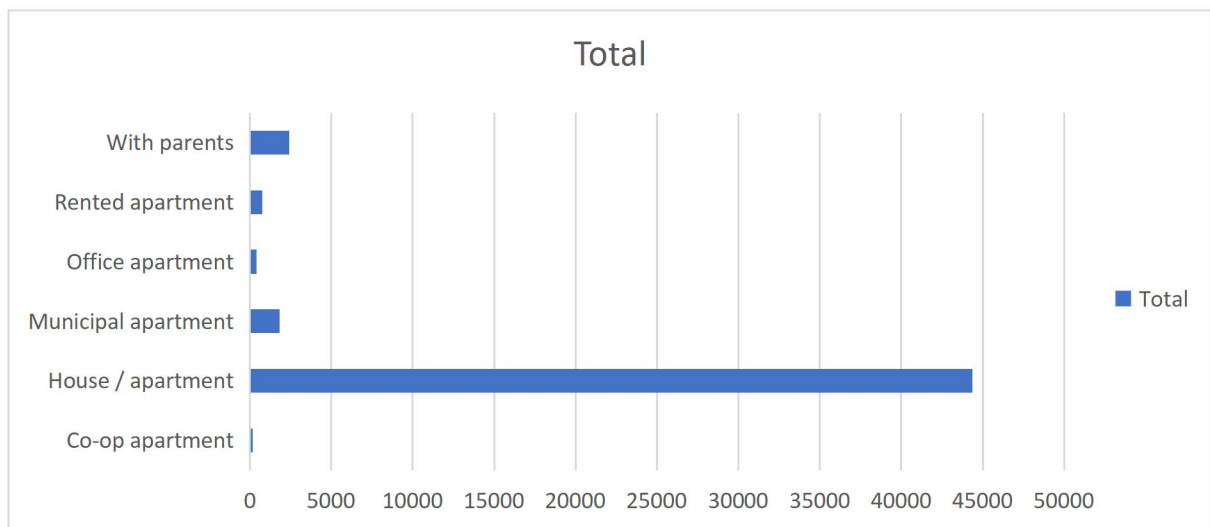
Row Labels	Count of NAME_CONTRACT_TYPE
Cash loans	45276
Revolving loans	4723
<b>Grand Total</b>	<b>49999</b>



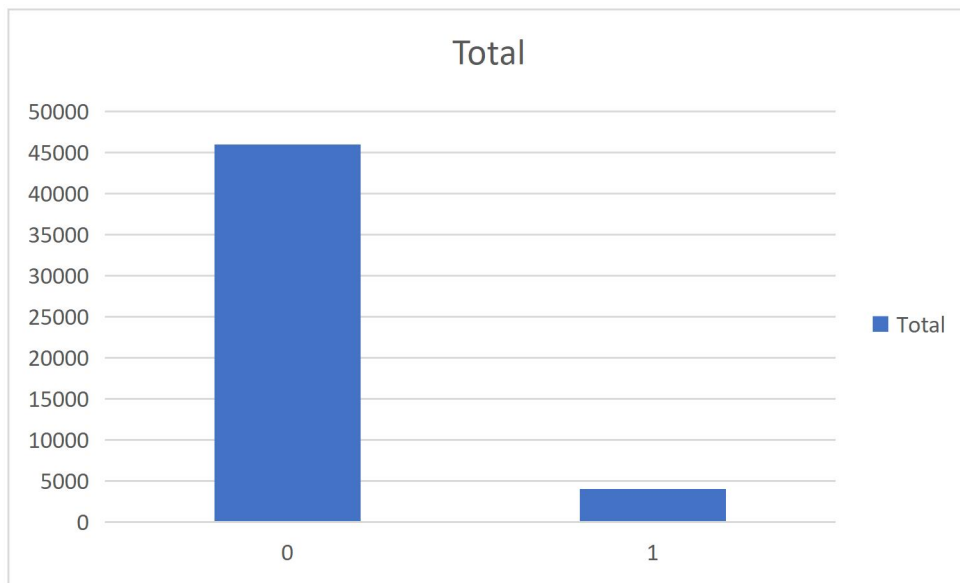
Row Labels	Count of NAME_EDUCATION_TYPE
Academic degree	20
Higher education	12167
Incomplete higher	1620
Lower secondary	620
Secondary / secondary special	35572
<b>Grand Total</b>	<b>49999</b>



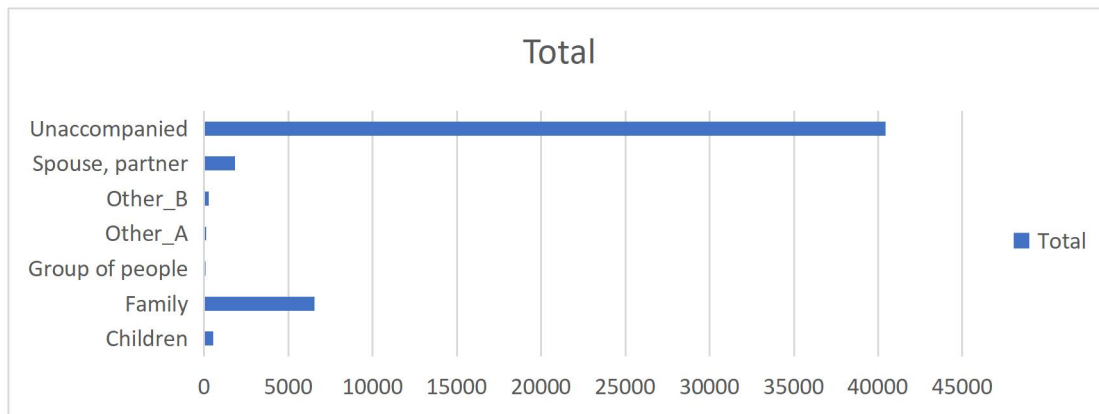
Row Labels	Count of NAME_HOUSING_TYPE
Co-op apartment	191
House / apartment	44368
Municipal apartment	1845
Office apartment	427
Rented apartment	769
With parents	2399
<b>Grand Total</b>	<b>49999</b>



Row Labels	Count of TARGET
0	45973
1	4026
<b>Grand Total</b>	<b>49999</b>

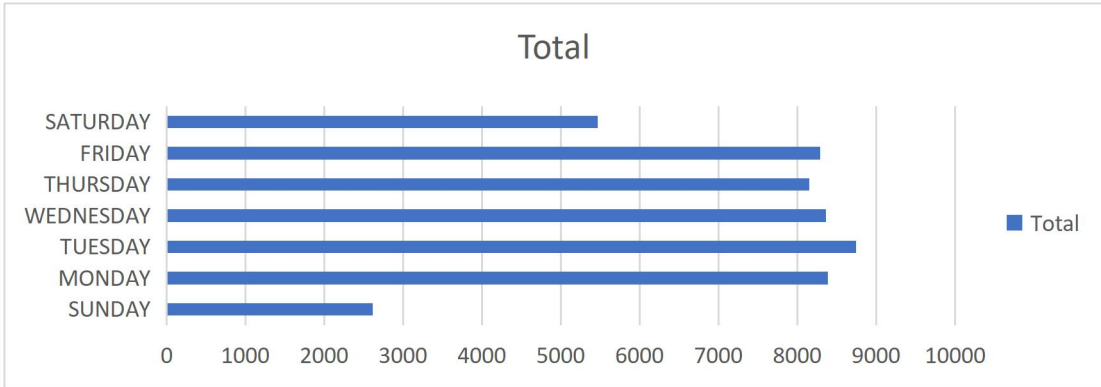


Row Labels	Count of NAME_TYPE_SUITE
Children	542
Family	6549
Group of people	36
Other_A	137
Other_B	259
Spouse, partner	1849
Unaccompanied	40435
<b>Grand Total</b>	<b>49807</b>



Row Labels	Count of WEEKDAY_APPR_PROCESS_START
SUNDAY	2616
MONDAY	8385
TUESDAY	8741
WEDNESDAY	8355
THURSDAY	8149

Grand Total	49999
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### 5. Identify Top Correlations for Different Scenarios:

- Take Top Correlations and Find Correlation with Target Variable with different Scenerious.

	A	B	C		D	E		F	G	H		I	J	K	L
	TARGET	CNT_CHILDREN	AMT_INCOME_TOTAL	AMT_CREDIT	REGION_POPULATION_RELATIVE	DAYS_BIRTH	DAYS_EMPLOYED	DAYS_REGISTRATION	DAYS_ID_PUBLISH	REGION_RATING_CLIENT					
8	1	0	112500	979992	0.018029	-18724	-2628	-6573	-1837						
9	1	0	202500	1193580	0.025164	-17482	-1262	-1182	-1029						
2	1	0	135000	288873	0.007305	-13384	-3597	-45	-4409						
3	1	0	81000	252000	0.028663	-24794	365243	-5391	-4199						
6	1	0	315000	953460	0.030755	-10199	-2015	-4802	-1038						
12	1	1	157500	723996	0.007274	-10526	-267	-387	-3190						
40	1	0	292500	675000	0.035792	-16667	-200	-5239	-114						
56	1	0	157500	245619	0.022625	-17538	-7676	-774	-1082						
55	1	0	111915	225000	0.018801	-7989	-150	-2570	-646						
32	1	3	180000	540000	0.02461	-15326	-1038	-782	-792						
36	1	1	202500	436032	0.032561	-10127	-111	-1724	-337						
13	1	0	135000	495216	0.008019	-12824	-154	-6764	-126						
37	1	0	157500	1710000	0.004849	-23127	-9274	-817	-4173						
14	1	0	73341	135000	0.018801	-9157	-146	-2926	-1822						
18	1	1	121500	263686.5	0.014464	-17847	-448	-3595	-1381						
37	1	1	225000	1019205	0.072508	-11356	-602	-335	-3224						
32	1	0	63000	426645	0.018634	-12209	-1572	-6348	-4551						
35	1	1	112500	571486.5	0.022625	-8292	-166	-3062	-456						
13	1	0	36000	284400	0.018209	-22078	365243	-6748	-4542						
33	1	0	157500	497520	0.02461	-13989	-1350	-8112	-4715						
16	1	0	112500	417024	0.025164	-13707	365243	-7809	-4436						
90	1	0	202500	343683	0.010966	-20200	365243	-973	-2779						
70	1	0	112500	117162	0.01885	-18302	-136	-4005	-1281						
33	1	0	81000	312840	0.01885	-8038	-609	-8038	-727						
31	1	1	171000	1009566	0.025164	-18767	-2046	-6555	-2317						

### Top Correlations:

## CNT CHILDREN

AMT INCOME TOTAL

AMT\_CREDIT

REGION POPULATION RELATIVE

DAYS\_BIRTH

DAYS\_EMPLOYED  
DAYS\_REGISTRATION  
DAYS\_ID\_PUBLISH  
REGION\_RATING\_CLIENT

Correlation for Traget 0										
	CNT_CHILDREN	AMT_INCOME_TOTAL	AMT_CREDIT	REGION_POPULATION_RELATIVE	DAYS_BIRTH	DAYS_EMPLOYED	DAYS_REGISTRATION	DAYS_ID_PUBLISH	REGION_RATING_CLIENT	
CNT_CHILDREN	1	0.009588558	0.00497156	-0.025555665	0.329263754	-0.239693041	0.181217183	-0.032115773	0.025913889	
AMT_INCOME_TOTAL	0.009588558	1	0.069315897	0.029841469	0.016002774	-0.031615555	0.009952379	0.003506646	-0.038188511	
AMT_CREDIT	0.00497156	0.069315897	1	0.095111221	-0.05934266	-0.070471393	0.003448569	-0.012228765	-0.100507425	
REGION_POPULATION_RELATIVE	-0.025555665	0.029841469	0.095111221	1	-0.032513748	-0.004101686	-0.059322344	-0.004345136	-0.532667302	
DAYS_BIRTH	0.329263754	0.016002774	-0.05934266	-0.032513748	1	-0.613553972	0.333632509	0.270825141	0.016779196	
DAYS_EMPLOYED	-0.239693041	-0.031615555	-0.070471393	-0.004101686	-0.613553972	1	-0.204680611	-0.270382022	0.034321673	
DAYS_REGISTRATION	0.181217183	0.009952379	0.003448569	-0.059322344	0.333632509	-0.204680611	1	0.104298561	0.087517643	
DAYS_ID_PUBLISH	-0.032115773	0.003506646	-0.012228765	-0.004345136	0.270825141	-0.270382022	0.104298561	1	-0.002307011	
REGION_RATING_CLIENT	0.025913889	-0.038188511	-0.100507425	-0.532667302	0.016779196	0.034321673	0.087517643	-0.002307011	1	

Correlation for target 1										
	CNT_CHILDREN	AMT_INCOME_TOTAL	AMT_CREDIT	REGION_POPULATION_RELATIVE	DAYS_BIRTH	DAYS_EMPLOYED	DAYS_REGISTRATION	DAYS_ID_PUBLISH	REGION_RATING_CLIENT	
CNT_CHILDREN	1	0.009588558	0.00497156	-0.025555665	0.329263754	-0.239693041	0.181217183	-0.032115773	0.025913889	
AMT_INCOME_TOTAL	0.009588558	1	0.069315897	0.029841469	0.016002774	-0.031615555	0.009952379	0.003506646	-0.038188511	
AMT_CREDIT	0.00497156	0.069315897	1	0.095111221	-0.05934266	-0.070471393	0.003448569	-0.012228765	-0.100507425	
REGION_POPULATION_RELATIVE	-0.025555665	0.029841469	0.095111221	1	-0.032513748	-0.004101686	-0.059322344	-0.004345136	-0.532667302	
DAYS_BIRTH	0.329263754	0.016002774	-0.05934266	-0.032513748	1	-0.613553972	0.333632509	0.270825141	0.016779196	
DAYS_EMPLOYED	-0.239693041	-0.031615555	-0.070471393	-0.004101686	-0.613553972	1	-0.204680611	-0.270382022	0.034321673	
DAYS_REGISTRATION	0.181217183	0.009952379	0.003448569	-0.059322344	0.333632509	-0.204680611	1	0.104298561	0.087517643	
DAYS_ID_PUBLISH	-0.032115773	0.003506646	-0.012228765	-0.004345136	0.270825141	-0.270382022	0.104298561	1	-0.002307011	
REGION_RATING_CLIENT	0.025913889	-0.038188511	-0.100507425	-0.532667302	0.016779196	0.034321673	0.087517643	-0.002307011	1	

I have attached excel sheets on google drive for your reference.

Google drive link:

<https://drive.google.com/drive/folders/1apAaHnXkVSYJnnocDSztwgTiDi64v95r?usp=sharing>