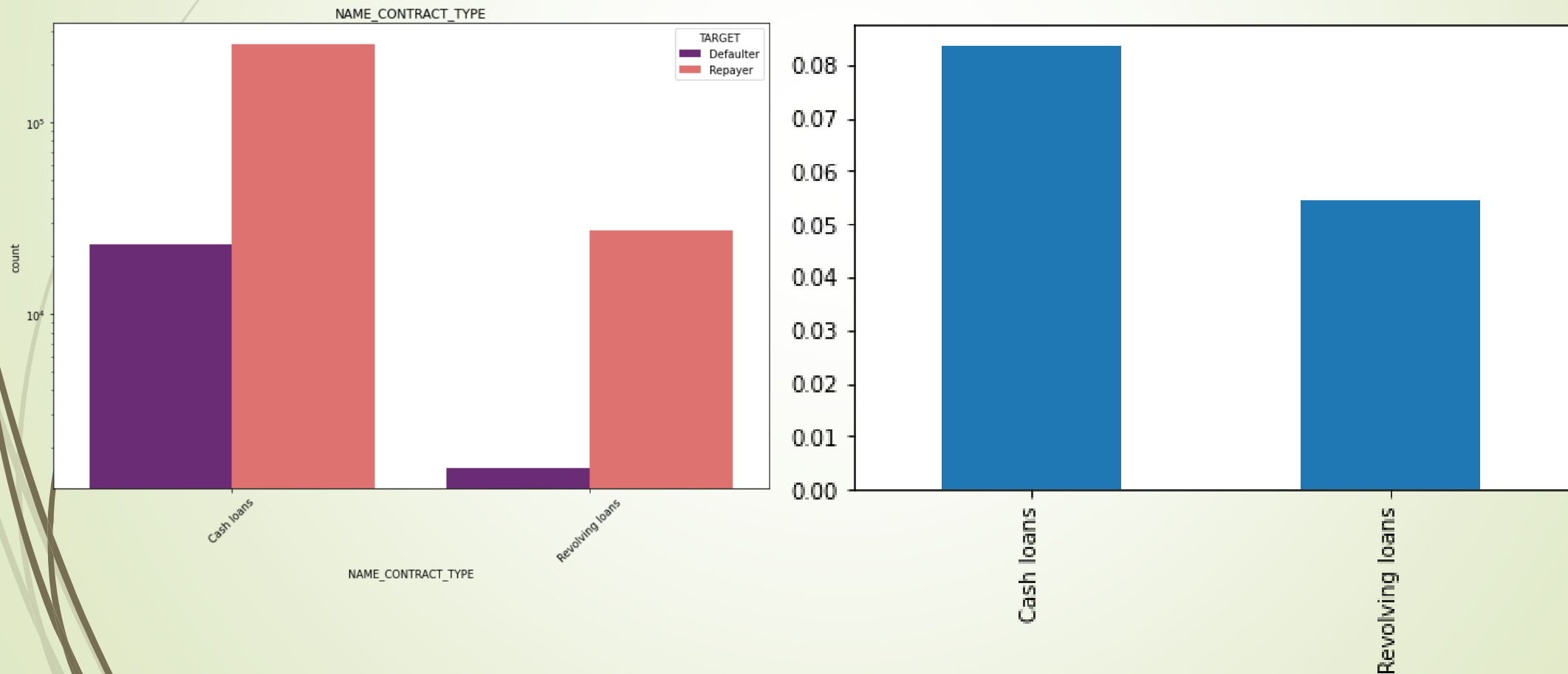# CREDIT – EDA CASE STUDY

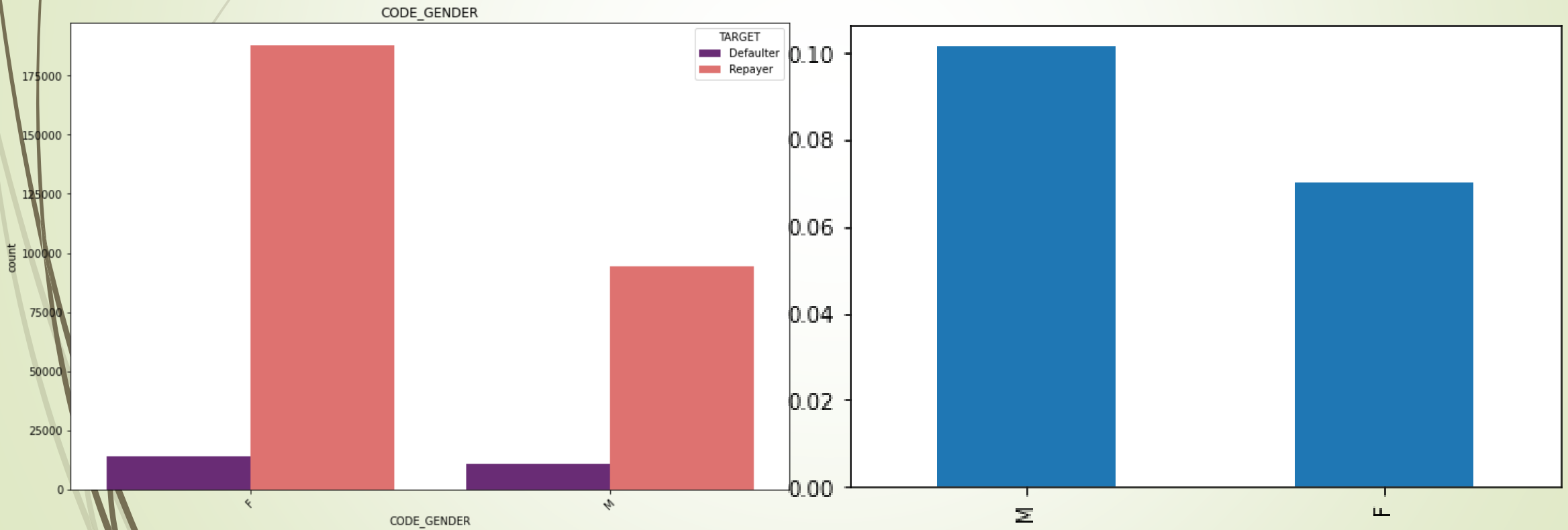Presented by ,
Sahil Pattiwar

Univariate Analysis

Contract Type – Revolving Loans Are Much Safer Than Cash Loans

Univariate Analysis

Gender– Based on the proportion of defaulted credits, males have a higher chance of Default , comparing with women
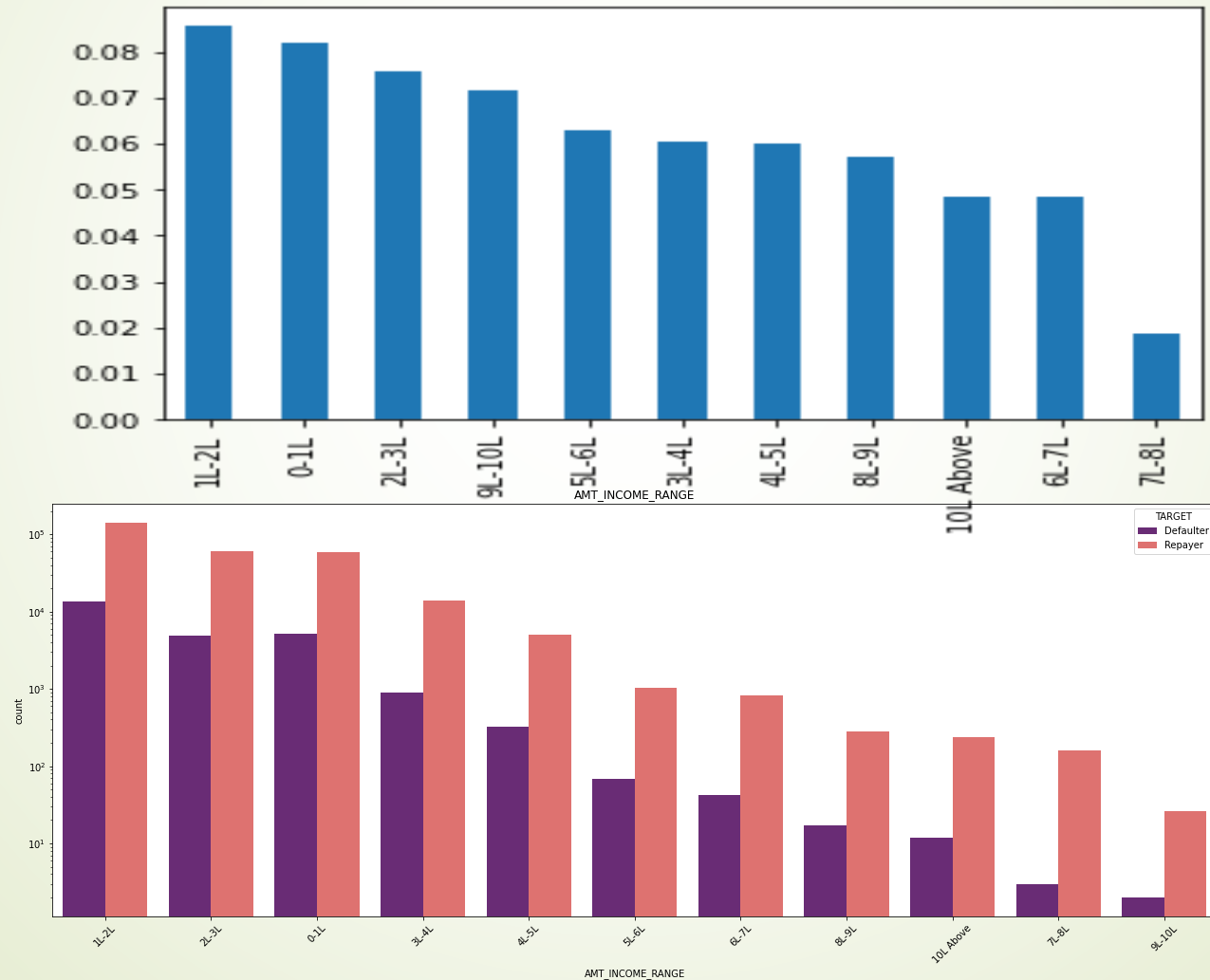
Univariate Analysis

Contract Type -People living in office apartments have lowest default rate and People living with parents (~11.5%) and living in rented apartments(>12%) have higher probability of defaulting
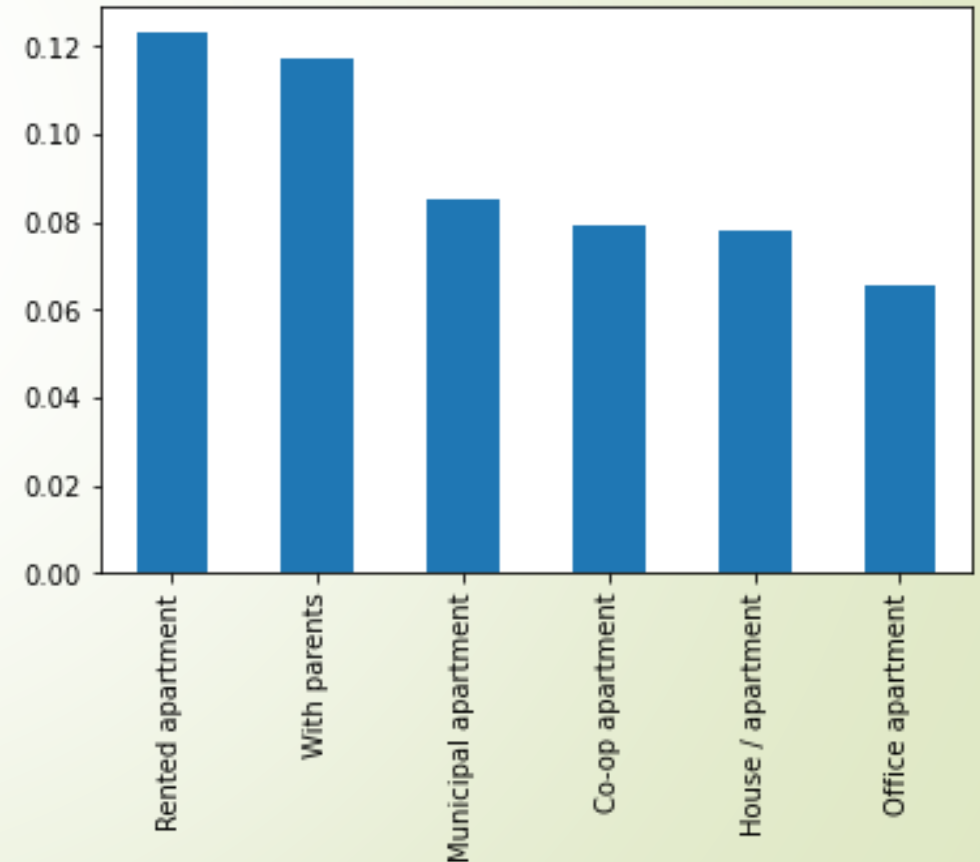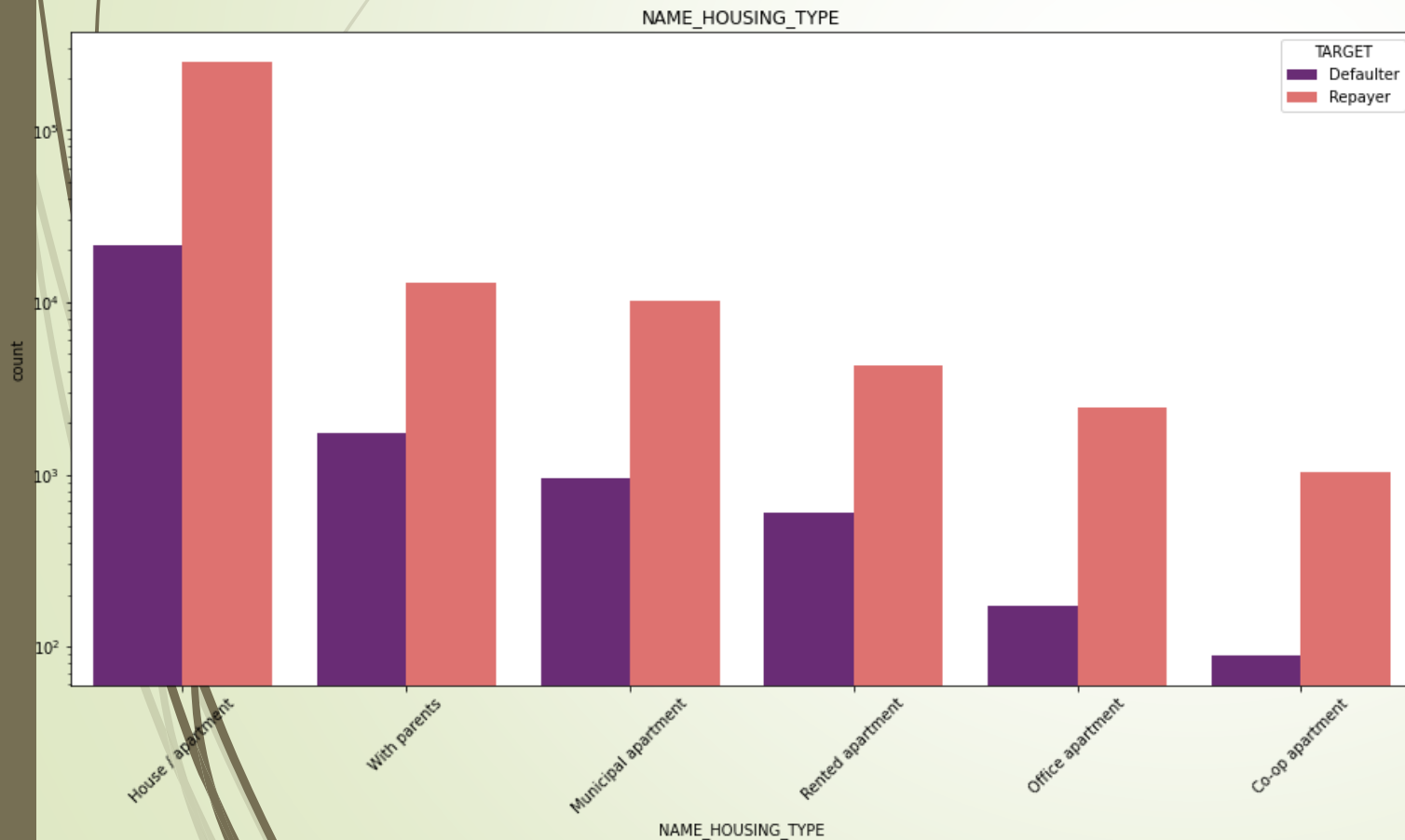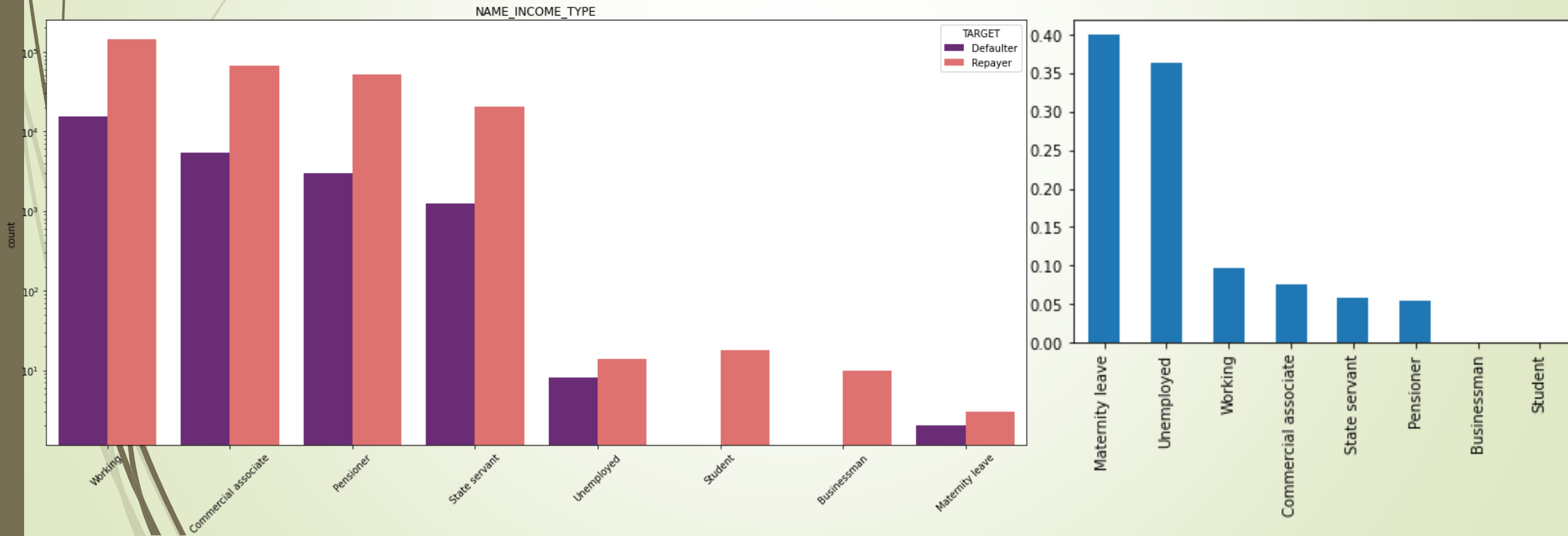
Univariate Analysis

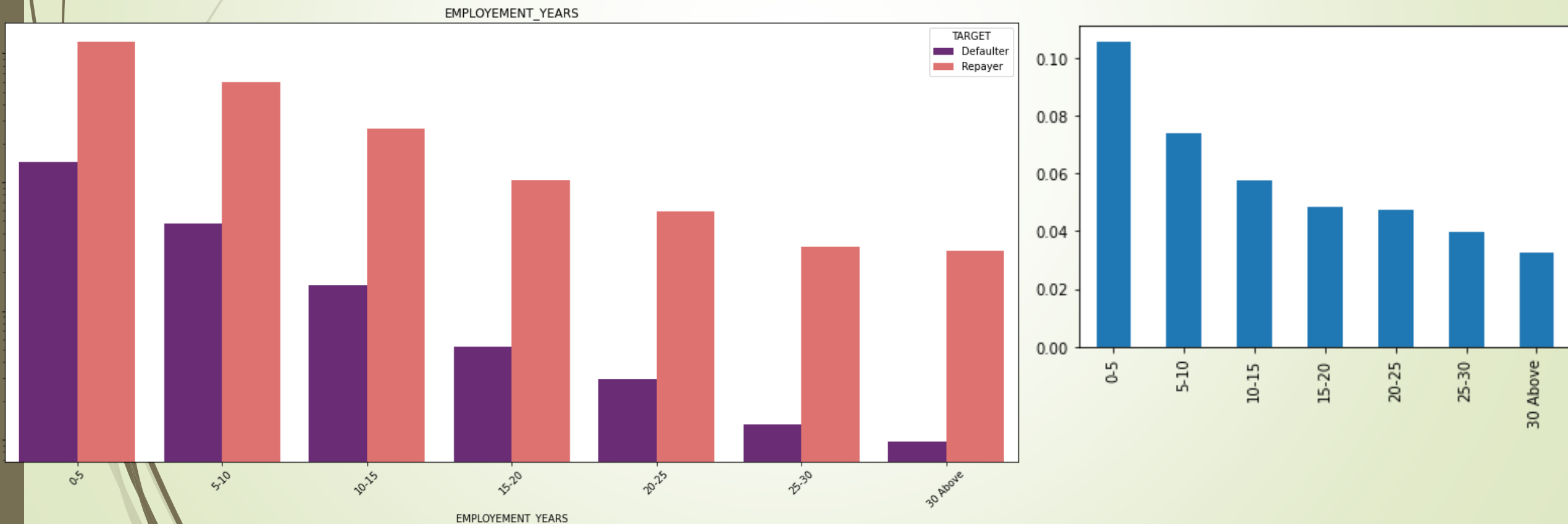AMT_INCOME_RANGE– People With Higher Income tends to less Default

Univariate Analysis

Income Type – Even tough Student and Businessmen though less in numbers , the are still safest among the clients with minimum Defaulter.
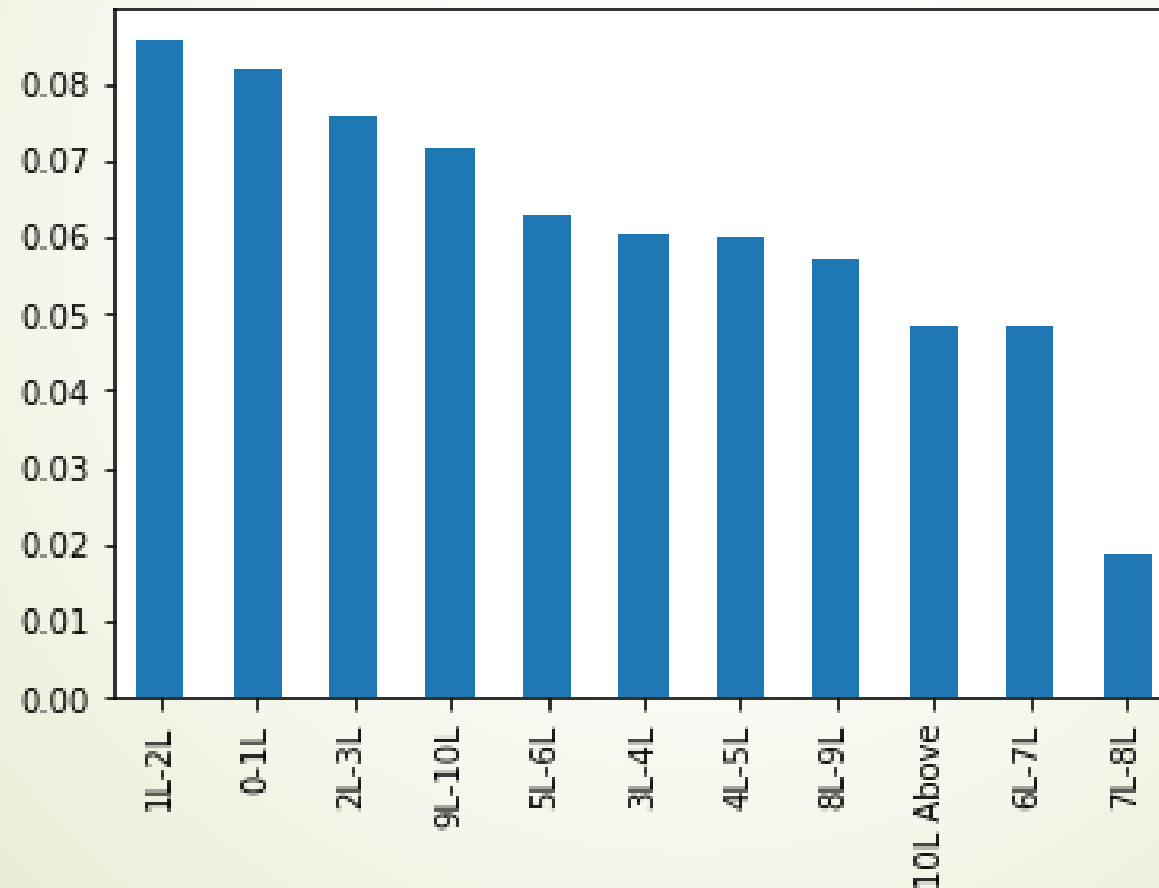
Univariate Analysis

Experience Type – Here we can see as experienced increase Loan application reduces and default rate also reduced

Univariate Analysis

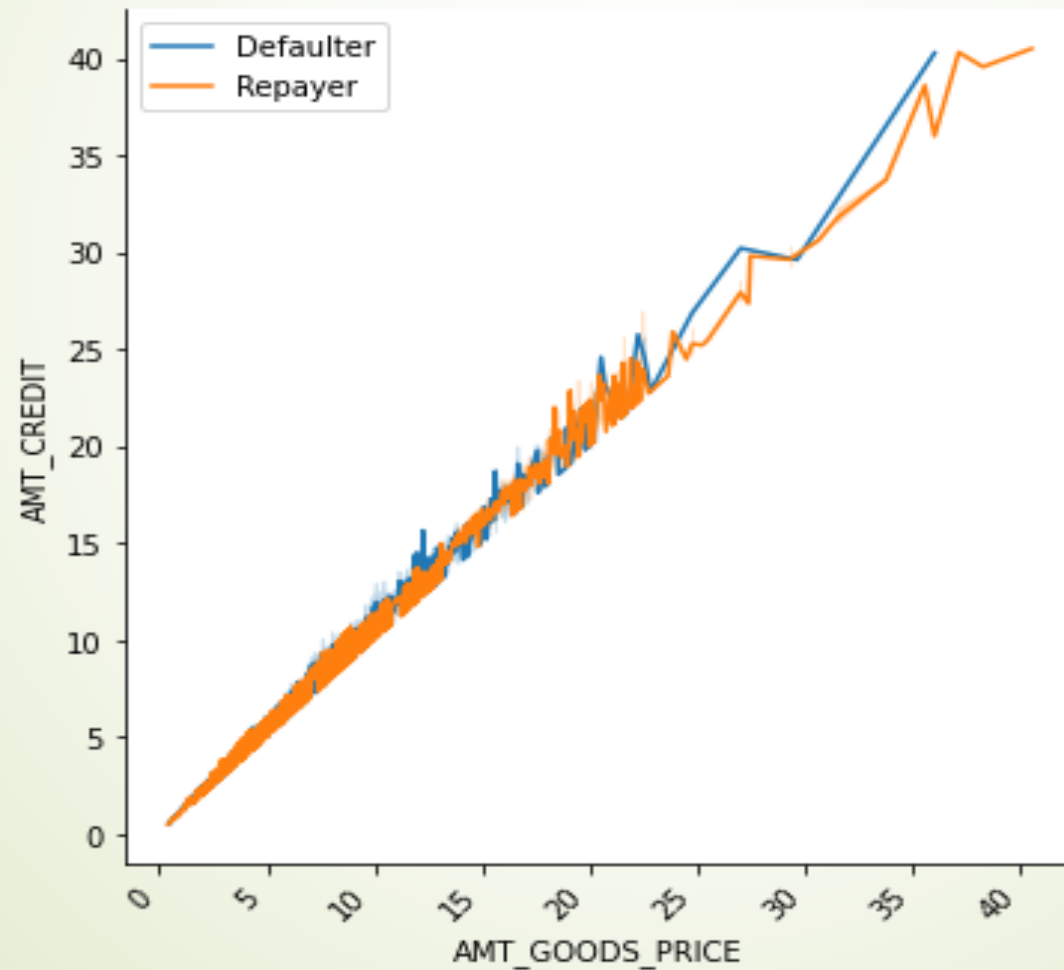Income Range –We can See Pattern That Higher Income Class Have Less chances of Default

Bivariate Analysis
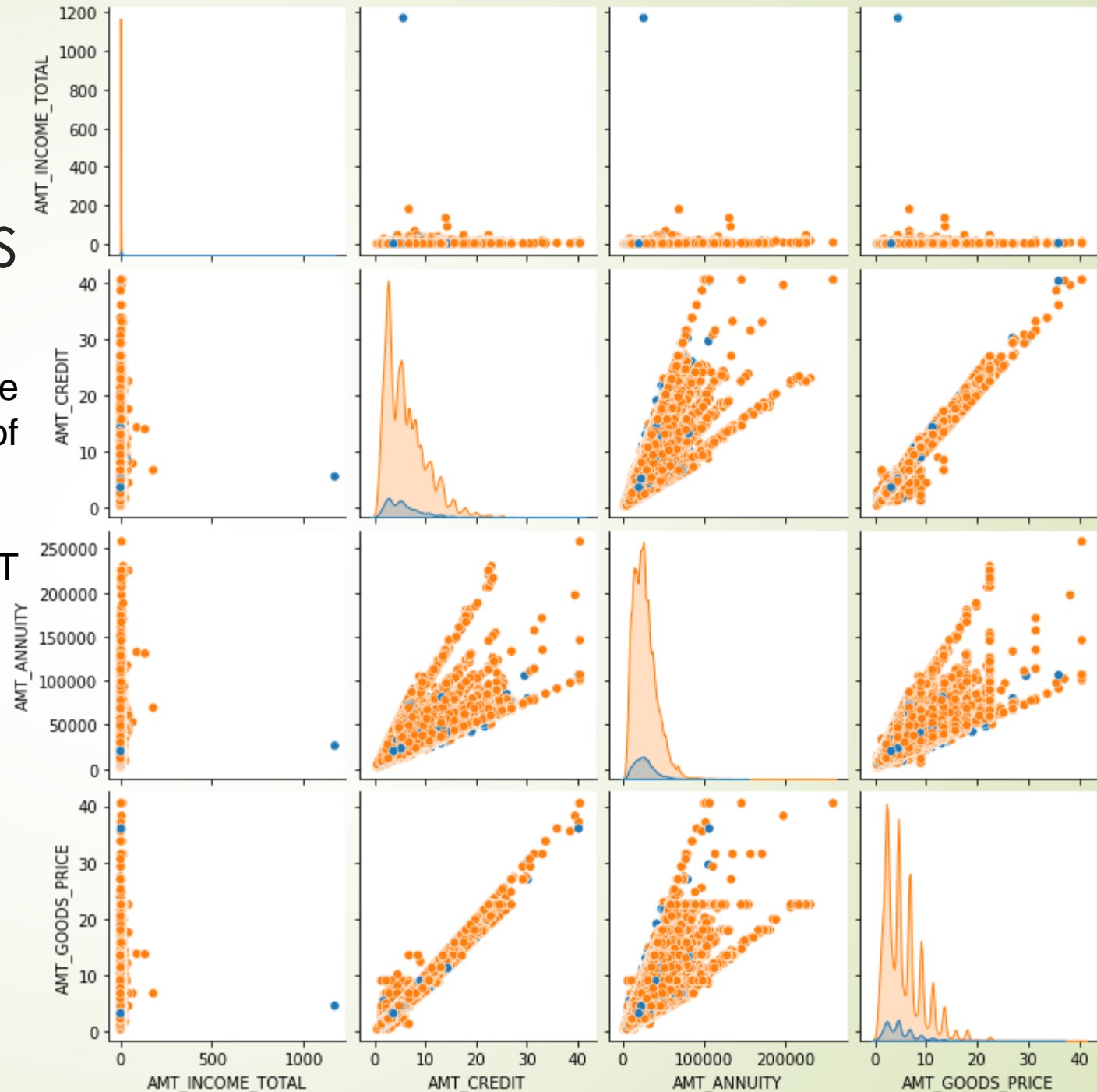## 'AMT_GOODS_PRICE' Vs 'AMT_CREDIT'
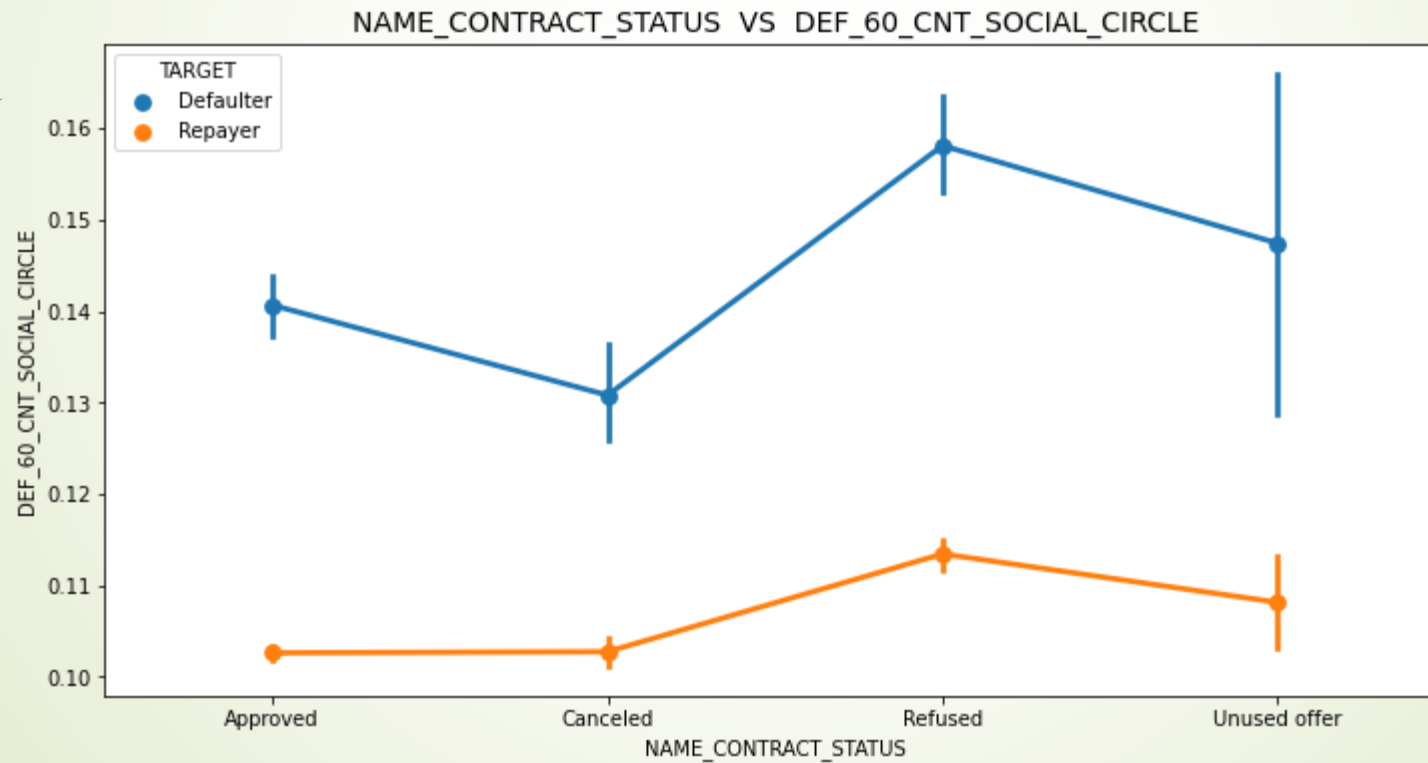### Loan Amount 30L Have Higher Default Rate

Bivariate Analysis

When Annuity Amount > 15K and Good Price Amount > 20 Lakhs, there is a lesser chance of defaulters

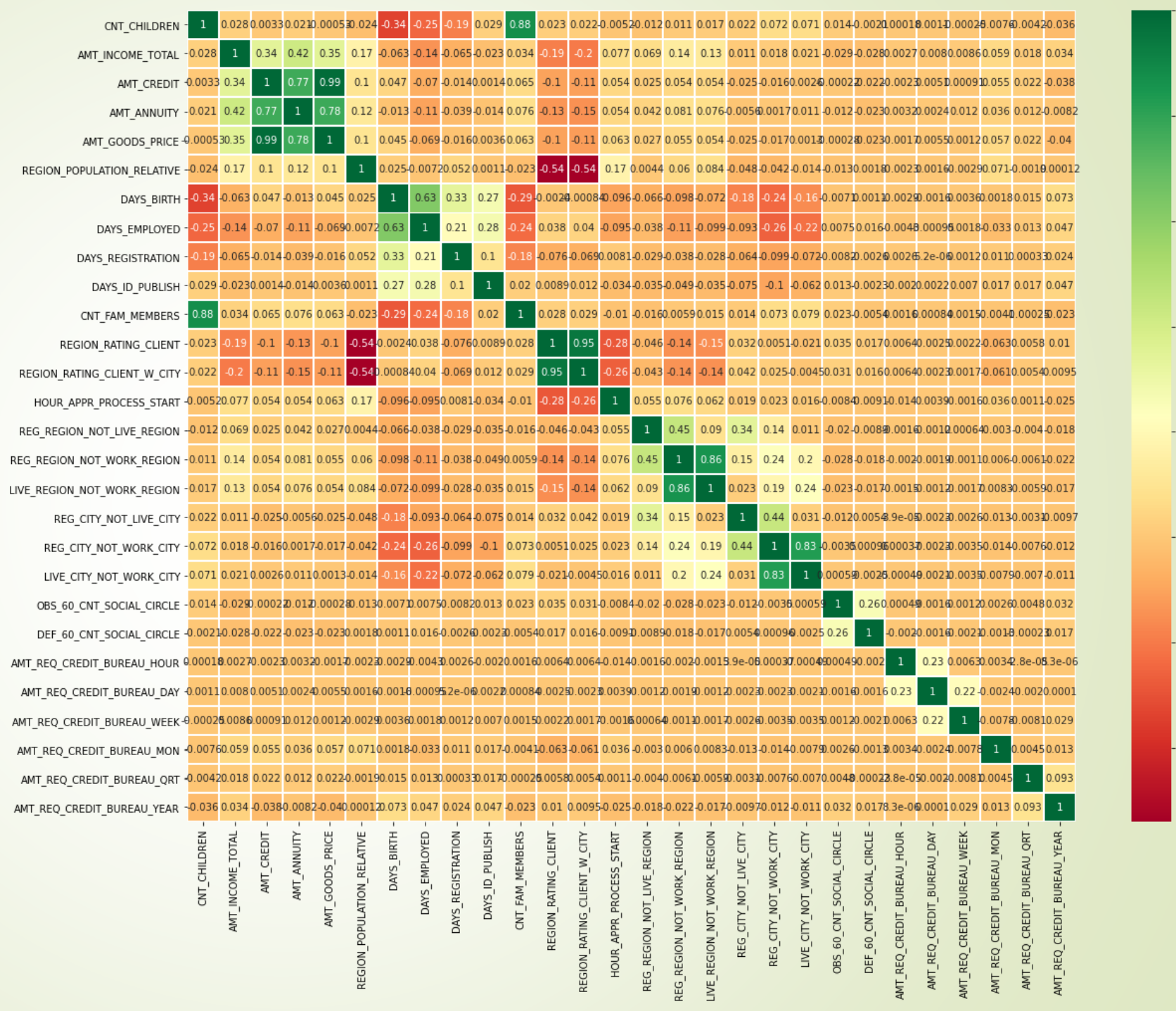There are very less defaulters for AMT_CREDIT >20 Lakhs

Bivariate Analysis

Social Circle– Clients Whose Social Circle has Higher Defaulters Are more likely to default More

Multivariate Analysis

Credit amount is highly correlated with among repayors

- Goods Price Amount
- Loan Annuity
- Total Income

Multivariate Analysis

Correlating factors

- Loan annuity correlation with credit amount has lightly reduced in repayors(0.77) when compared to defaulters(0.75)
- We can also see that repayors have high correlation in number of days employed(0.63) when compared to defaulters(0.58).
- There is a severe drop in the correlation between total income of the client and the credit amount(0.038) amongst defaulters whereas it is 0.34 among repayors.

Top Correlation For Repayment

1. NAME_EDUCATION_TYPE: Academic degree has less defaults.

2. NAME_INCOME_TYPE: Student and Businessmen have no defaults.

3. ORGANIZATION_TYPE: Clients from Security Ministry have Least Default rate

4. DAYS_BIRTH: People above age of 50 have low probability of defaulting

5. DAYS_EMPLOYED: Clients with 40+ year experience having less than 1% default rate

6. AMT_INCOME_TOTAL: Applicant with Income increase the chances of default are also less , Income above 700,000 are safest

7. NAME_CASH_LOAN_PURPOSE: Loans bought for Hobby, Buying garage are being repayed mostly.

8. CODE_GENDER: Men are at relatively higher default rate

9. NAME_EDUCATION_TYPE: People with Lower Secondary & Secondary education

10. OCCUPATION_TYPE: Avoid Low-skill Laborers, Drivers and Waiters/barmen staff, Security staff, Laborers and Cooking staff as their default rate is huge.

11. DAYS_BIRTH: Avoid young people who are in age group of 20-40 as they have higher probability of defaulting

12. DAYS_EMPLOYED: People who have less than 5 years of employment have high default rate.

13. AMT_GOODS_PRICE: When the credit amount goes beyond 3lakhs, there is an increase in defaulters.

Final Suggestions

1. 1. Banks should focus more on contract type 'Student' ,'pensioner' and 'Businessman' with housing 'type other than 'Co-op apartment' for successful payments.

2. 2. Banks should more on loans Amount 0f less than 30Lacks as they have less Default Rate

3. 3. Banks Can ignore loan application from Unemployed Clients as they have High chance of default about 40 %

4. 4. People living in office apartments and with parents has lowest default rate so Focus can be increased there

5. 5. There are very high No of clients whose Loan was Cancelled but those are among the higher repaying client

6. 6. Refusal reason should be recorded for further analysis as these clients could turn into potential repaying customer.