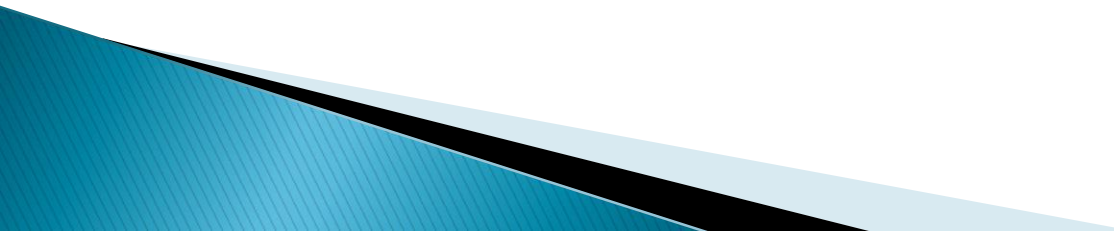


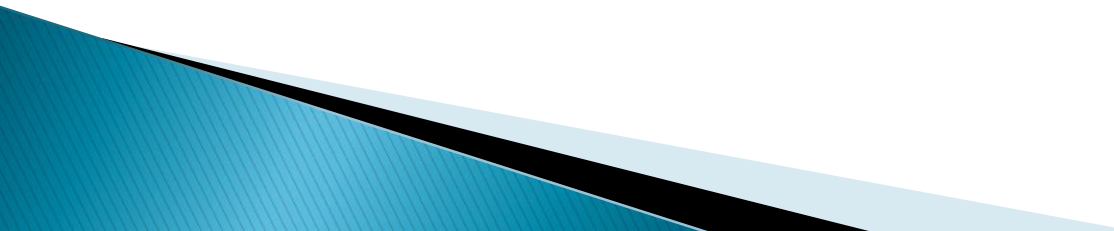
CREDIT ED A CASE STUDY

BY SALONI GUPTA
AND
YESH THAKUR

PURPOSE

- ▶ Credit risk analysis will help the company to make the decision for loan approval based on profile of applicant .
 - ▶ We will use EDA to understand how consumer attributes and loan attributes influence the tendency of default.
- 

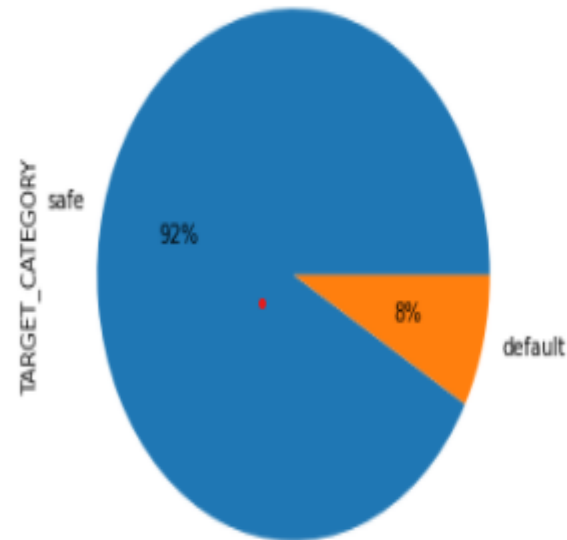
Steps

- ▶ Data understanding
 - ▶ Univariate analysis.
 - ▶ Bivariate Analysis.
 - ▶ Correlation matrix (Analysis).
- 

UNIVARIATE ANALYSIS

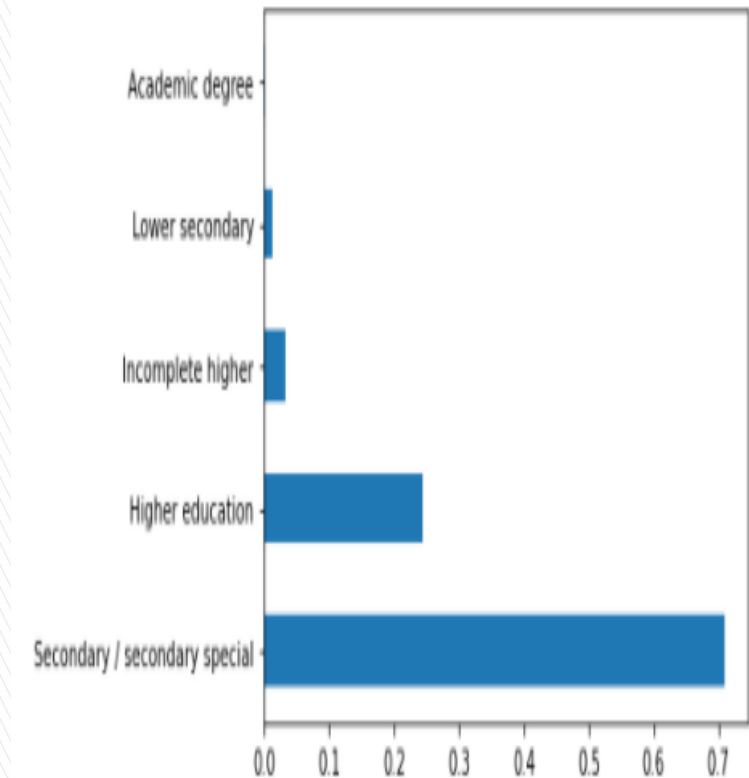
Analyzing Target variable

- ▶ The percentage of people who were able to pay the loan installments is higher than the defaulters.
- ▶ 92% of people are marked safe , this means 92% of people were able to pay the loan installments on time.
- ▶ There were only 8% people who were not able to pay the installments on time.



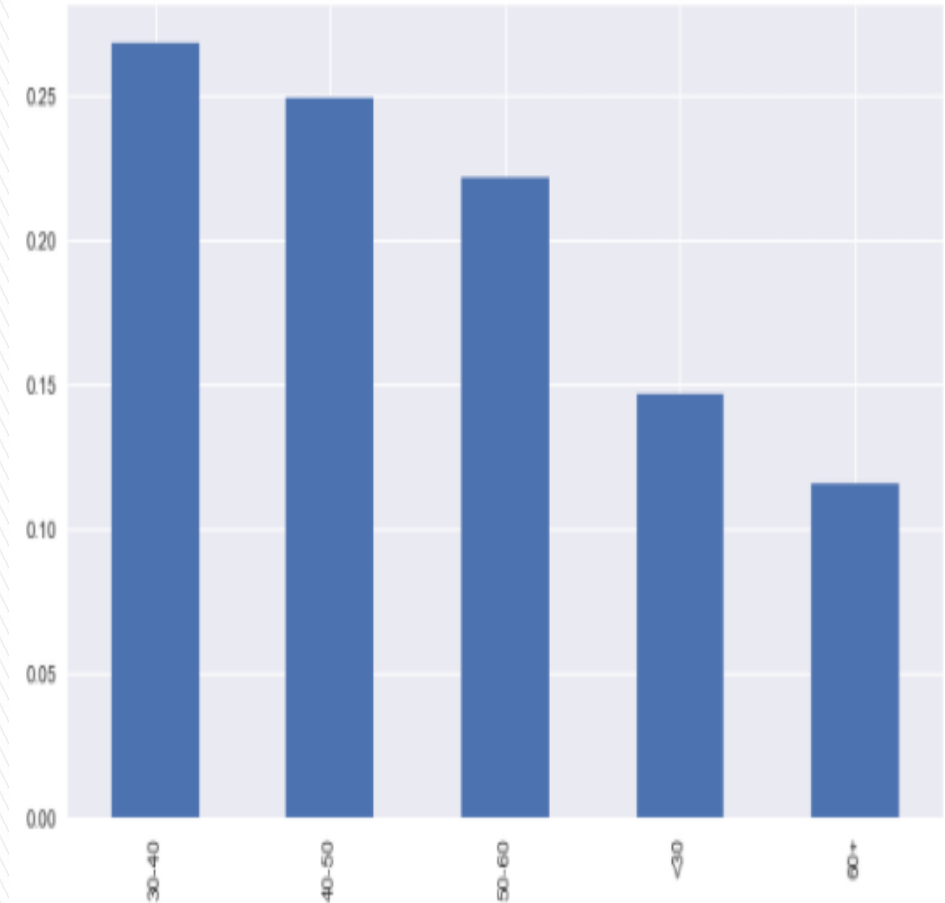
EDUCATION TYPE

- ▶ The people who have secondary/secondary special have applied for more loans followed by people who have higher education.
- ▶ The least loans were applied by people who have Academic degree.



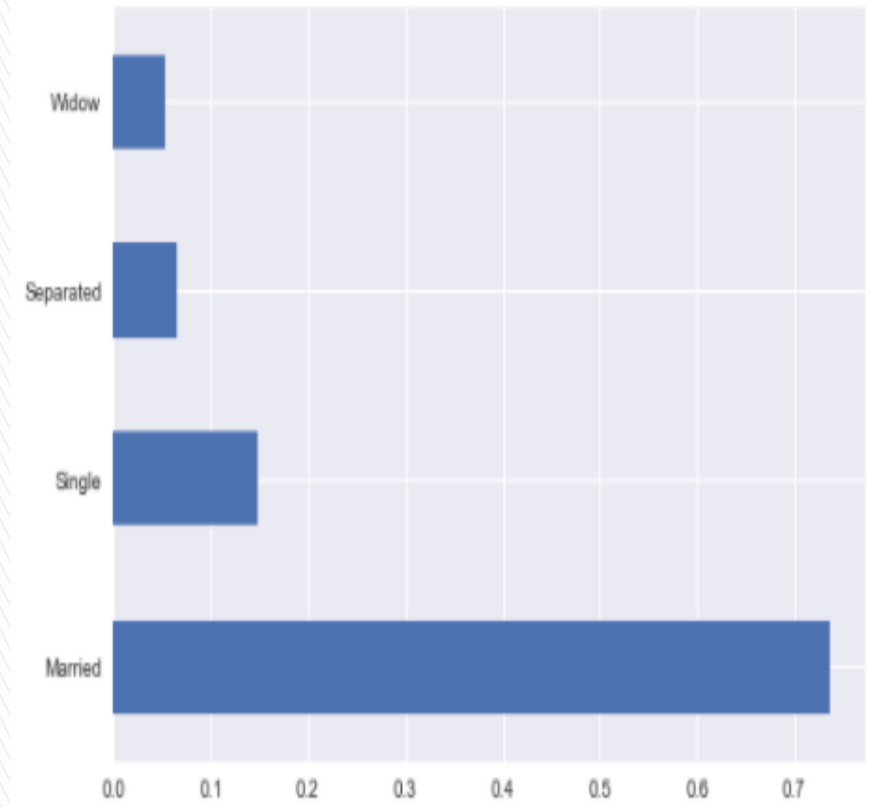
ANALYZING AGE GROUP

- ▶ Mostly people with age group 30–40 have applied for loans.
- ▶ Very less amount of loans were applied by retired people , that is, 60+ aged people.
- ▶ People at young age , that is, having age less than 30 are also applying less loans.



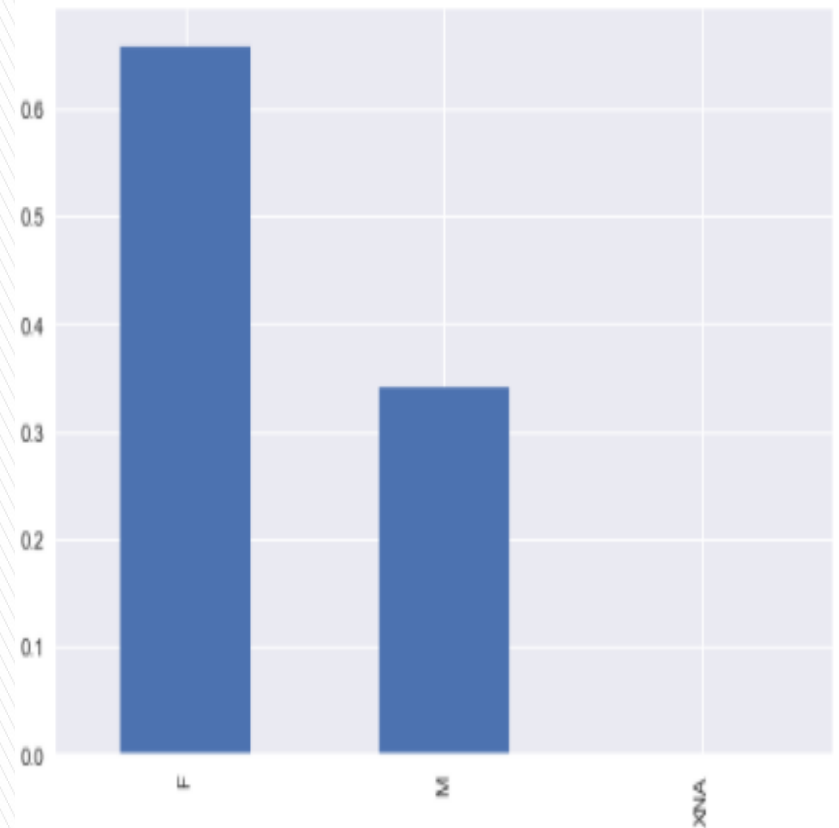
FAMILY STATUS

- ▶ Married people are applying for more loans followed by single people.
- ▶ The count of widows and separated is very less.



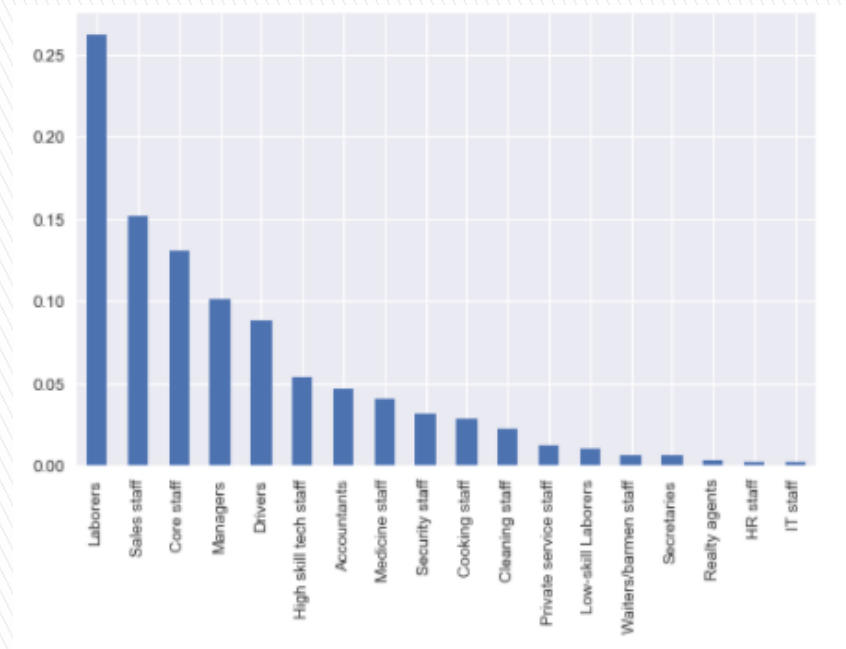
ANALYZING GENDER VARIABLE

- ▶ The count of female is considerably higher than the count of males.
- ▶ More females are applying for loans than male.



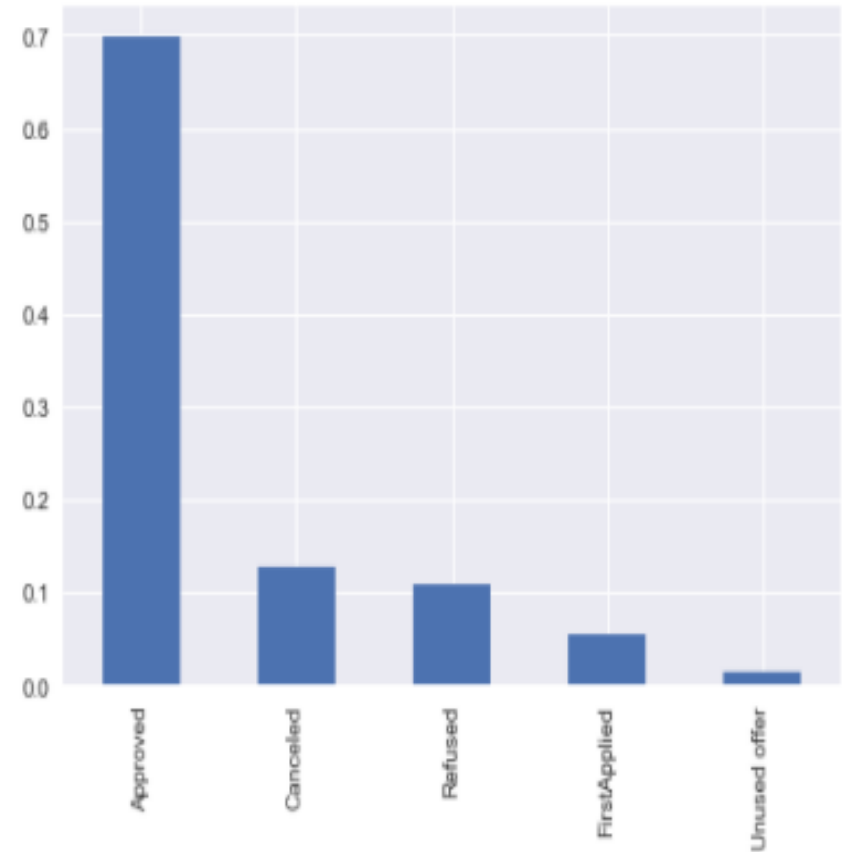
OCCUPATION TYPE

- ▶ The count of laborers is really high than any other occupation.
- ▶ Sales staff , core staff , managers, drivers are also applying for loans in high number.
- ▶ Least count of loans were applied by IT staff , HR staff ,Reality agent , Secretaries and Waller/ bamen staff.



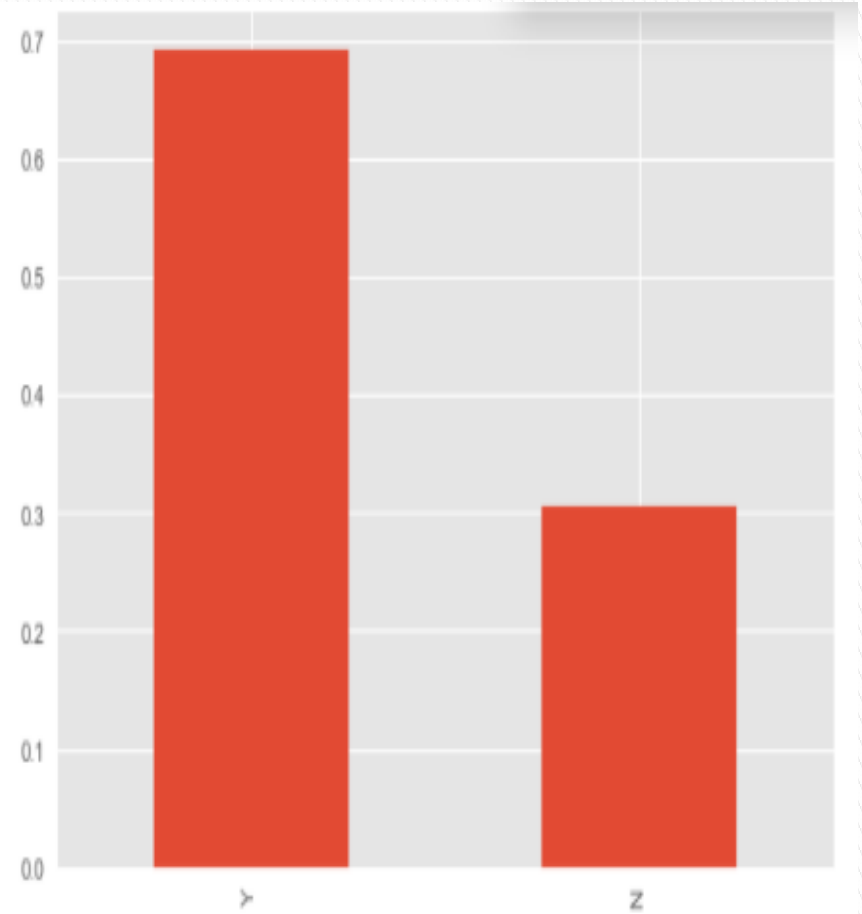
CONTRACT STATUS

- ▶ More loans were approved .
- ▶ The loans which are canceled and refused is very less.
- ▶ Unused offer is considerably less.



OWNS A HOUSE OR NOT

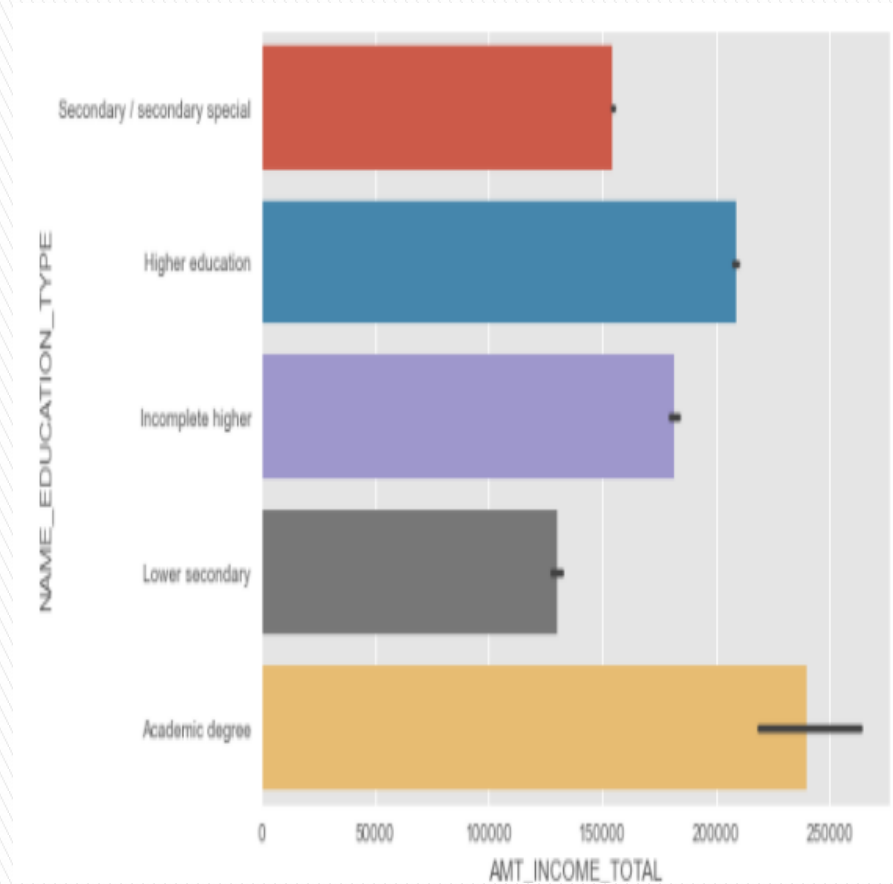
- ▶ People owning house have applied more than people who does not owns a house.



BIVARIATE ANALYSIS

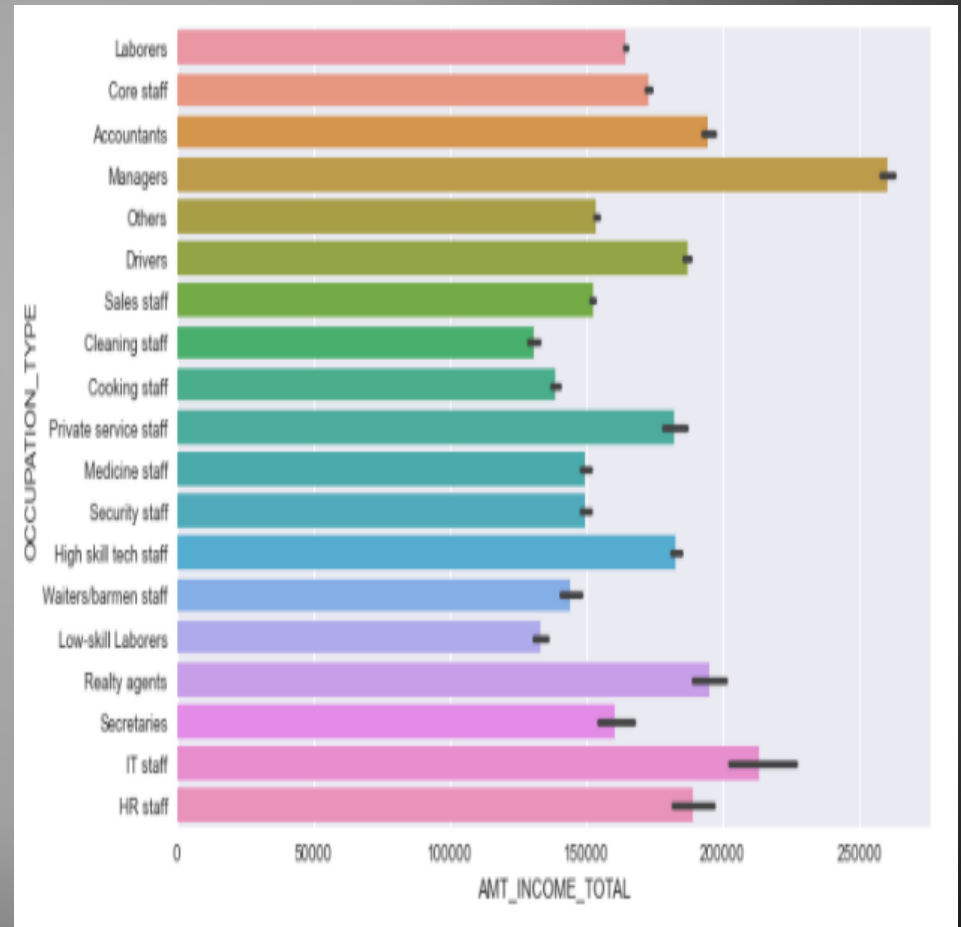
EDUCATION V/S TOTAL INCOME

- ▶ The people are academic degree are earning more than any education level .
- ▶ The earning of People having low secondary qualification is really low.



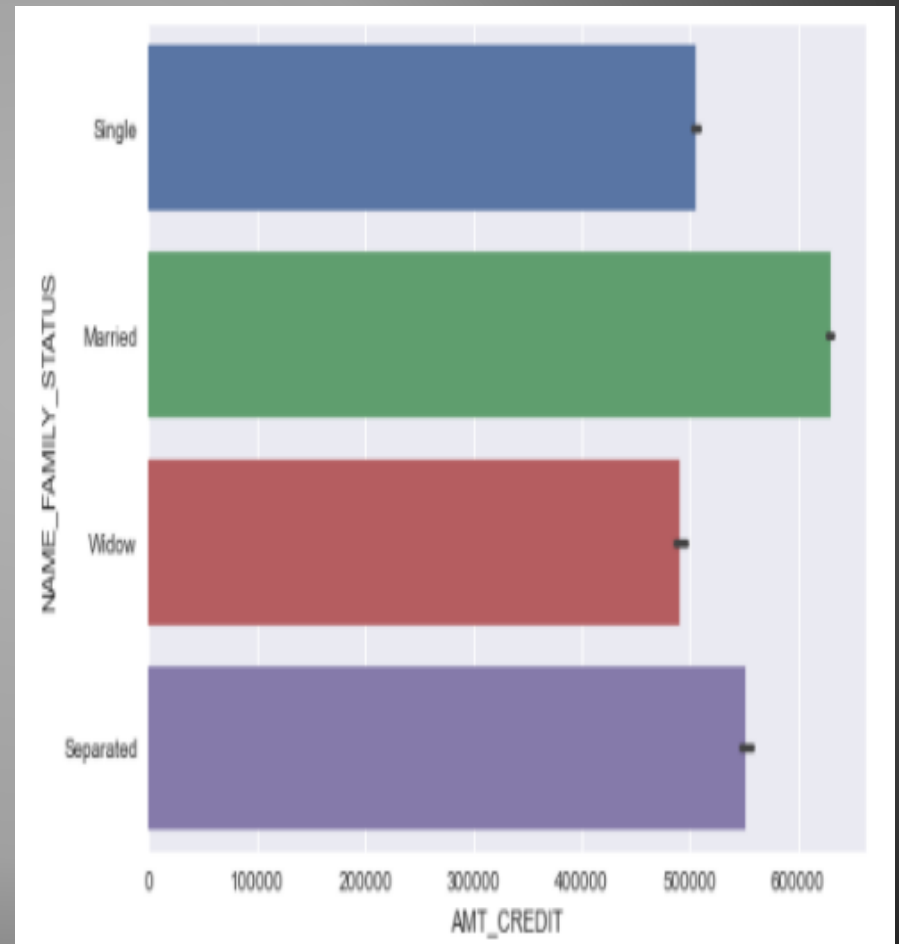
OCCUPATION V/S TOTAL INCOME

- ▶ Managers have the highest salaries followed by IT staff and Realty agents.
- ▶ Low-skill laborers and cleaning are most under paid occupation.



FAMILY STATUS V/S AMOUNT CREDIT

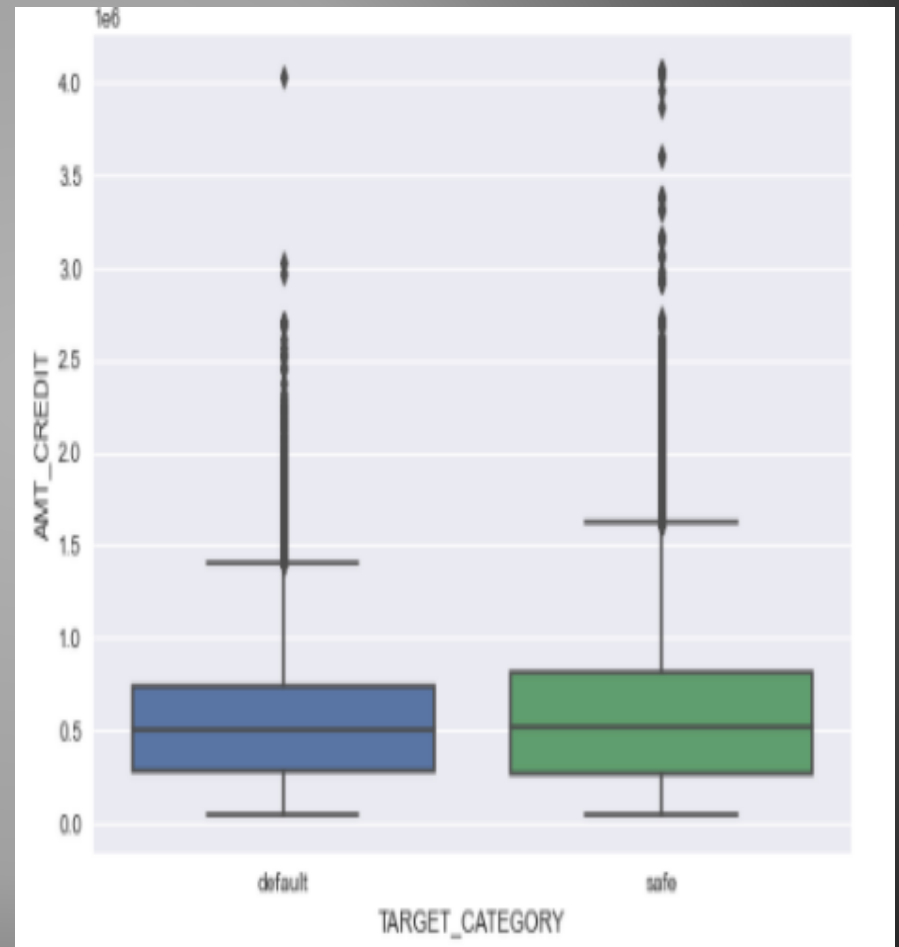
- ▶ Married people have requested high amount of credit followed by separated people.
- ▶ Single people and widows have requested almost equal amount of credit.



TARGET CATEGORY
V/S
OTHER DIMENSIONS

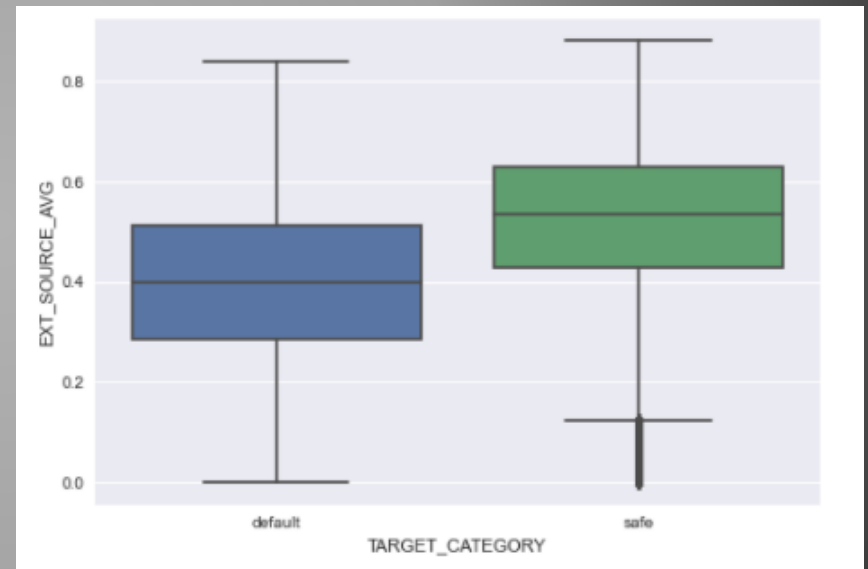
AMOUNT CREDIT V/S TARGET CATEGORY

- ▶ There are more outliers in safe category than default category.
- ▶ The median values of amount credit in both the category is almost same.



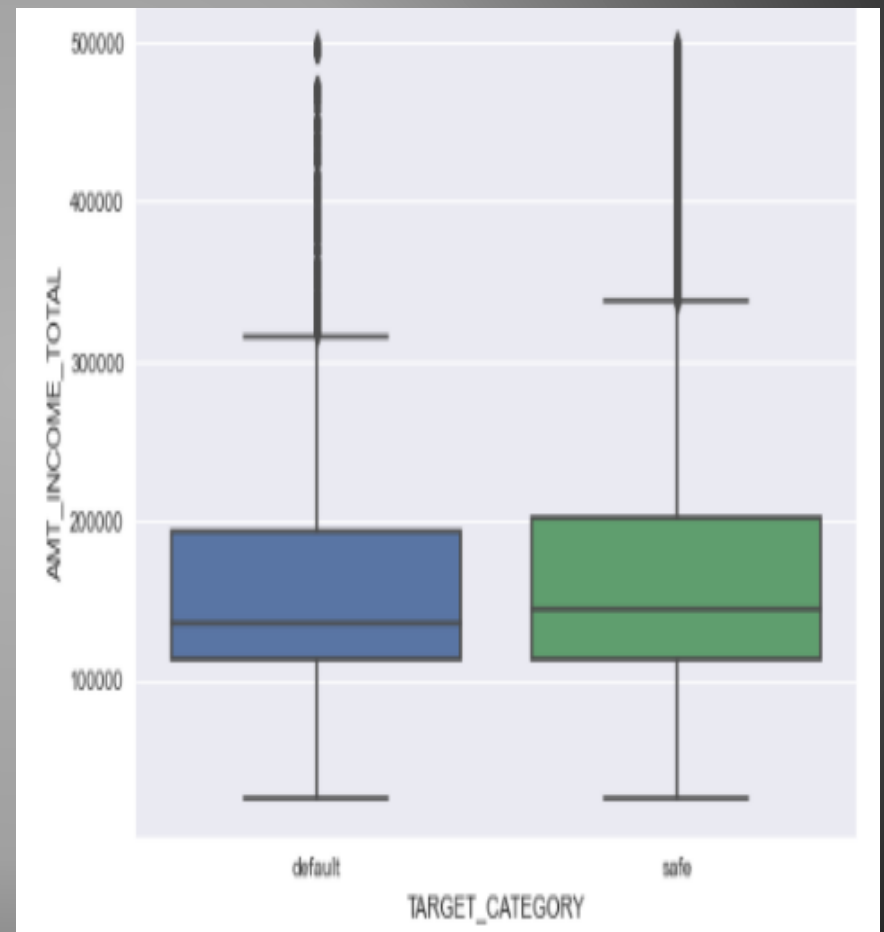
EXTERNAL SOURCE AVERAGE V/S TARGET CATEGORY

- ▶ The median value of the people who are marked safe is high than the people who are marked as defaulters.
- ▶ There are no such outliers.



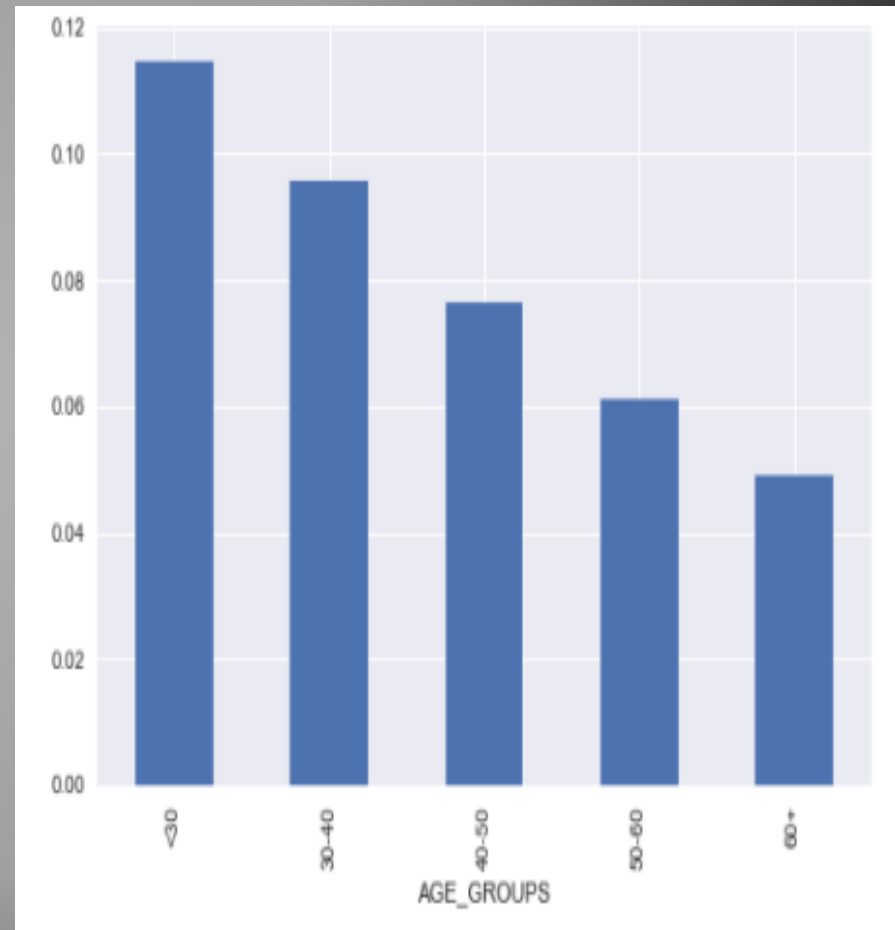
TOTAL INCOME V/S TARGET CATEGORY

- ▶ Both the graphs are almost same .
- ▶ The outliers lie in the range 320000 – 500000 (appx) for both categories.



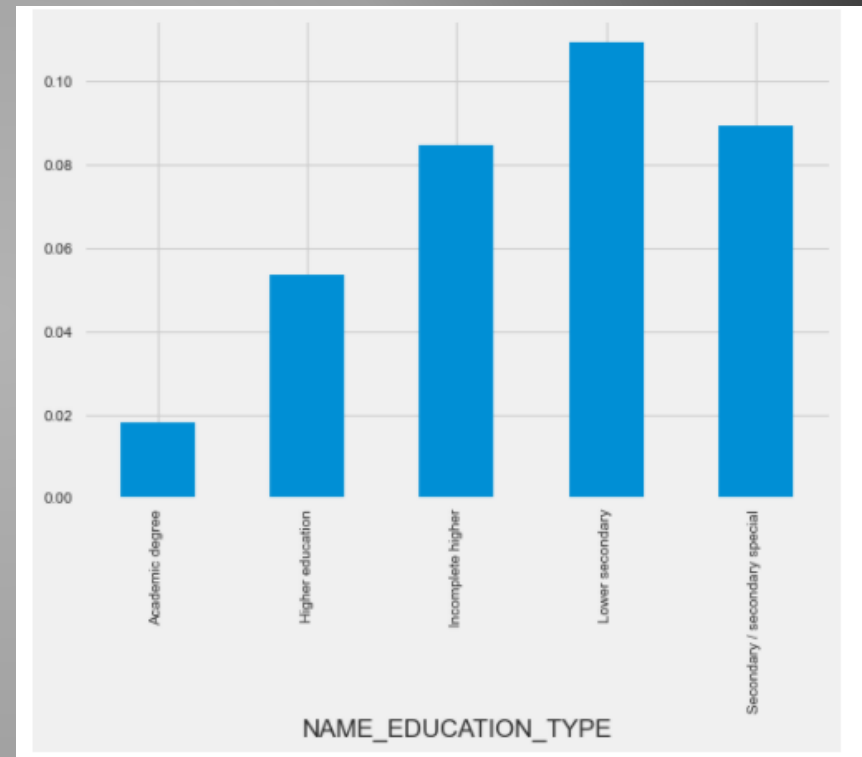
TARGET CATEGORY V/S AGE GROUP

- ▶ The retired / old people are marked safe that is they have made their loan installments on time.
- ▶ The people having age less than 30 are marked closed to defaulters that is they were unable to pay loan installments on time.



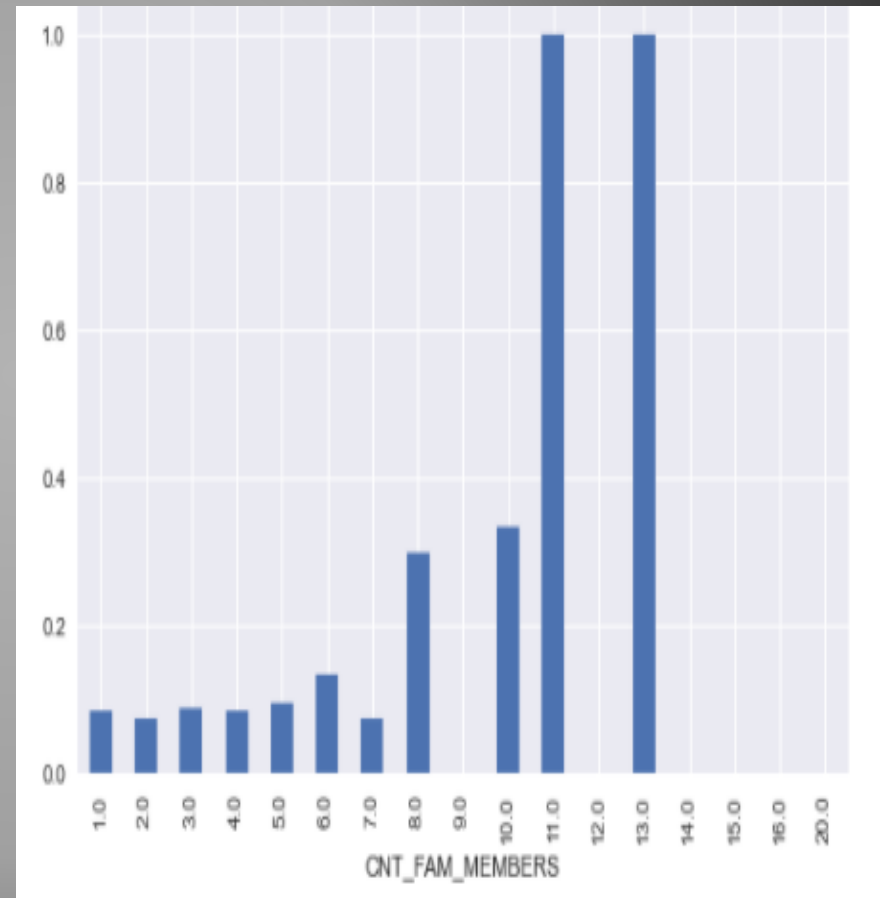
TARGET V/S EDUCATION TYPE

- ▶ The people with lower secondary qualifications are marked as defaulters, they were unable to pay the loan installments.
- ▶ The people with academic degree are able to make their loan installments on time.



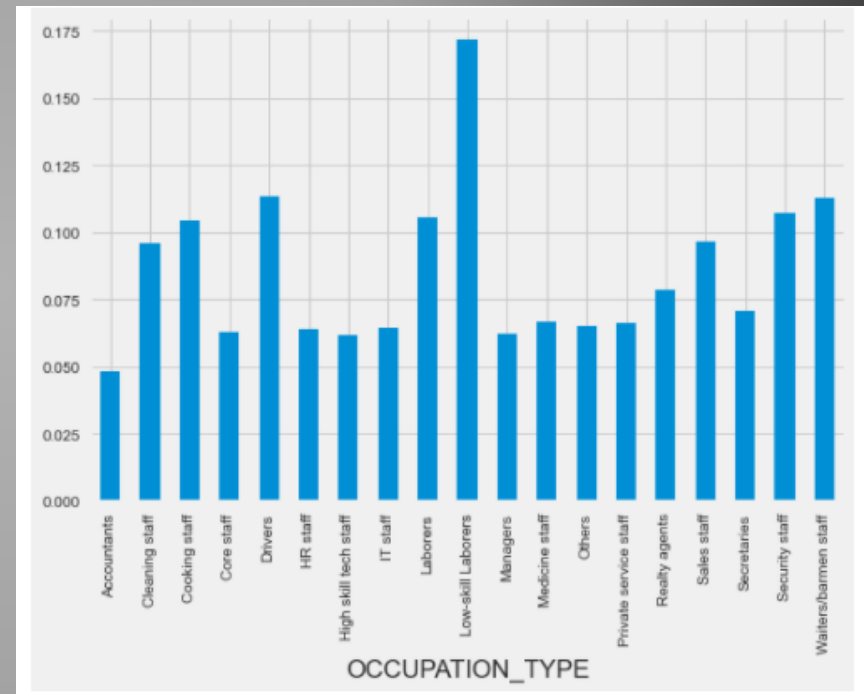
TARGET CATEGORY V/S COUNT OF FAMILY MEMBERS

- ▶ The people having 11–13 family members are not able to pay loan installments on time and hence marked as defaulters.
- ▶ The people having 1–7 family members are most likely to pay their installments on time.



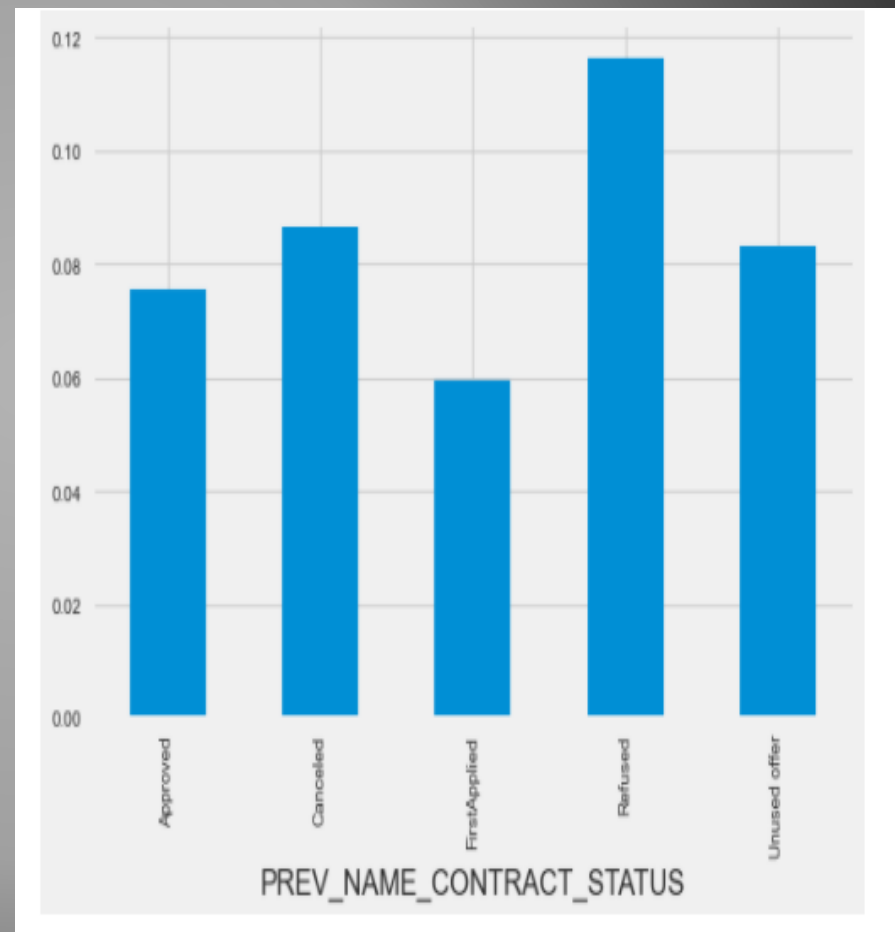
TARGET CATEGORY V/S OCCUPATION TYPE

- ▶ The low-skill laborers were not able to make loan installments and hence marked as defaulters.
- ▶ Accountants are likely to make their payments on time.



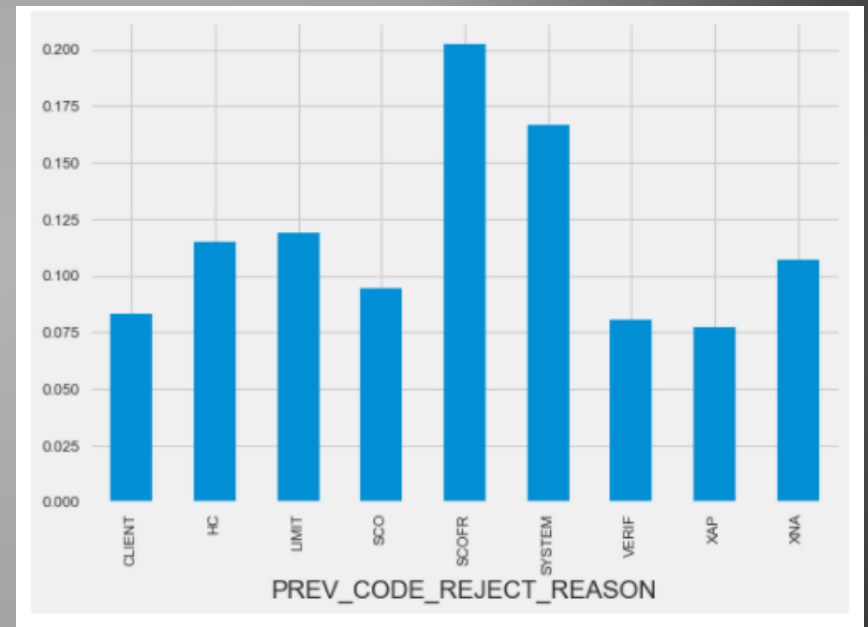
TARGET CATEGORY V/S CONTRACT STATUS

- ▶ The candidates whose loan is approved are more to pay loan installments on time.
- ▶ The people were refused for loan approval as they will default more.



TARGET CATEGORY V/S REASONS FOR REJECTION

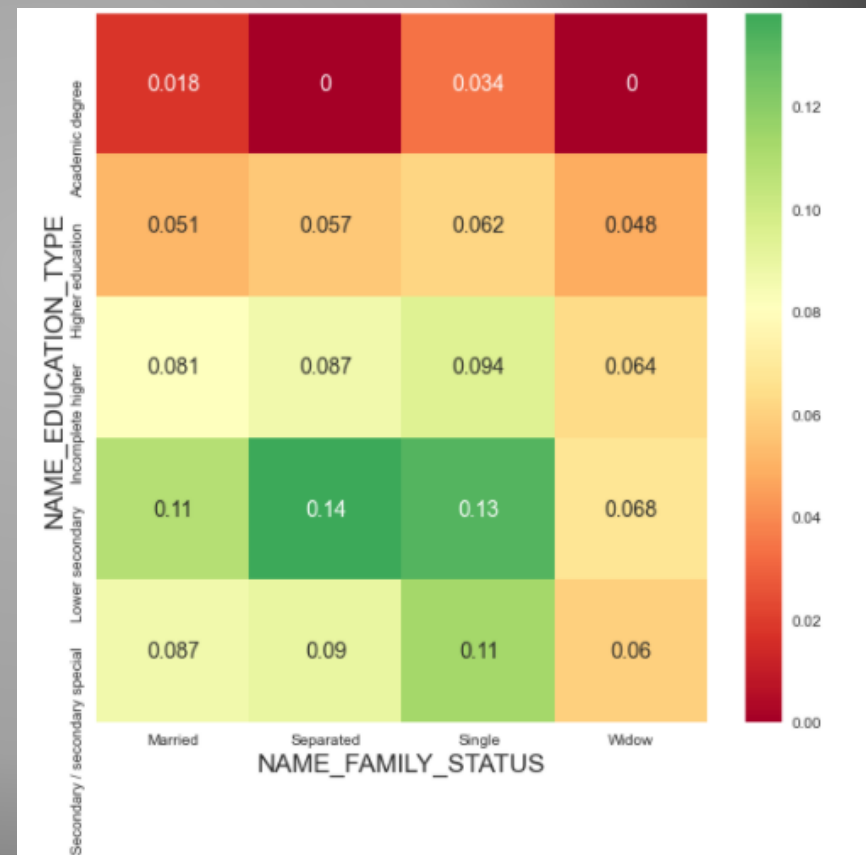
- ▶ The major reason for rejection is SCOFR and system.



MULTIVARIATE ANALYSIS

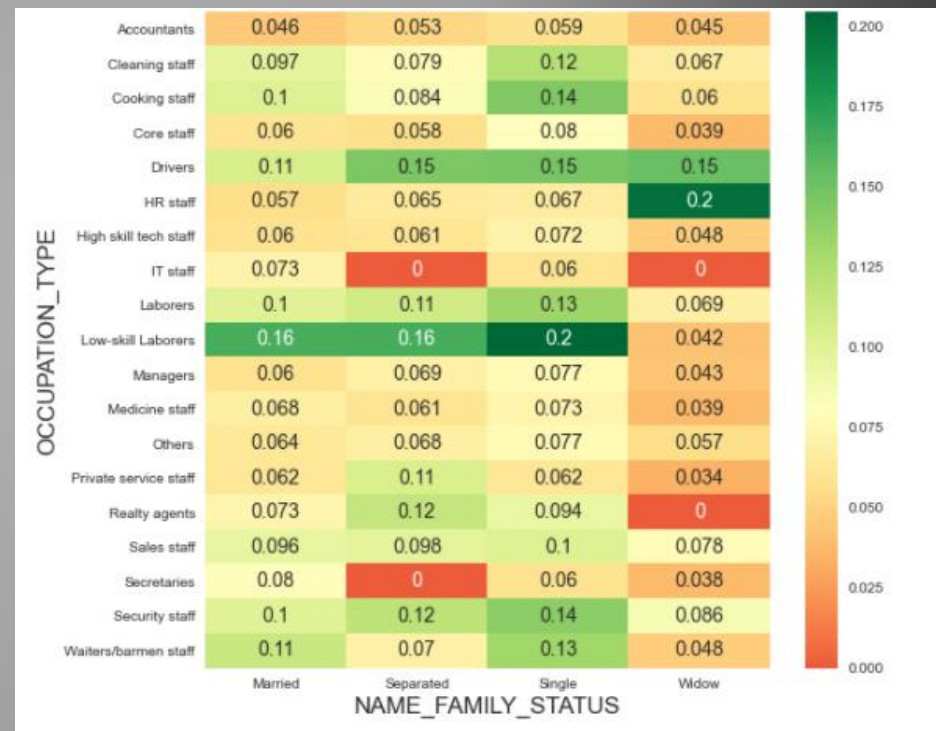
EDUCATION TYPE V/S FAMILY STATUS V/S TARGET

- ▶ The single / separated with lower secondary education tends to default more.
- ▶ The people having academic degree and who are single or widow are the safest group to provide loan .



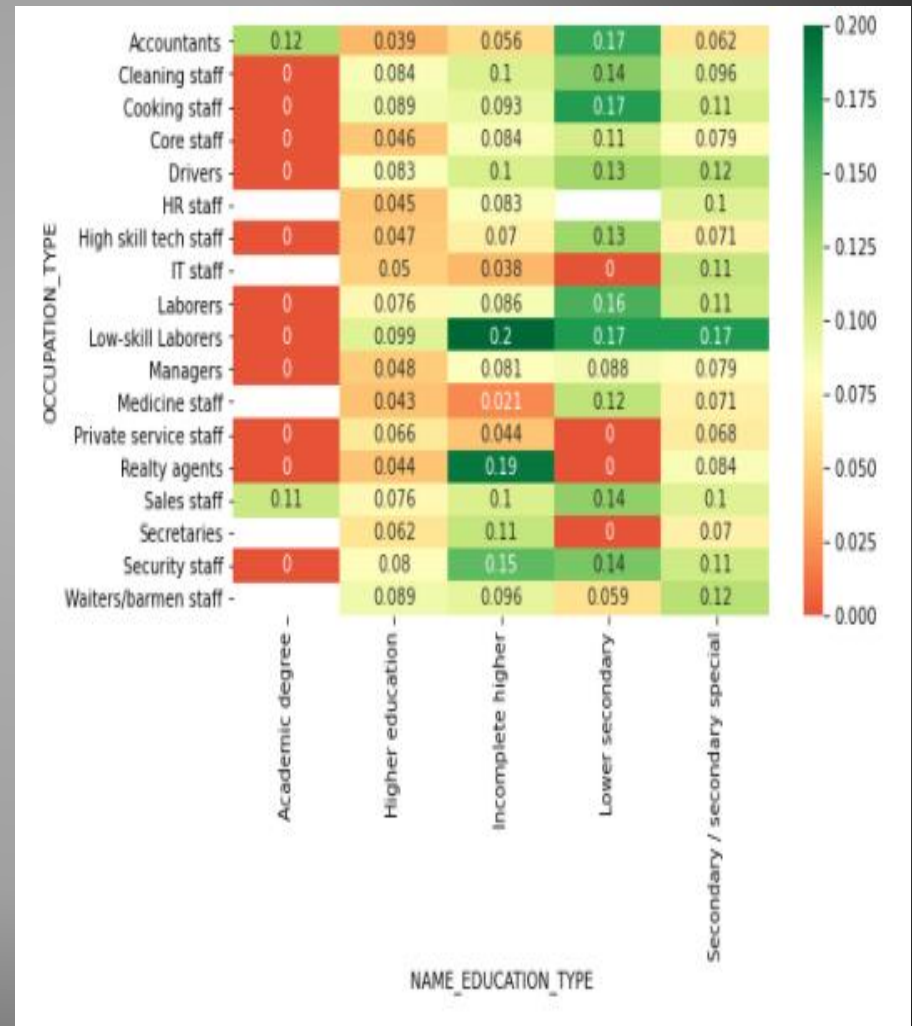
FAMILY STATUS V/S OCCUPATION TYPE V/STARGET

- ▶ The widow working in HR staff and single people who are low skill laborers tend to default more.
- ▶ The widow and separated from IT staff, widow from realty agents and secretaries who are separated are safe to provide loan approvals.



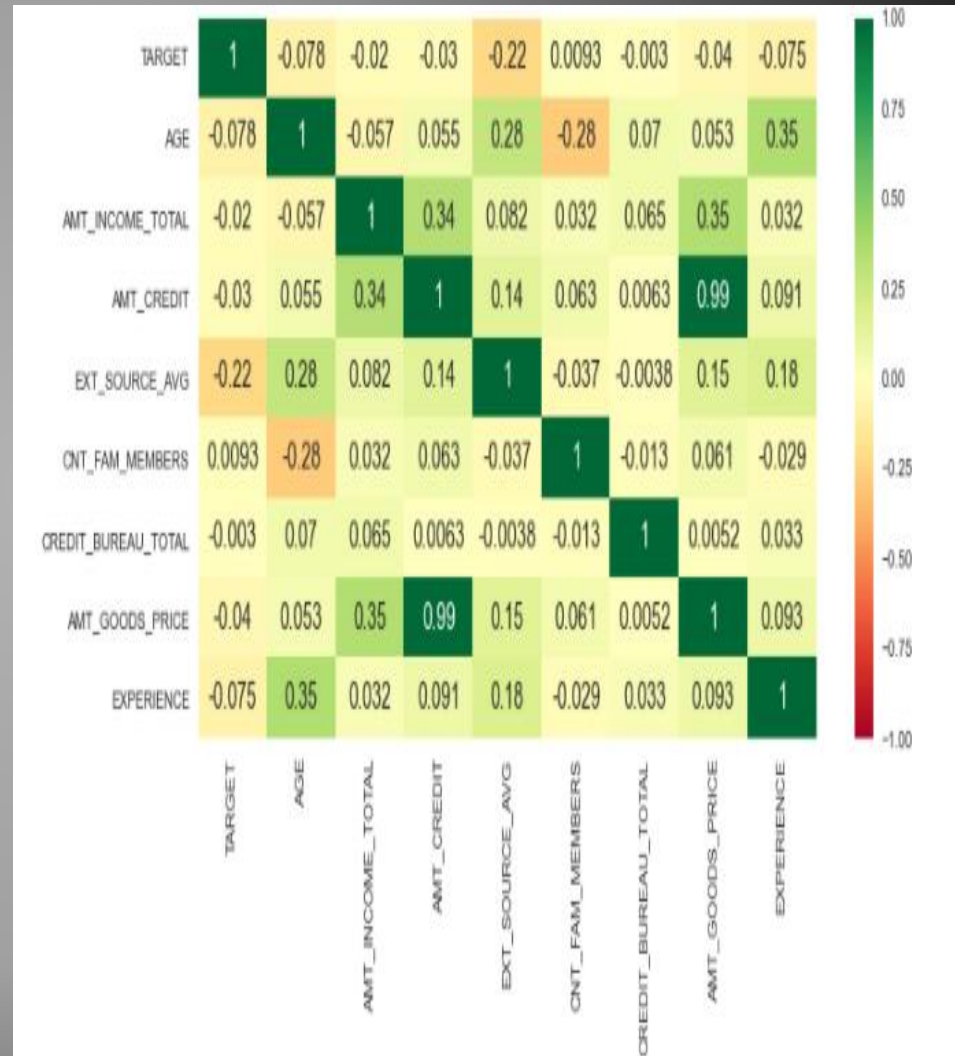
OCCUPATION TYPE V/S EDUCATION TYPE V/STARGET

- ▶ The people having incomplete higher education who are low skill laborers and realty agents tend to default more.
- ▶ People having academic degree with any occupation are safest to give loans.

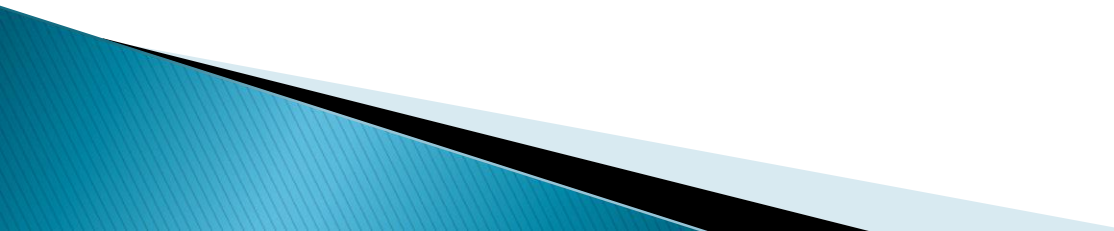


CORRELATION BETWEEN TARGET AND OTHER IMPORTANT NUMERIC VARIABLES

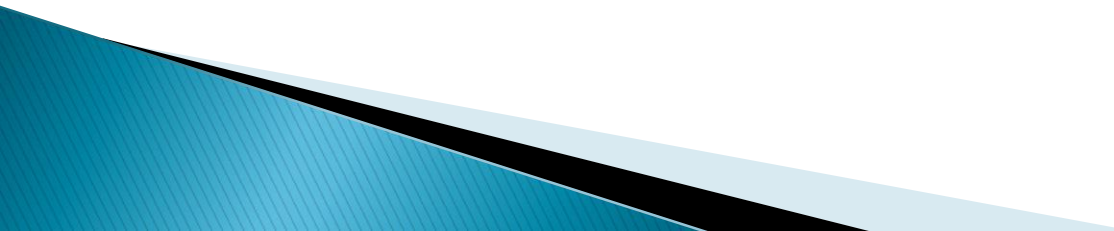
- ▶ There is a high correlation between good price and amount credit in both previous and current application.
- ▶ There is high correlation between



CONCLUSION

- ▶ The categories which seems to be defaulters are as follows:–
 - ❑ Students/People less than age of 30
 - ❑ Low skill laborers who are widowed and single.
 - ❑ The people with incomplete higher education.
 - ❑ People having more than 10 family members.
 - ❑ The widow working in HR staff.
- 

▶ The safest categories to which bank can provide loan are :-

- ❑ Females
 - ❑ People having academic degree
 - ❑ Old age people
 - ❑ Accountants
 - ❑ Educated Realty agents
 - ❑ IT staff
 - ❑ Married people
- 

THANK YOU