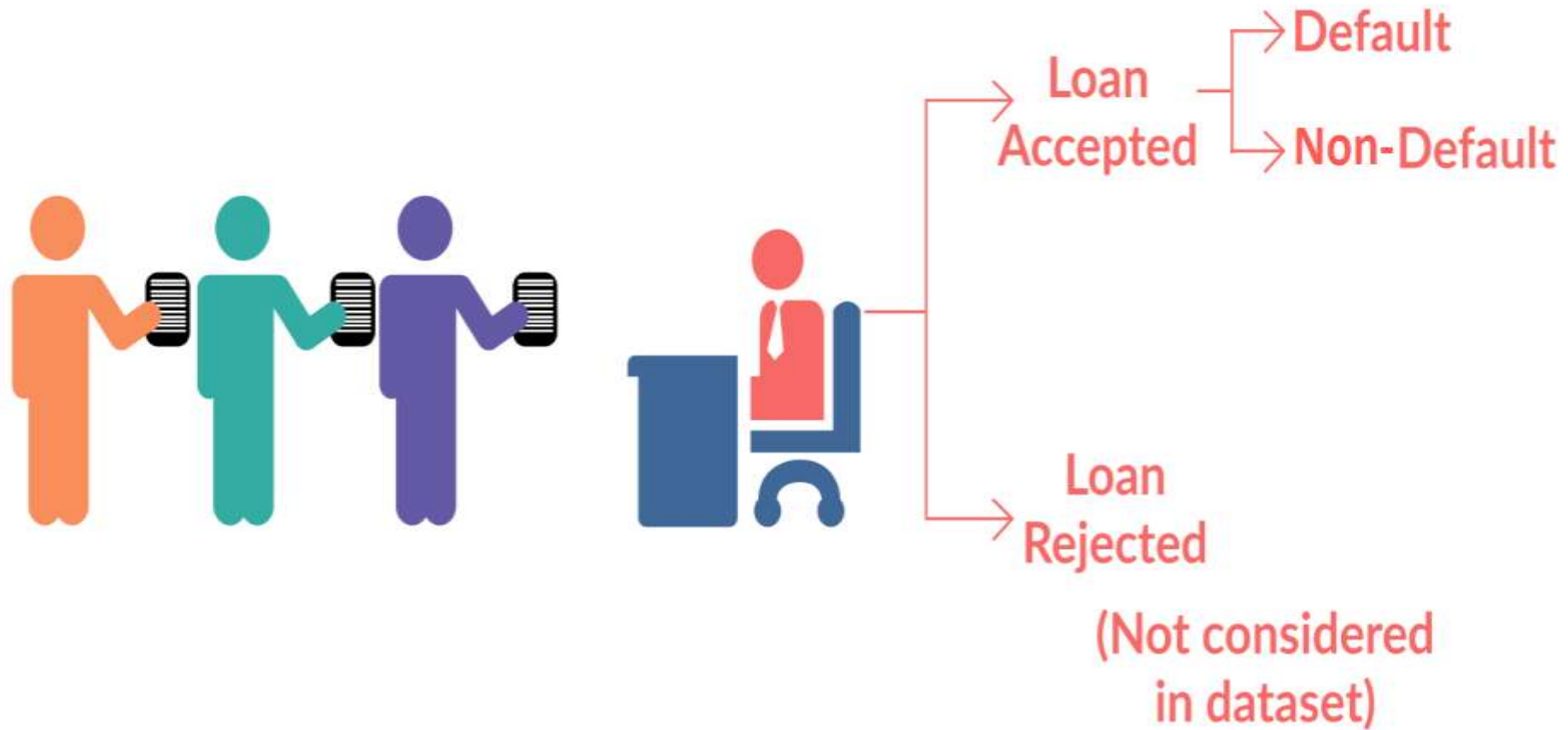


CONSUMER FINANCE COMPANY CASE STUDY



Name -: Salil Chandan

Dataset

loan.csv - Excel

Salil Chandan

File Home Insert Page Layout Formulas Data Review View Help Tell me what you want to do

K4

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	id	member_id	loan_amnt	funded_amnt	funded_amnt	term	int_rate	installment	grade	sub_grade	emp_title	emp_length	home_ownership	annual_inc	verification_status	issue_d	loan_status	payment_status
2	1077501	1296599	5000	5000	4975	36 months	10.65%	162.87	B	B2		10+ years	RENT	24000	Verified	Dec-11	Fully Paid	n
3	1077430	1314167	2500	2500	2500	60 months	15.27%	59.83	C	C4	Ryder	< 1 year	RENT	30000	Source Verified	Dec-11	Charged Off	n
4	1077175	1313524	2400	2400	2400	36 months	15.96%	84.33	C	C5		10+ years	RENT	12252	Not Verified	Dec-11	Fully Paid	n
5	1076863	1277178	10000	10000	10000	36 months	13.49%	339.31	C	C1	AIR RESOUR	10+ years	RENT	49200	Source Verified	Dec-11	Fully Paid	n
6	1075358	1311748	3000	3000	3000	60 months	12.69%	67.79	B	B5	University M	1 year	RENT	80000	Source Verified	Dec-11	Current	n
7	1075269	1311441	5000	5000	5000	36 months	7.90%	156.46	A	A4	Veolia Trans	3 years	RENT	36000	Source Verified	Dec-11	Fully Paid	n
8	1069639	1304742	7000	7000	7000	60 months	15.96%	170.08	C	C5	Southern St	8 years	RENT	47004	Not Verified	Dec-11	Fully Paid	n
9	1072053	1288686	3000	3000	3000	36 months	18.64%	109.43	E	E1	MKC Account	9 years	RENT	48000	Source Verified	Dec-11	Fully Paid	n
10	1071795	1306957	5600	5600	5600	60 months	21.28%	152.39	F	F2		4 years	OWN	40000	Source Verified	Dec-11	Charged Off	n
11	1071570	1306721	5375	5375	5350	60 months	12.69%	121.45	B	B5	Starbucks	< 1 year	RENT	15000	Verified	Dec-11	Charged Off	n
12	1070078	1305201	6500	6500	6500	60 months	14.65%	153.45	C	C3	Southwest F	5 years	OWN	72000	Not Verified	Dec-11	Fully Paid	n
13	1069908	1305008	12000	12000	12000	36 months	12.69%	402.54	B	B5	UCLA	10+ years	OWN	75000	Source Verified	Dec-11	Fully Paid	n
14	1064687	1298717	9000	9000	9000	36 months	13.49%	305.38	C	C1	Va. Dept of	< 1 year	RENT	30000	Source Verified	Dec-11	Charged Off	n
15	1069866	1304956	3000	3000	3000	36 months	9.91%	96.68	B	B1	Target	3 years	RENT	15000	Source Verified	Dec-11	Fully Paid	n
16	1069057	1303503	10000	10000	10000	36 months	10.65%	325.74	B	B2	SFMTA	3 years	RENT	1.00E+05	Source Verified	Dec-11	Charged Off	n
17	1069759	1304871	1000	1000	1000	36 months	16.29%	35.31	D	D1	Internal rev	< 1 year	RENT	28000	Not Verified	Dec-11	Fully Paid	n
18	1065775	1299699	10000	10000	10000	36 months	15.27%	347.98	C	C4	Chin's Resta	4 years	RENT	42000	Not Verified	Dec-11	Fully Paid	n
19	1069971	1304884	3600	3600	3600	36 months	6.03%	109.57	A	A1	Duracell	10+ years	MORTGAGE	110000	Not Verified	Dec-11	Fully Paid	n
20	1062474	1294539	6000	6000	6000	36 months	11.71%	198.46	B	B3	Connection	1 year	MORTGAGE	84000	Verified	Dec-11	Fully Paid	n
21	1069742	1304855	9200	9200	9200	36 months	6.03%	280.01	A	A1	Network Int	6 years	RENT	77385.19	Not Verified	Dec-11	Fully Paid	n
22	1069740	1284848	20250	20250	19142.1611	60 months	15.27%	484.63	C	C4	Archdiocese	3 years	RENT	43370	Verified	Dec-11	Fully Paid	n
23	1039153	1269083	21000	21000	21000	36 months	12.42%	701.73	B	B4	Osram Sylva	10+ years	RENT	105000	Verified	Dec-11	Charged Off	n
24	1069710	1304821	10000	10000	10000	36 months	11.71%	330.76	B	B3	Value Air	10+ years	OWN	50000	Source Verified	Dec-11	Fully Paid	n
25	1069700	1304810	10000	10000	10000	36 months	11.71%	330.76	B	B3	Wells Fargo	5 years	RENT	50000	Not Verified	Dec-11	Fully Paid	n
26	1069559	1304634	6000	6000	6000	36 months	11.71%	198.46	B	B3	bmg-educat	1 year	RENT	76000	Not Verified	Dec-11	Charged Off	n
27	1069697	1273773	15000	15000	15000	36 months	9.91%	483.38	B	B1	Winfield Pa	2 years	MORTGAGE	92000	Verified	Dec-11	Fully Paid	n

loan

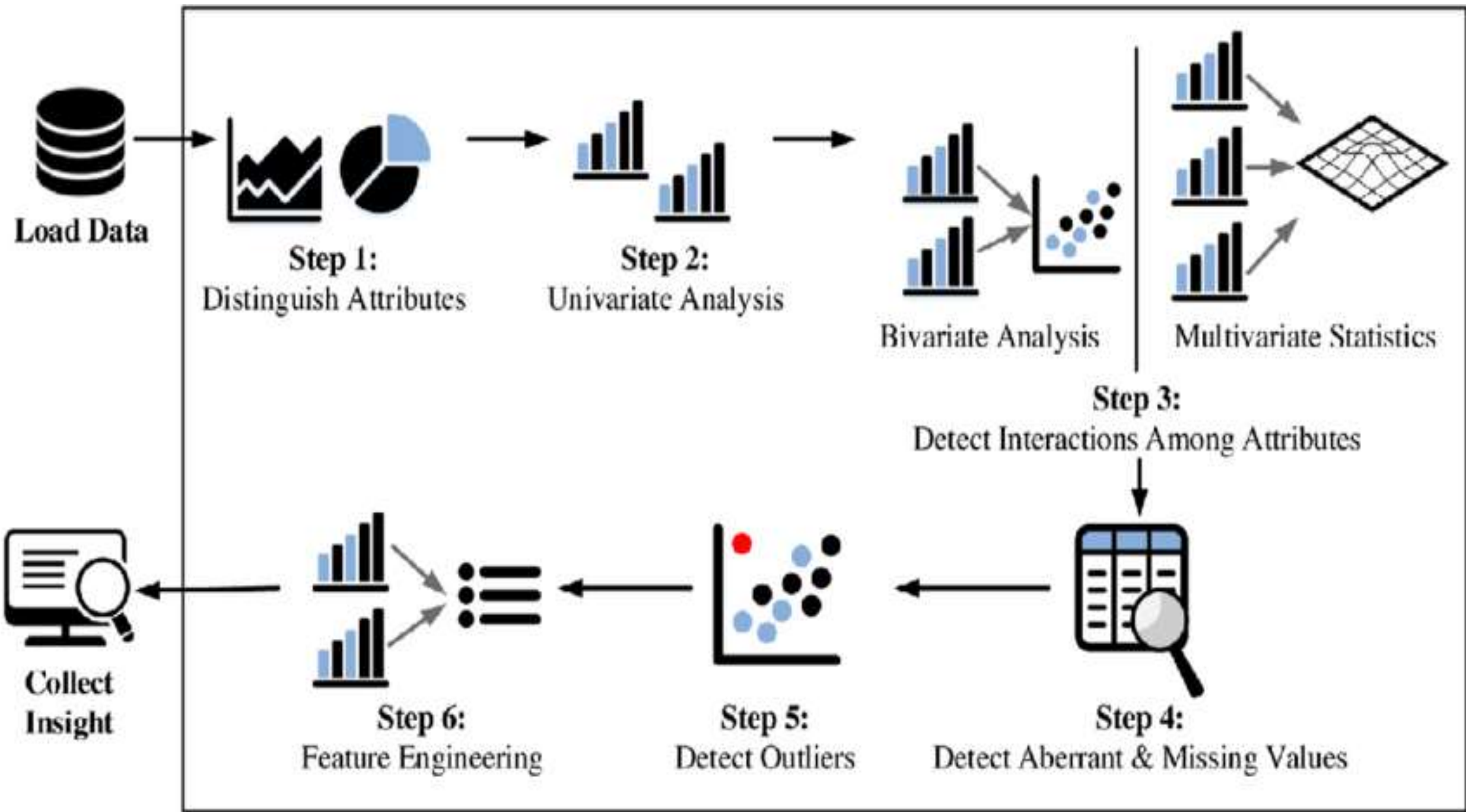
Accessibility: Unavailable

Type of Loan Risk

- Two types of risks are associated with the bank's decision:
- If the applicant is likely to repay the loan, then not approving the loan results in a loss of business to the company
- If the applicant is not likely to repay the loan, i.e. he/she is likely to default, then approving the loan may lead to a financial loss for the company.

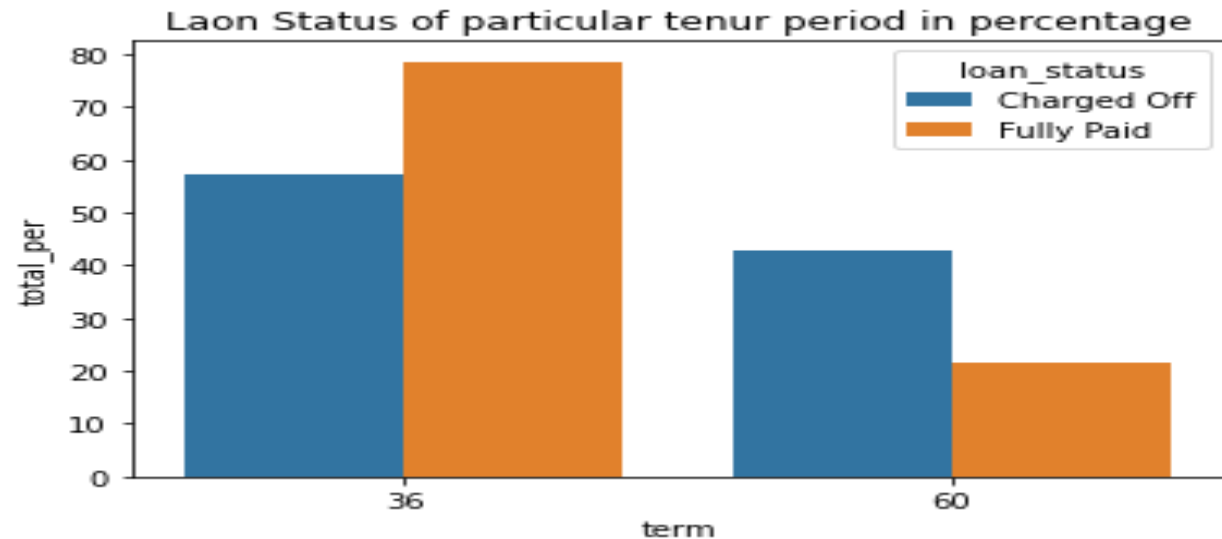
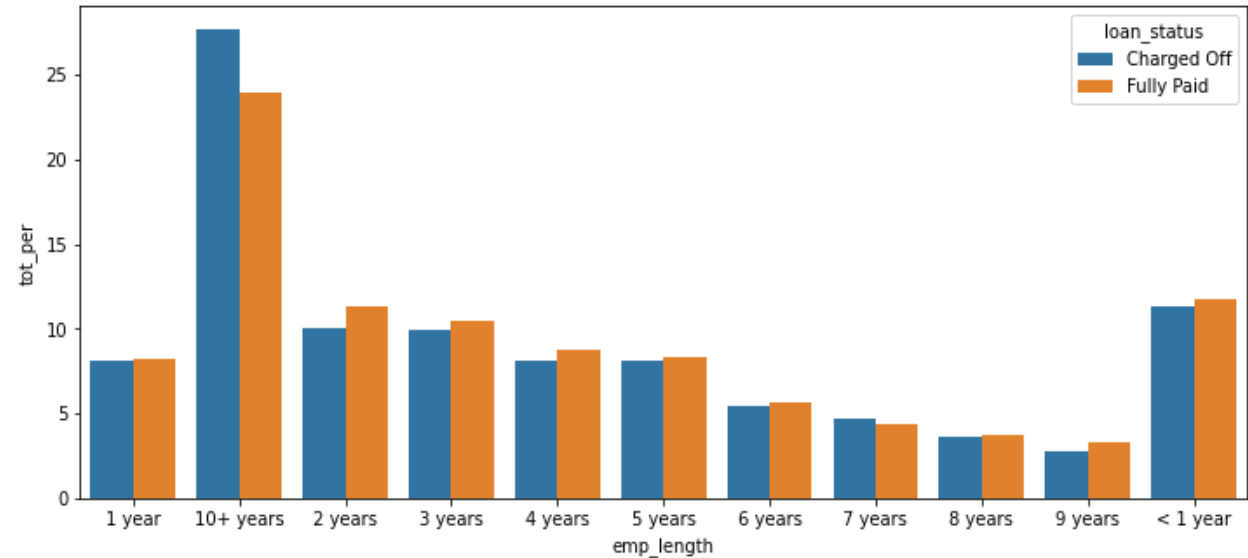
AIM TO ANALYSE THE DATA

- The aim is to identify patterns which indicate if a person is likely to default, which may be used for taking actions such as denying the loan, reducing the amount of loan, lending at a higher interest rate, etc.



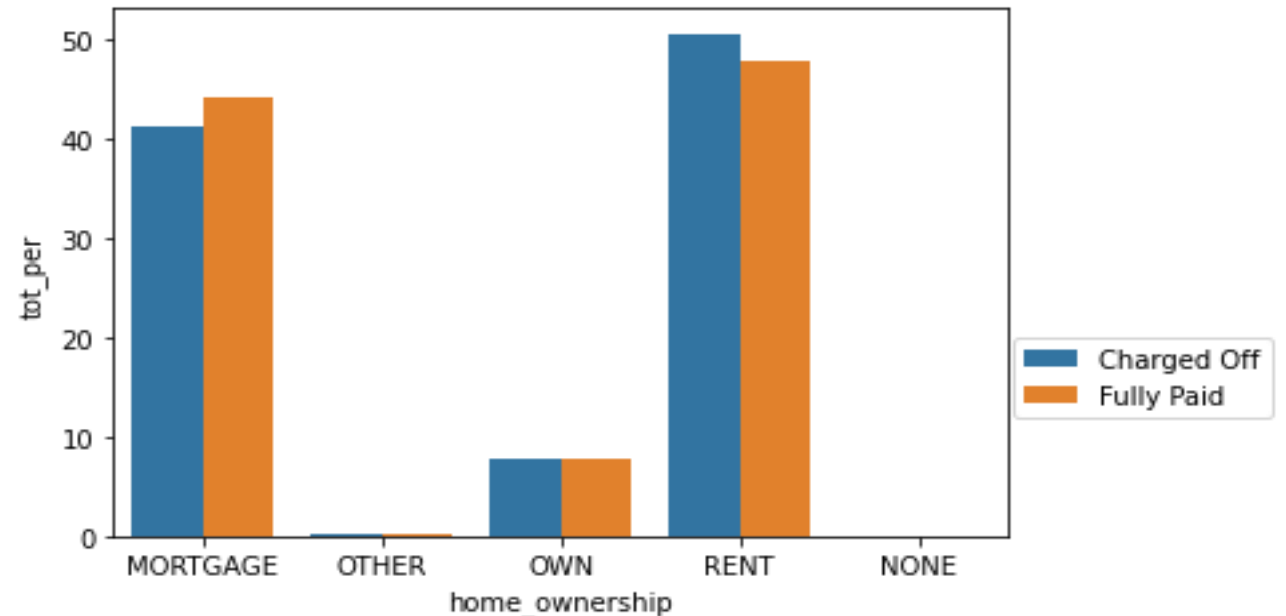
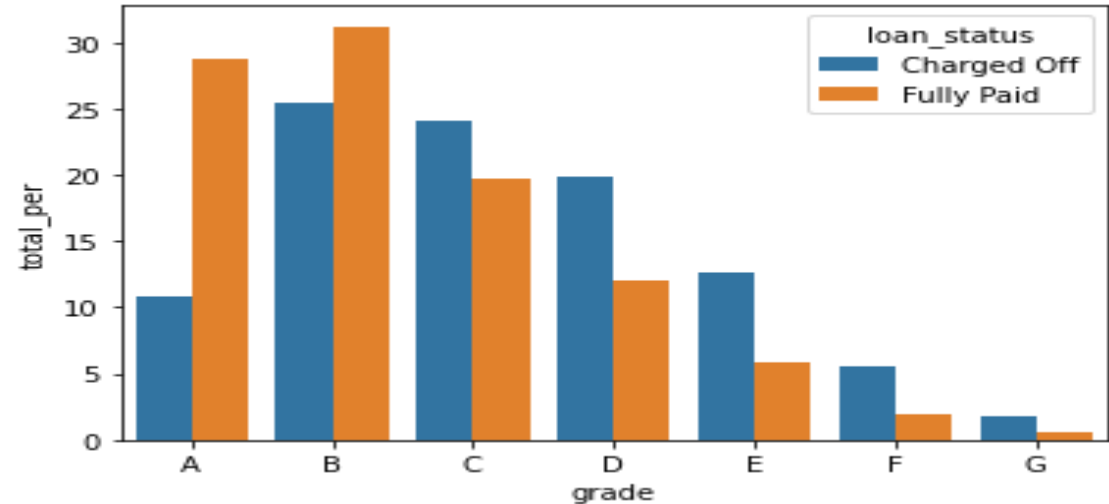
Univariate and Bivariate Analysis

- Employment length in years. Possible values are between 0 and 10 where 0 means less than one year and 10 means ten or more years.
- In this graph, it shows that the charged off customer having a maximum employment length in 10+years and 7 year.
- The number of payments on the loan. Values are in months and can be either 36 or 60.
- Loan Status of particular tenure , we saw that the customer who take the loan of 60 months have maximum number of defaulter.



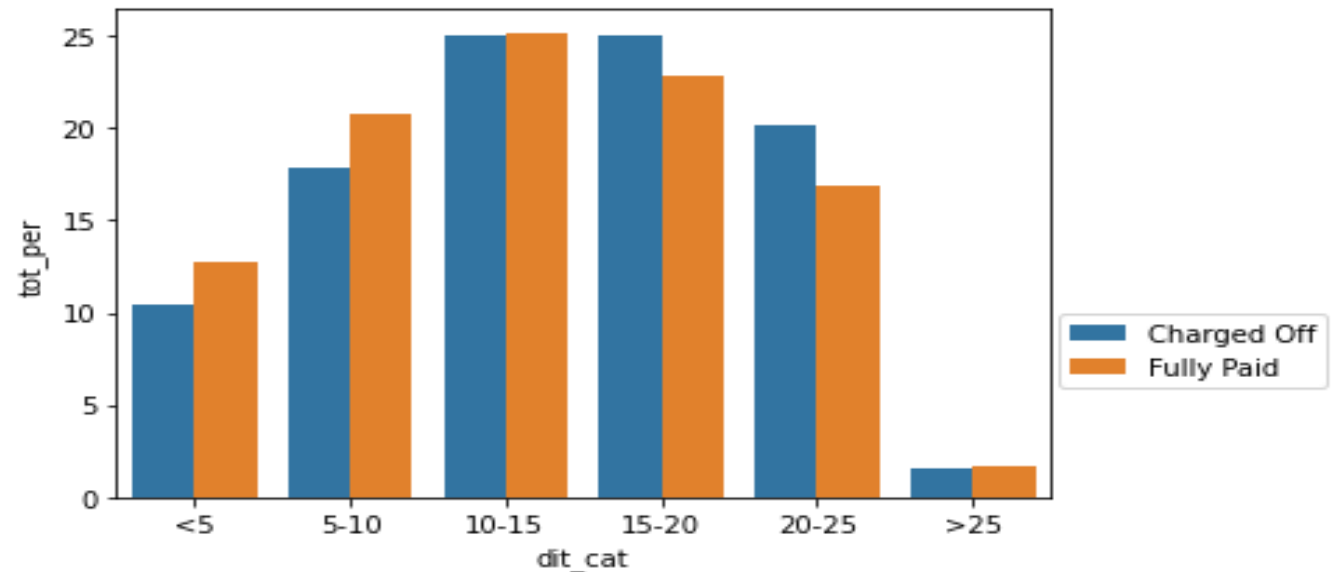
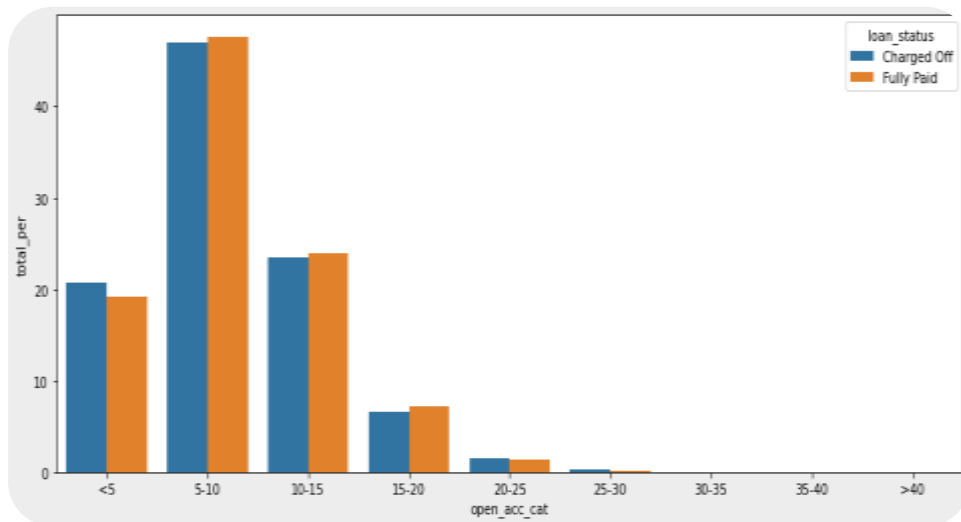
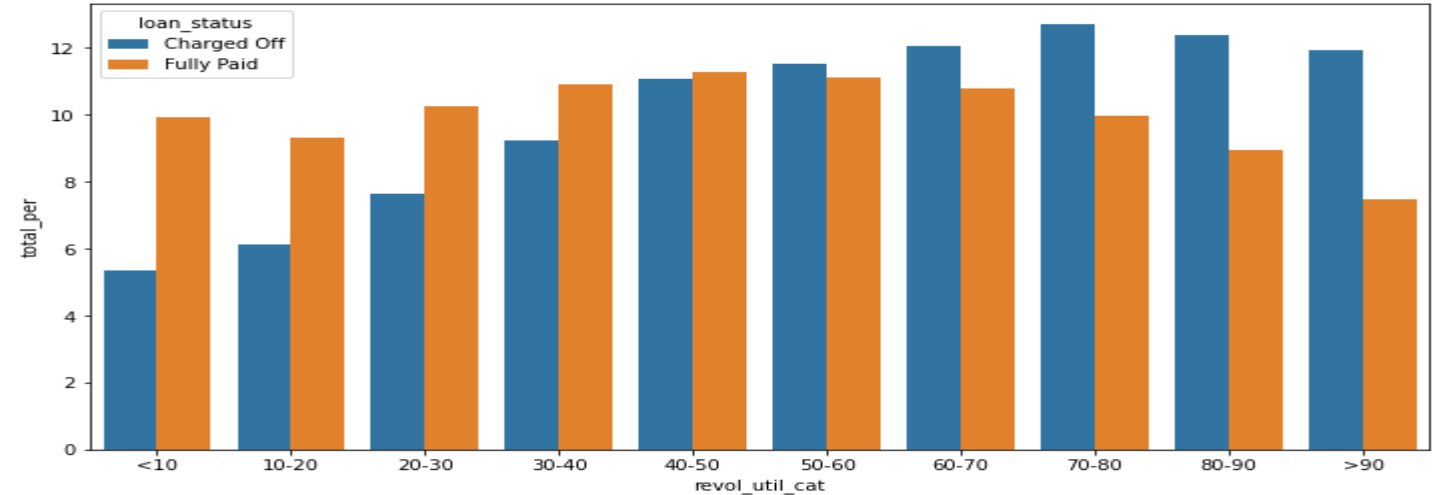
Grade and Home ownership Attributes

- LC assigned loan grade
- In this grade graph we saw that the defaulter are highly increase from C-G grade.
- The home ownership status provided by the borrower during registration. Our values are: RENT, OWN, MORTGAGE, OTHER.
- In this graph we analyse that the customer who are living in a rent are higher number of defaulters.



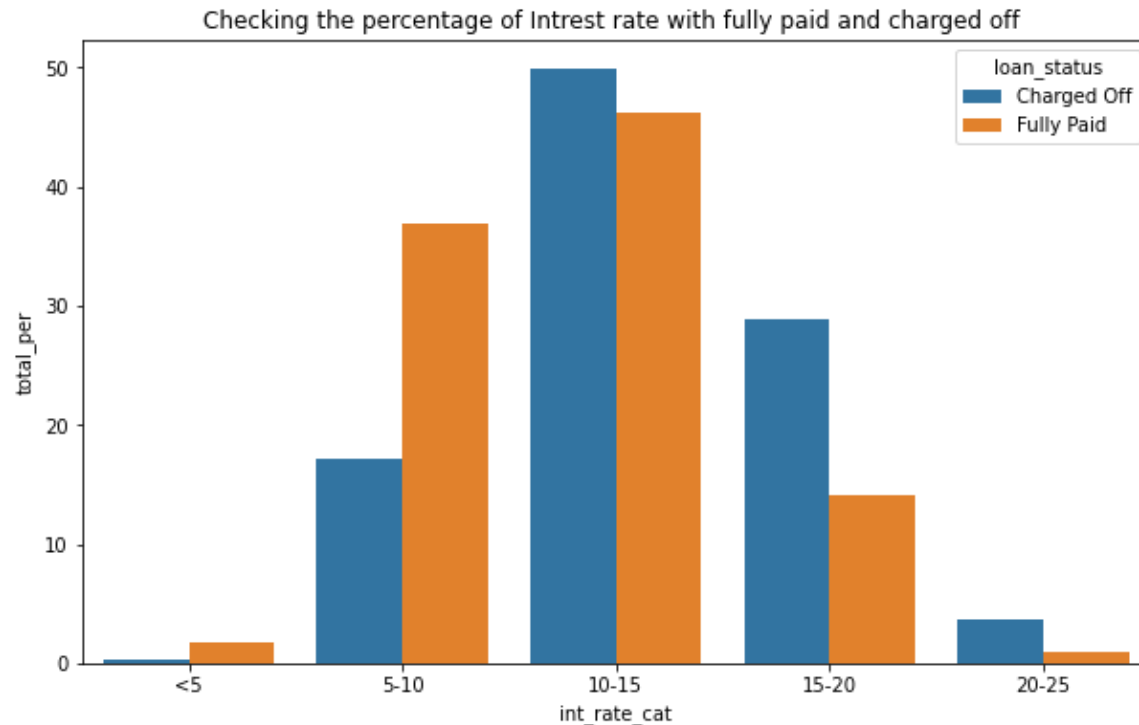
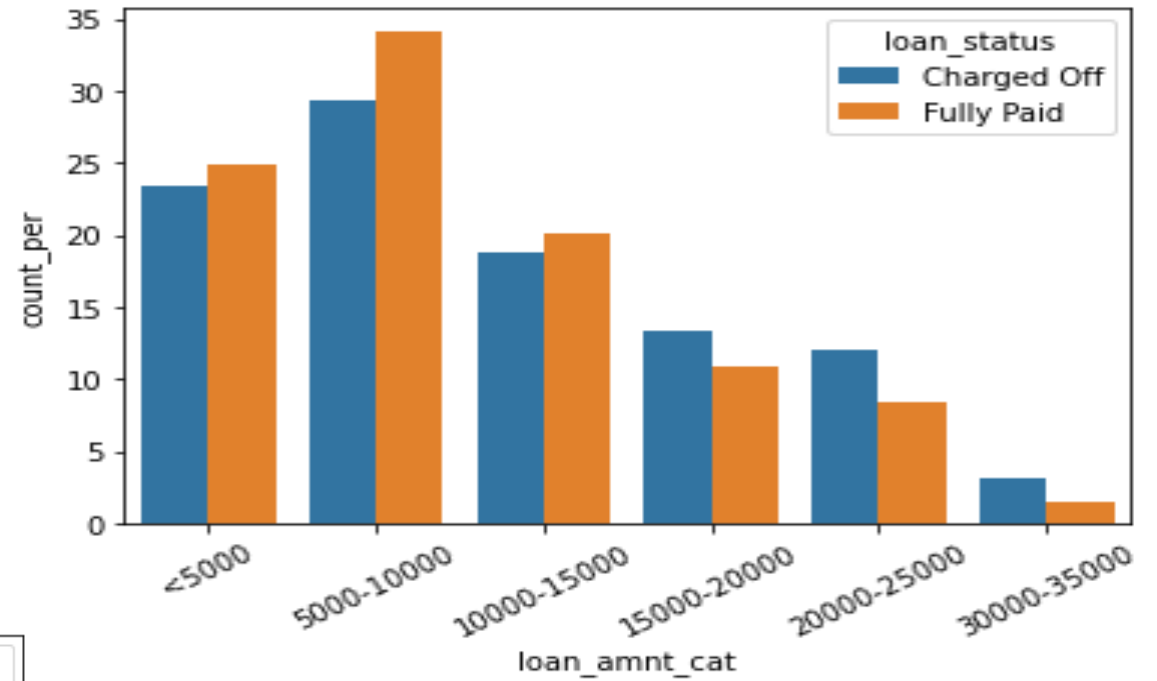
Revolving Utilization and Dti Attributes and Open Account

- In this graph we got to know that after the 50 revol_util_category the number of defaulter are increased & highly correlated to interest rate over 47%.
- Debt-to-Income(dti) greater than 15 has been observed with more defaults.
- Moreover, it is dependent on the revolving line utilization rate over 28%
- Open_acc less than 5 has more default rate. Open_acc has a positive correlation of 29% with Dti.



Loan Amount Relation with Interest Rate

- In this graph we got to know that the customer who having higher number of defaulter are lie in the range of 15000 to 35000
- Also it have highly correlated to interest rate which is of 31%.



Multivariate Analysis



Conclusion

- To make the business profit , company should do a strict verification against the C and G grade Customers.
- Open_acc and Home_Ownership which can be used as security for repayment of a loan. Company need to be improve in the open accounts and the customer lived their life in rent home because it s found that the $\text{Open_acc} < 5$ and Home_Ownership as RENT has more defaults.
- dti and revol_util will be the most suitable driving factors for Loan Default as far as consumer attributes are concerned which is need to be improve.