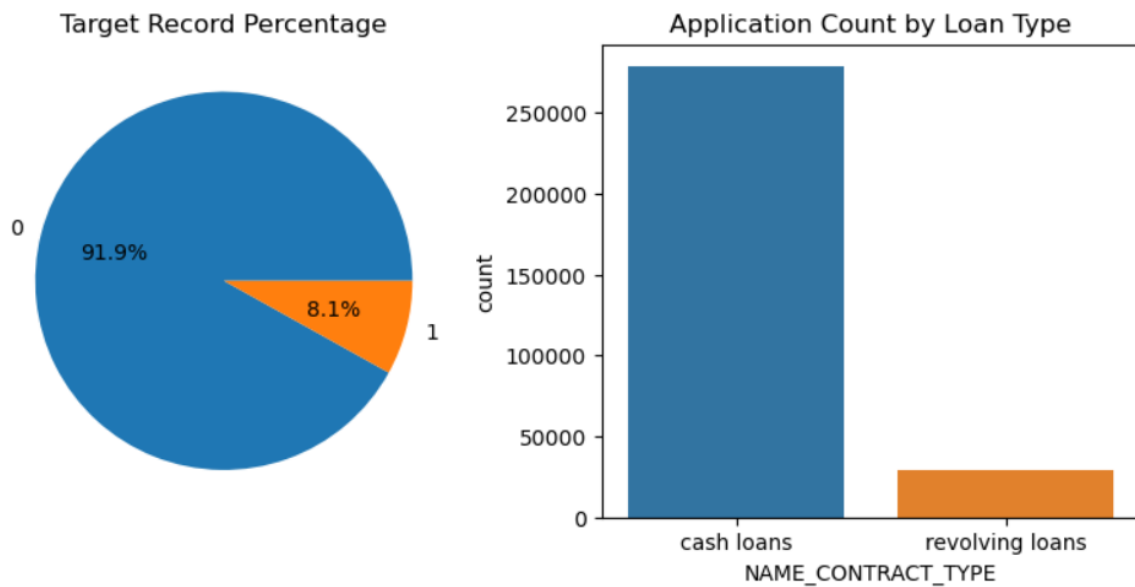


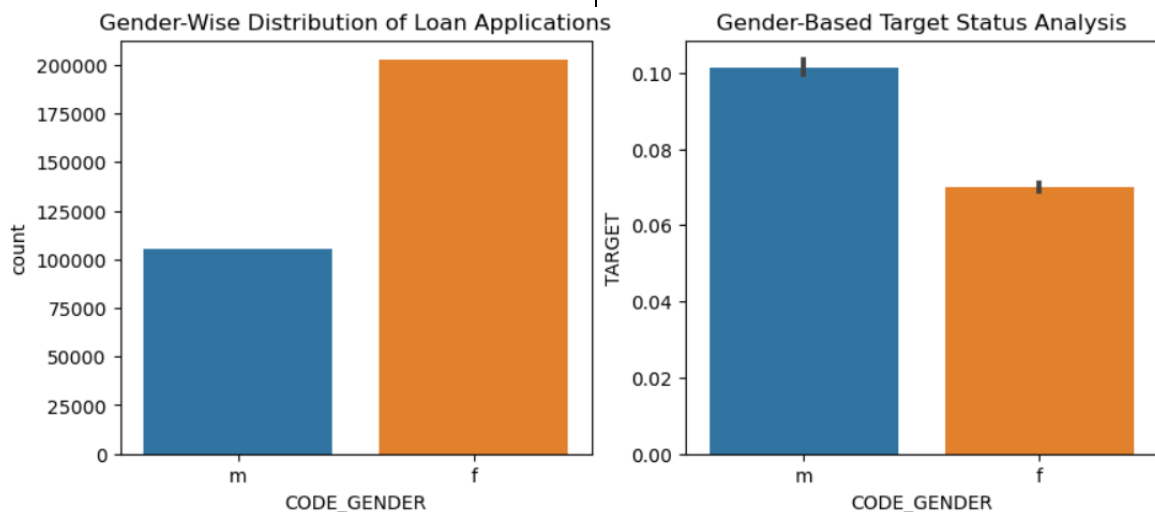
(A) Loan Type Application Count and Default count

Description	Result
Rows and column in Dataframe	307,511 rows and 122 columns
Name of contract type	cash loan 278232 revolving loans 29279
Contract type wise Default count	cash loan 23221 revolving loans 1604



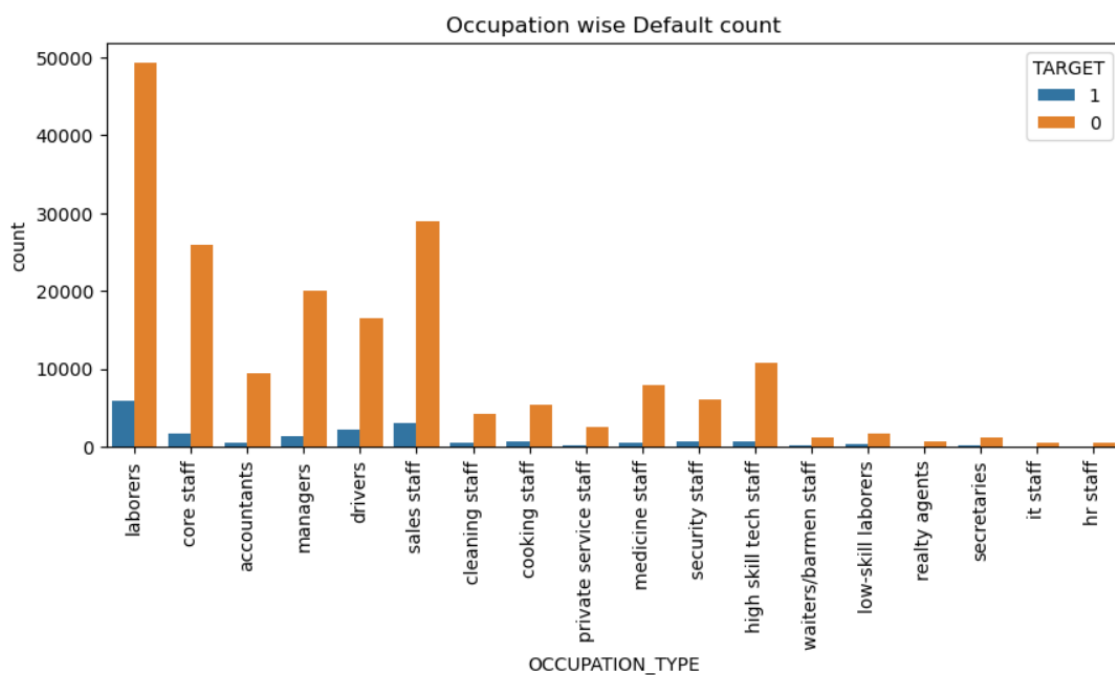
(B) Gender wise Application Count and Default count

Description	Result
Gender Wise Loan Application count after cleaning Data	f 202448 m 105059
Gender Wise Default count	f 14170 m 10655
Gender wise Default Percent	f 7.00 m 10.14



(c) Occupation wise Application Count and Default count

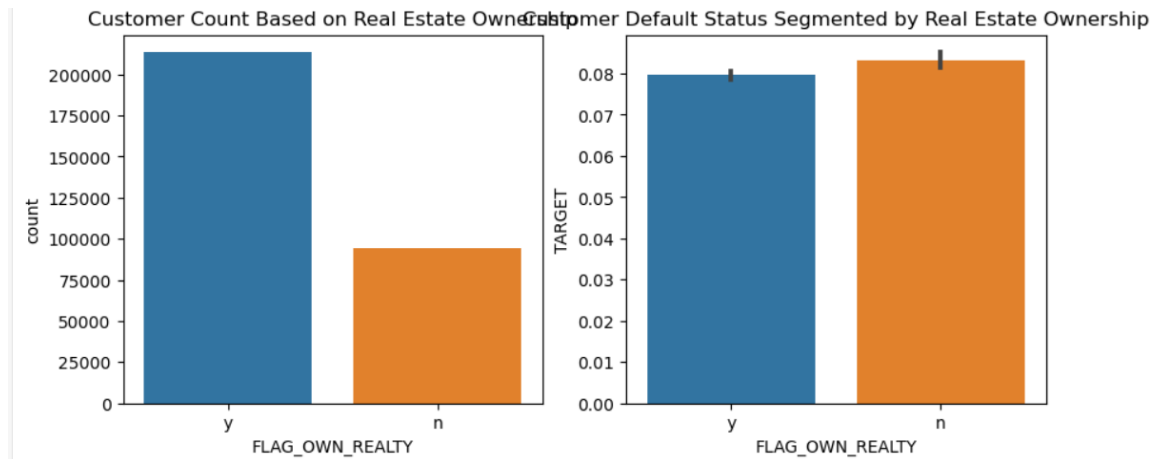
Description	Count	Default count
laborers	55186	5838
sales staff	32102	3092
core staff	27569	1738
managers	21371	1328
drivers	18603	2107
high skill tech	11380	701
accountants	9813	474
medicine staff	8537	572
security staff	6721	722
cooking staff	5946	621
cleaning staff	4653	447
private service	2652	175
low-skill laborers	2092	359
waiters/barmen staff	1348	152
secretaries	135	92
realty agents	751	59
hr staff	563	36
it staff	526	34



Occupation type show as Laborers ,Sales Staff, Driver, and core-staff had face repayment difficult

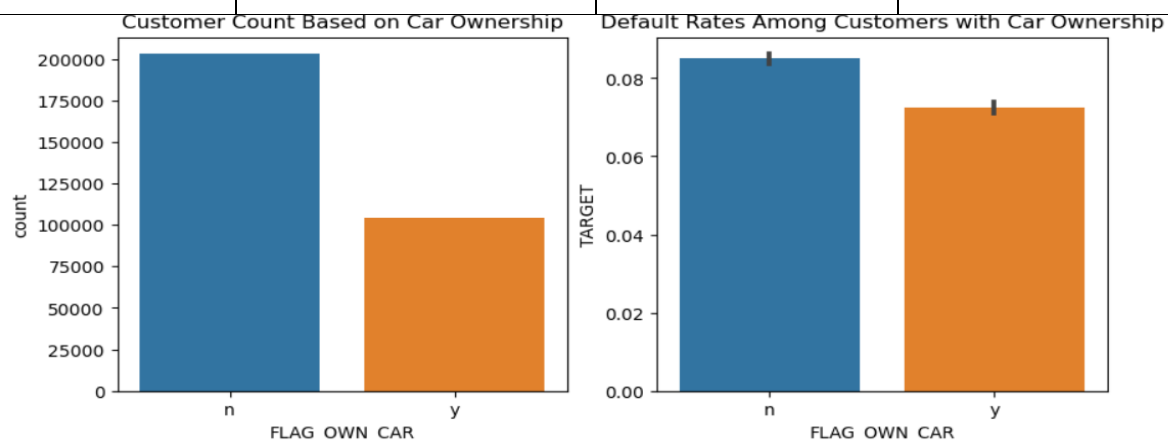
(D) Own Realty wise Application Count and Default count

Description	Count	Default count	Default Percent
Owe Realty	y 213308 n 94199	y 16983 n 7842	y 7.96 n 8.32



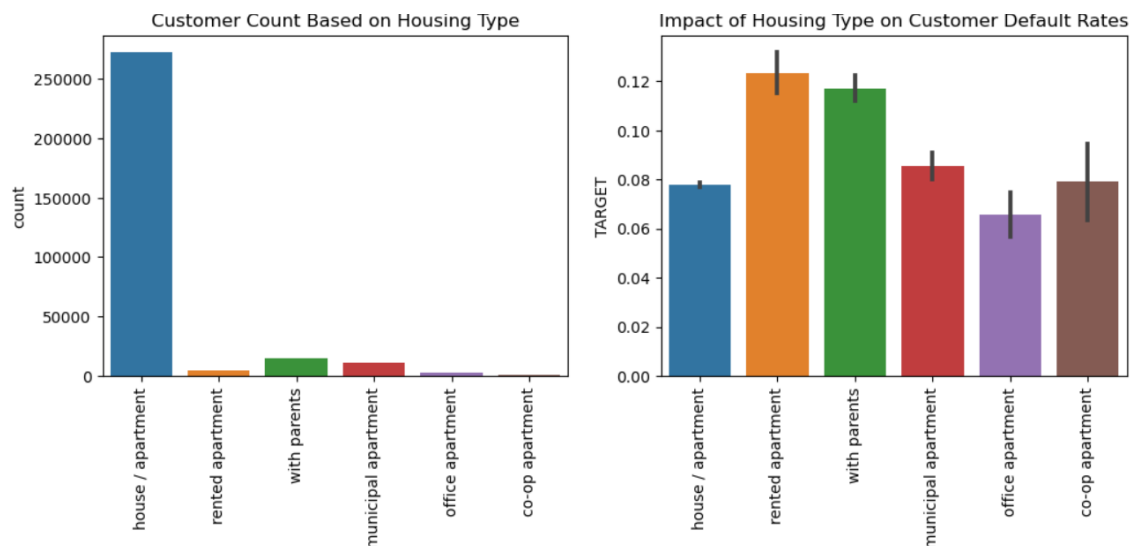
(E) Own Car wise Application Count and Default count

Description	Count	Default count	Default Percent
Owe Car	n 202922 y 104585	n 17249 y 7576	n 8.50 y 7.24



(F) Housing type wise Application Count and Default count

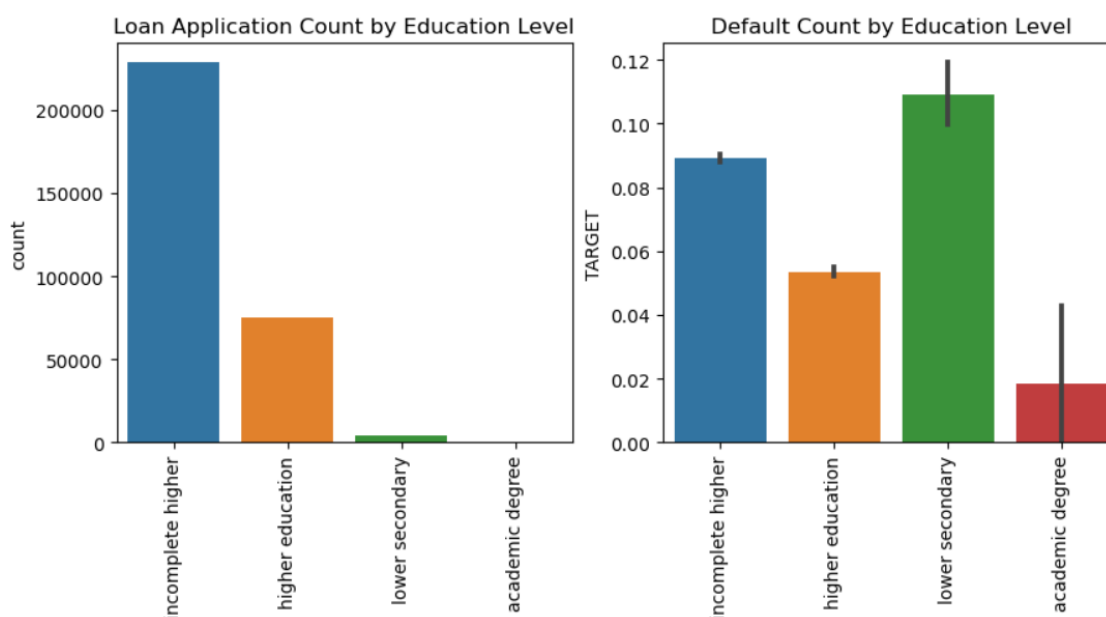
Description HousingType	Default Count	Default Percent
co-op apartment 1122	co-op apartment 89	co-op apartment 7.93
house / apartment 272865	house / apartment 21272	house / apartment 7.80
municipal apartment 11182	municipal apartment 955	municipal apartment 8.54
office apartment 2617	office apartment 172	office apartment 6.57
rented apartment 4881	rented apartment 601	rented apartment 12.31
with parents 14840	with parents 1736	with parents 11.70



Upon analyzing the default rates by housing type, it was found that customers living in rented premises and those living with parents have a higher default ratio compared to other housing types. This indicates that these housing situations might be associated with a higher financial risk.[1](#)

(g) Education Type wise Application Count and Default count

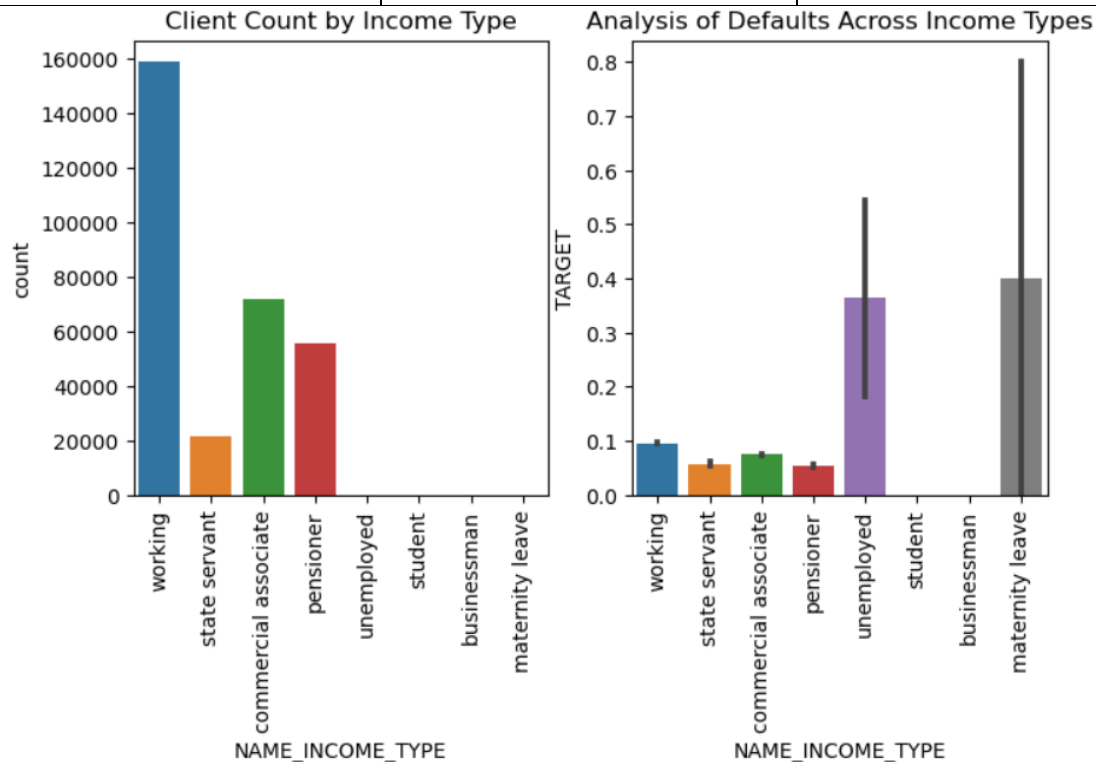
Description Education type		Default Count		Default Percent	
academic degree	164	academic degree	3	academic degree	1.83
higher education	74862	higher education	4009	higher education	5.36
incomplete higher	228665	incomplete higher	20396	incomplete higher	8.92
lower secondary	3816	lower secondary	417	lower secondary	10.93



These plots will help illustrate that individuals with incomplete higher and lower secondary education are the majority of applicants and also have higher default rates, potentially due to the need for funds and challenges in managing EMLs.

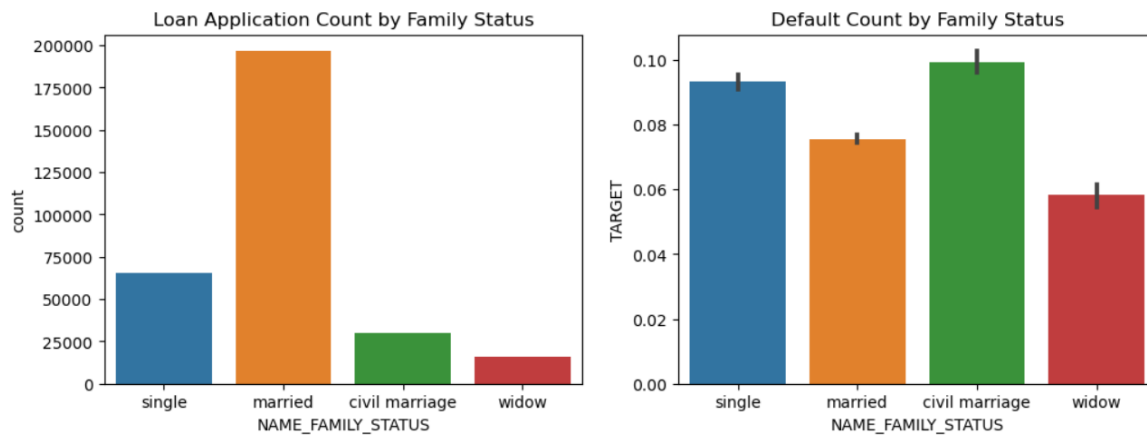
(H) Income type wise Application Count and Default count

Description Income type		Default Count		Default Percent	
businessman	10	businessman	0	businessman	0.00
commercial associate	71616	commercial associate	5360	commercial associate	7.48
maternity leave	5	maternity leave	2	maternity leave	40.00
pensioner	55362	pensioner	2982	pensioner	5.39
state servant	21703	state servant	1249	state servant	5.75
student	18	student	0	student	0.00
unemployed	22	unemployed	8	unemployed	36.36
working	158771	working	15224	working	9.59



(I) Family Status wise Application Count and Default count

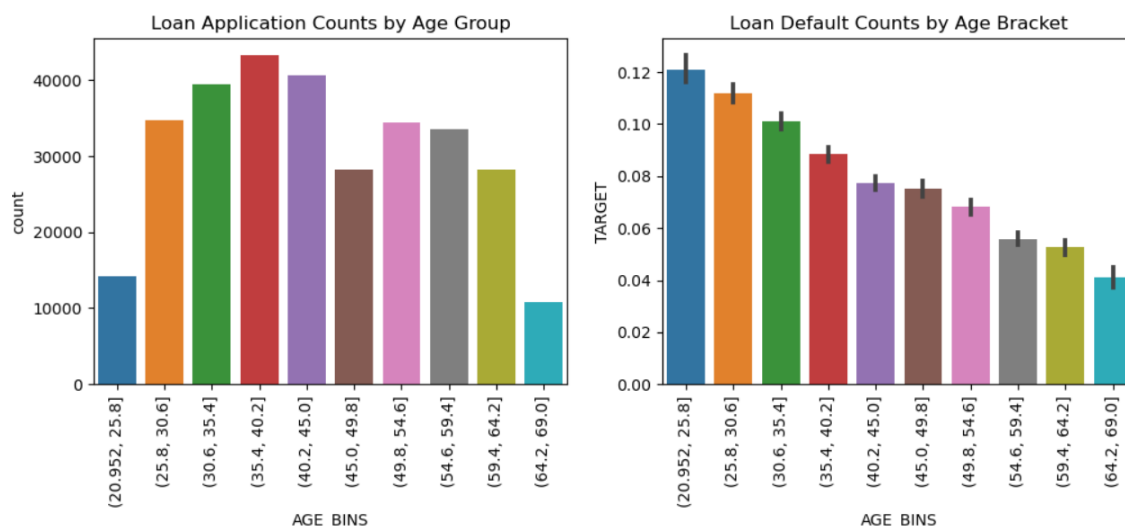
Description Family Status		Default Count		Default Percent	
civil marriage	29774	civil marriage	2961	civil marriage	9.94
married	196429	married	14850	married	7.56
single	65214	single	6077	single	9.32
widow	16088	widow	937	widow	5.82



These plots will help to visually confirm that married individuals apply for more loans, while the highest default rate is among single individuals.

(J) Age bins wise Application Count and Default count

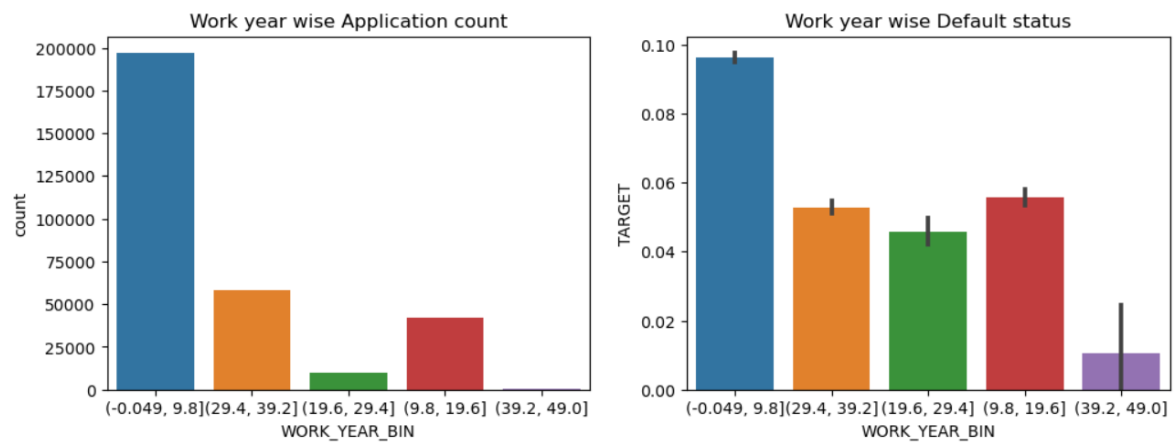
Description Age bines	Default Count	Default Percent
(20.952, 25.8] 14213	(20.952, 25.8] 1721	(20.952, 25.8] 12.11
(25.8, 30.6] 34654	(25.8, 30.6] 3872	(25.8, 30.6] 11.17
(30.6, 35.4] 39471	(30.6, 35.4] 3981	(30.6, 35.4] 10.09
(35.4, 40.2] 43296	(35.4, 40.2] 3828	(35.4, 40.2] 8.84
(40.2, 45.0] 40585	(40.2, 45.0] 3141	(40.2, 45.0] 7.74
(45.0, 49.8] 28228	(45.0, 49.8] 2120	(45.0, 49.8] 7.51
(49.8, 54.6] 34466	(49.8, 54.6] 2350	(49.8, 54.6] 6.82
(54.6, 59.4] 33572	(54.6, 59.4] 1879	(54.6, 59.4] 5.60
(59.4, 64.2] 28259	(59.4, 64.2] 1489	(59.4, 64.2] 5.27
(64.2, 69.0] 10761	(64.2, 69.0] 444	(64.2, 69.0] 4.13



"The default percentages by age bin are as follows: the highest default rate is observed in the age range (20.952, 25.8] at 12.11%, followed by (25.8, 30.6] at 11.17%. Default rates decrease progressively across older age bins, with the lowest rate in the age range (64.2, 69.0] at 4.13%."

(K) Work Year Bin wise Application Count and Default count

Description Work year Bin	Default Count	Default Percent
(-0.049, 9.8] 196738	(-0.049, 9.8] 18930	(-0.049, 9.8] 9.62
(9.8, 19.6] 41937	(9.8, 19.6] 2338	(9.8, 19.6] 5.58
(19.6, 29.4] 10207	(19.6, 29.4] 467	(19.6, 29.4] 4.58
(29.4, 39.2] 58339	(29.4, 39.2] 3087	(29.4, 39.2] 5.29
(39.2, 49.0] 284	(39.2, 49.0] 3	(39.2, 49.0] 1.06



"The default percentages by work year bin are as follows: The highest default rate is observed in the work experience range (-0.049, 9.8] at 9.62%, followed by (9.8, 19.6] at 5.58%. The default rate decreases for the next bin (19.6, 29.4] at 4.58%, and then increases slightly for (29.4, 39.2] at 5.29%. The lowest default rate is seen in the work experience range (39.2, 49.0] at just 1.06%." [1](#)