CREDIT EDA ANALYSIS

RISK ASSESSMENT

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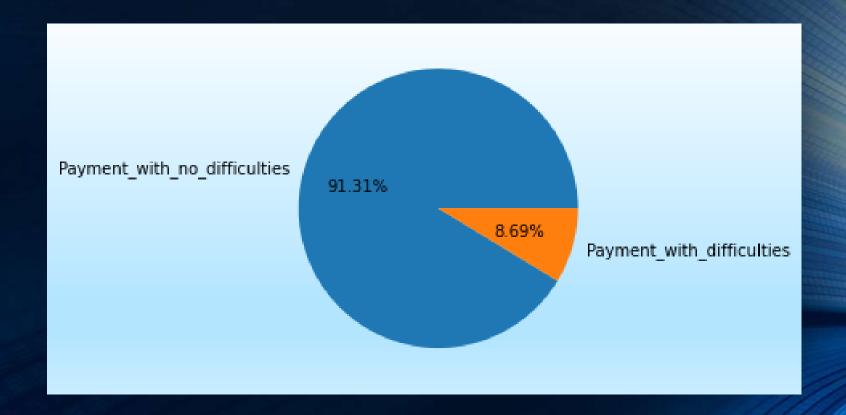
Problem Statement

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.

The company wants to understand the driving factors(or driver variables) behind loan default, i.e. the Variables which are strong indicators of default
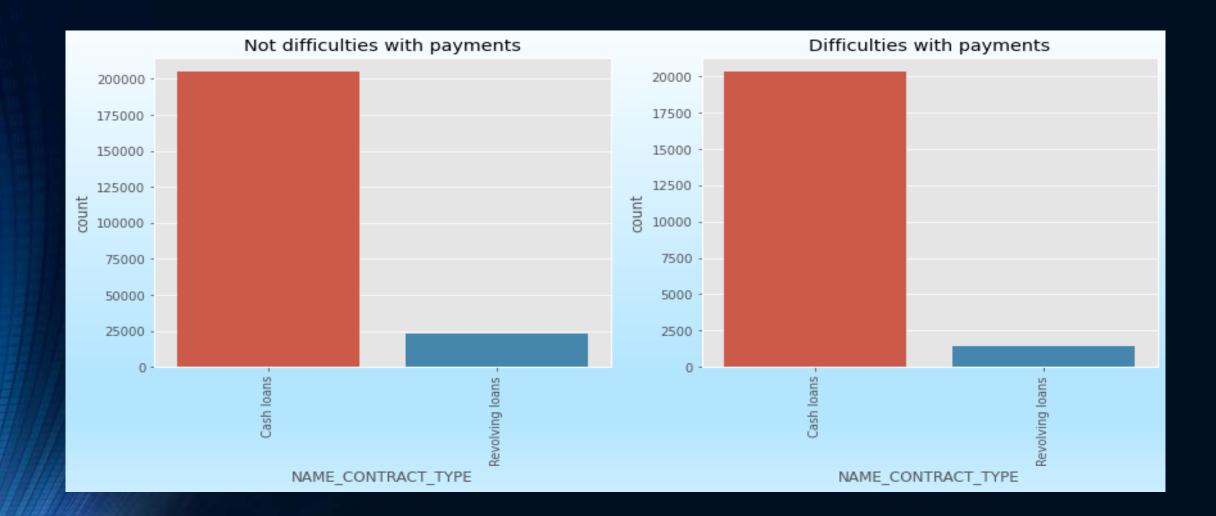
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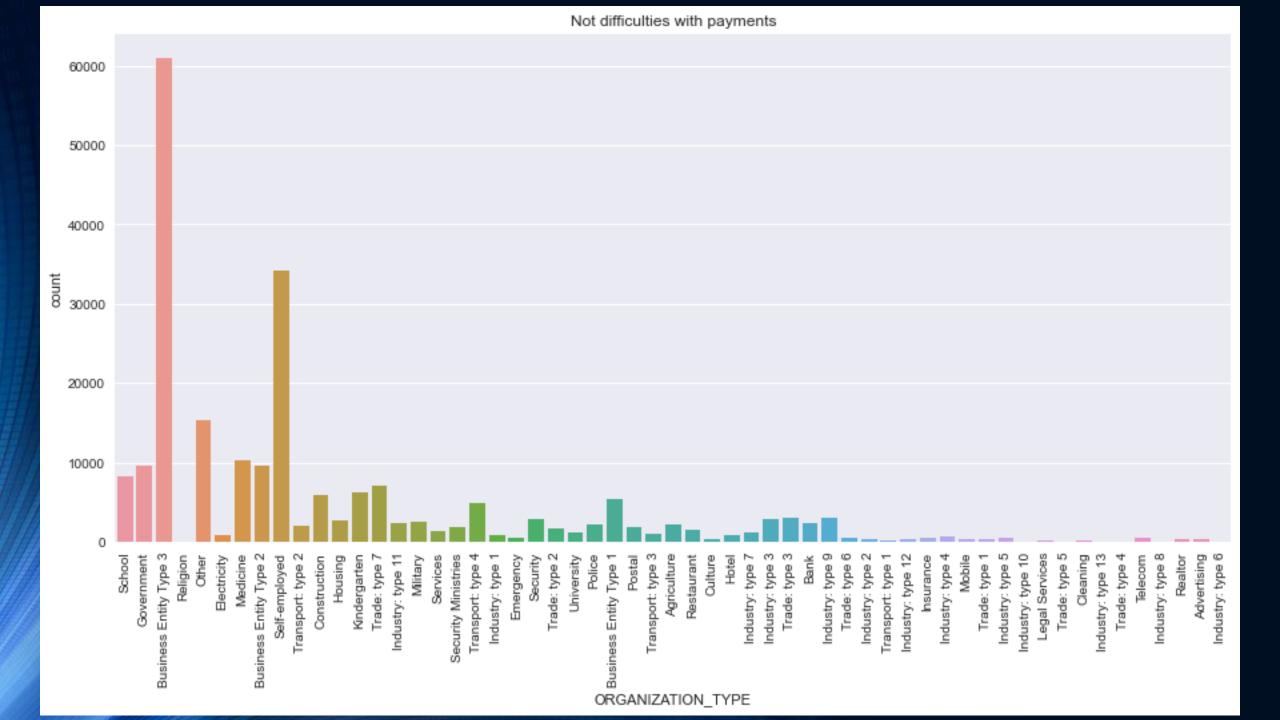3) Numerical Univariate Analysis

4) Numerical Bivariate Analysis
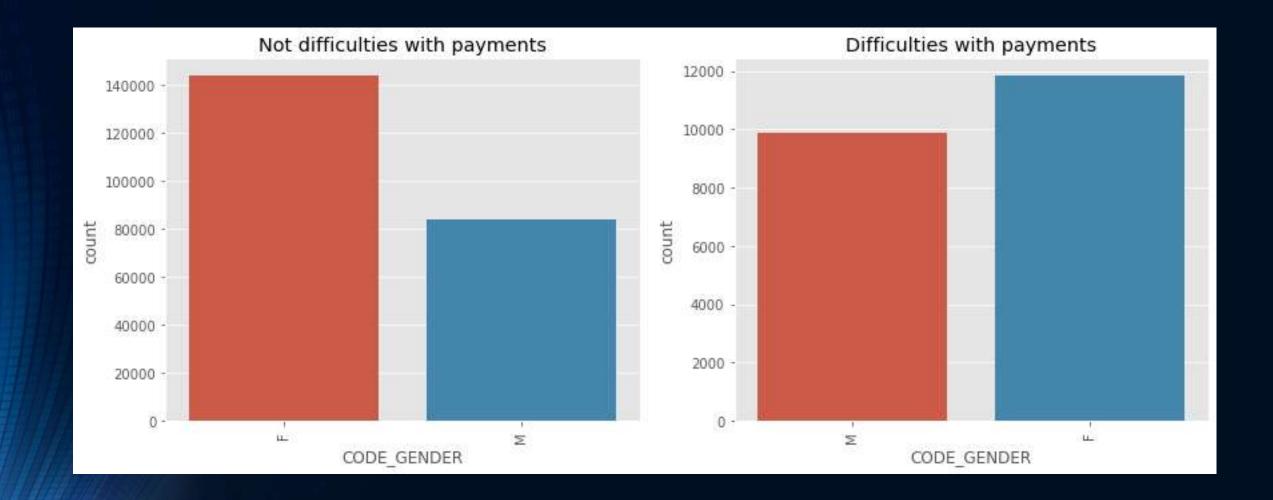
•Categorical Univariate Analysis

Observations
- From the observation there are 91.31% of the peoples are not having difficulties in payments.
- From the observation there are 8.69% of the peoples are having difficulties in payments.
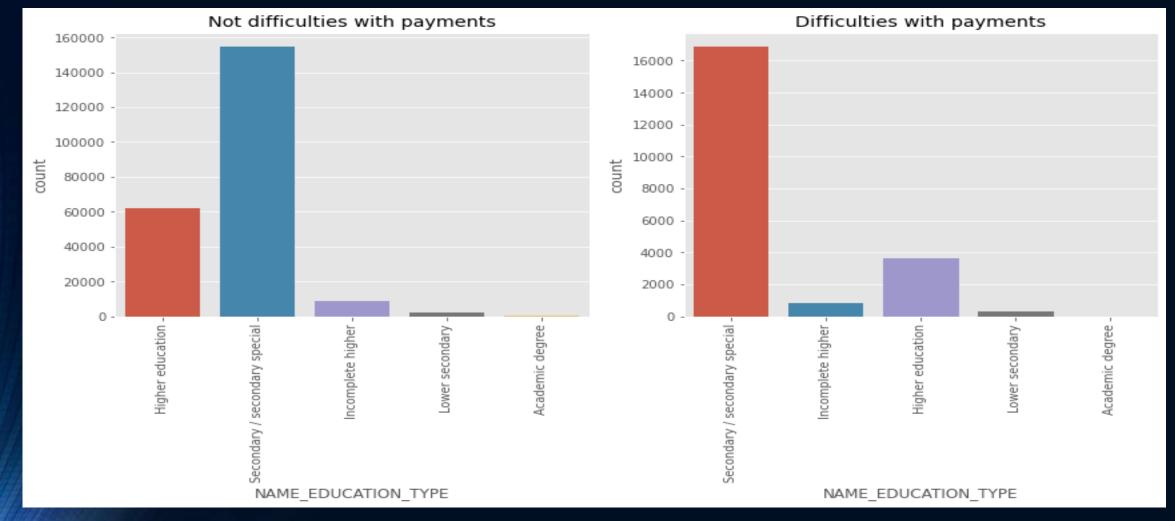
Observations

- From the observations we can see that for both payment with difficulties and payment with no difficulties are of cash loans .
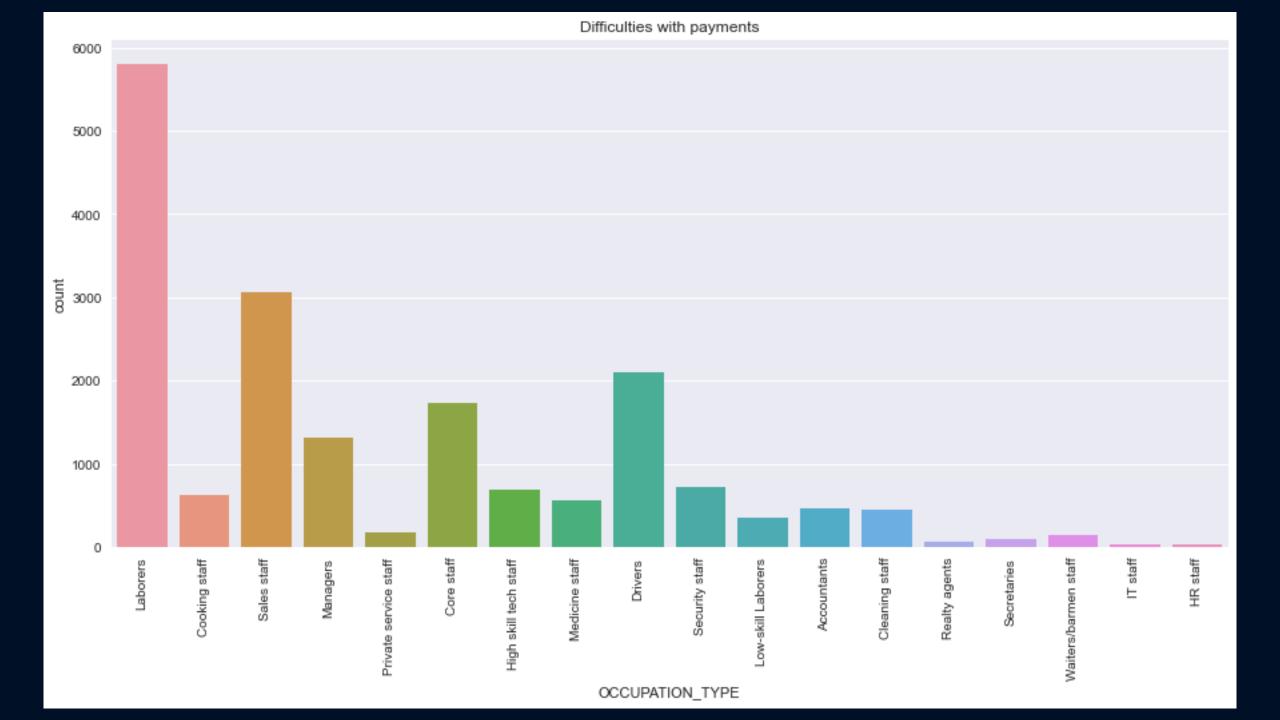
Not difficulties with payments

Observations

- In Organization type of business entity type 3 and self employed and others are more likely makes their payment with no difficulties.
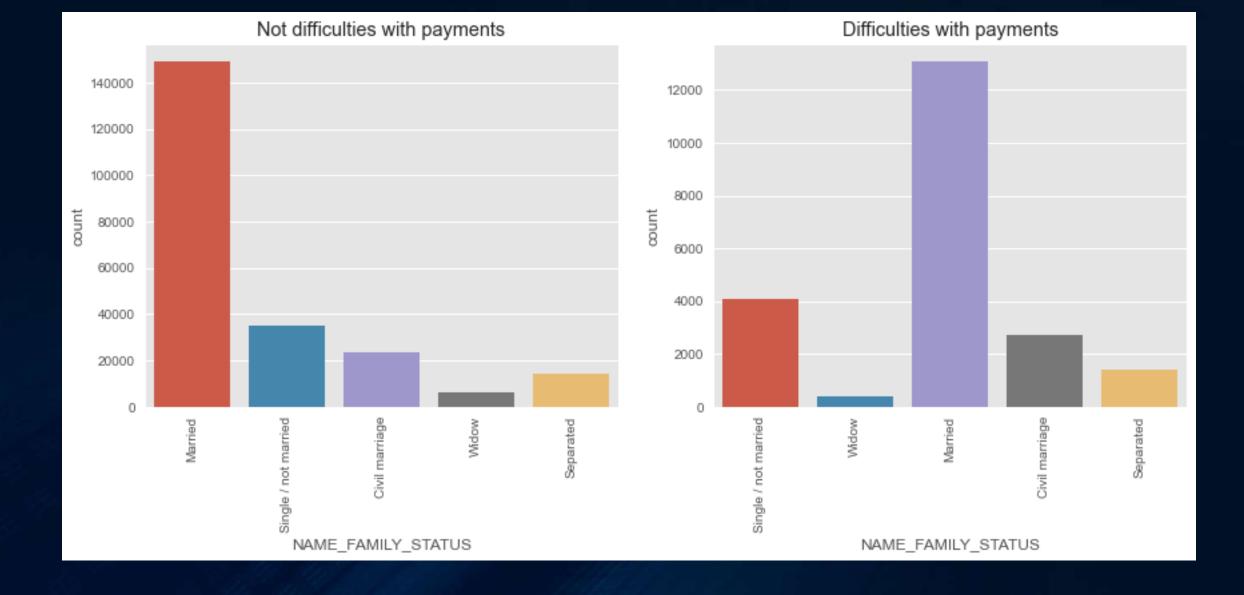
Observations
- From the observation males are having higher payment difficulties than females .
- From the observation females do not have difficulties in payments .

Not difficulties with payments — count vs NAME_EDUCATION_TYPE (Higher education, Secondary / secondary special, Incomplete higher, Lower secondary, Academic degree)

Difficulties with payments — count vs NAME_EDUCATION_TYPE (Secondary / secondary special, Incomplete higher, Higher education, Lower secondary, Academic degree)
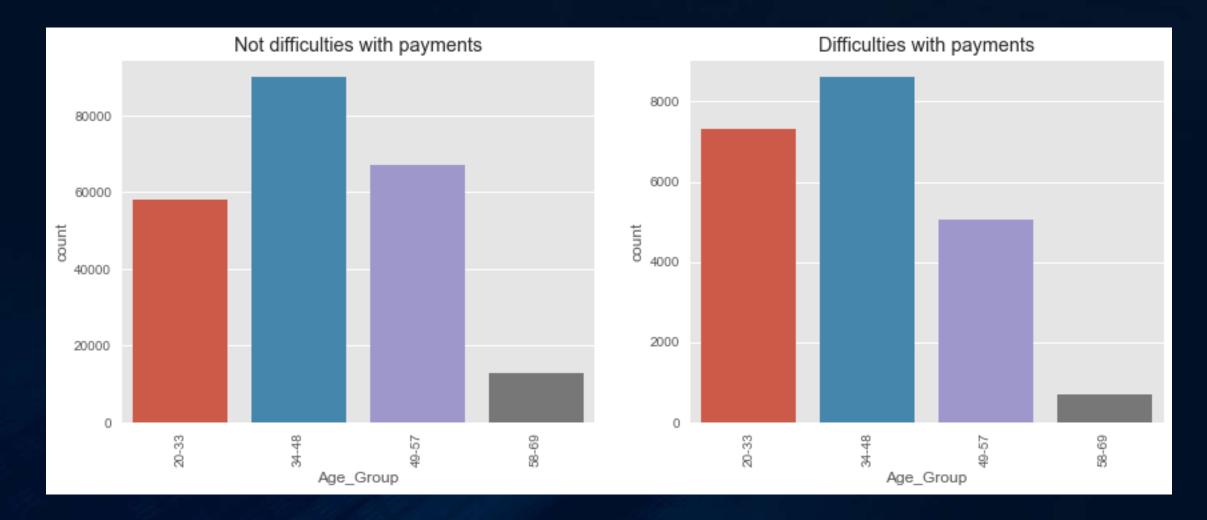
Observations

- The Secondary/Secondary special Education type for both difficulties with payment and no difficulties with payment have same distribution where as Higher education is slight higher than payment with difficulties for payment with no difficulties
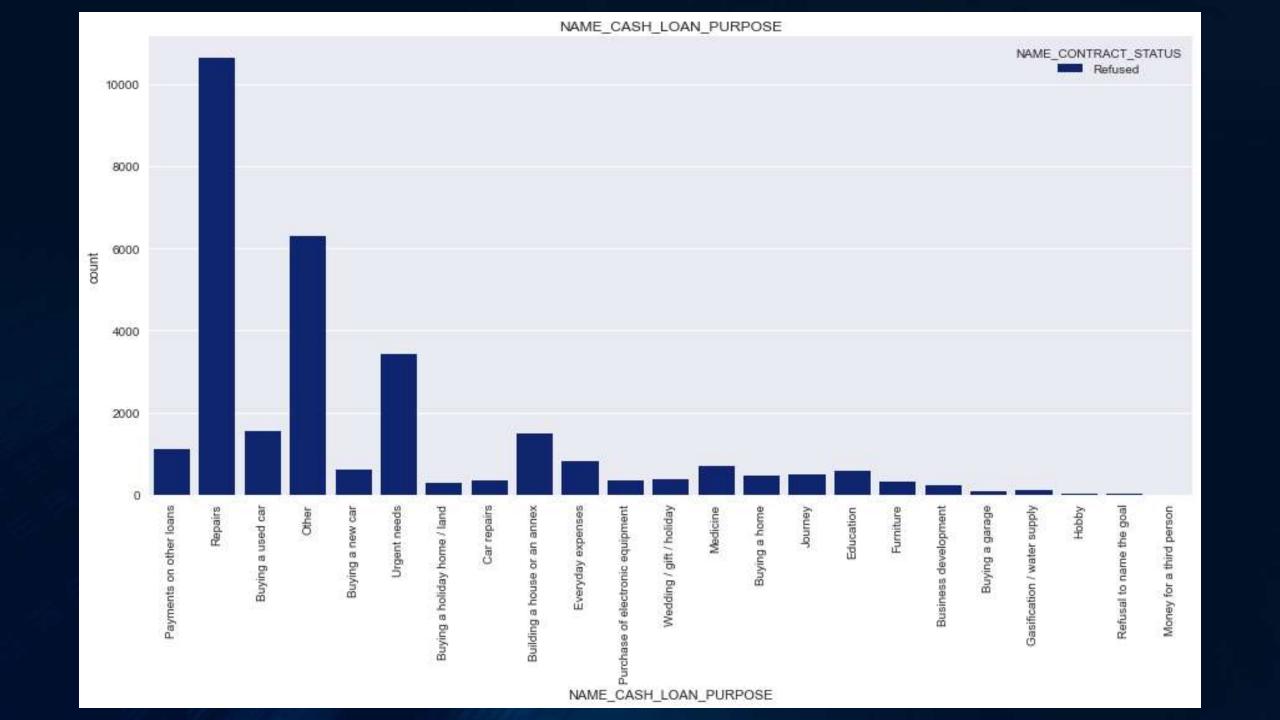
Difficulties with payments

Observations

- Occupation type of Labourers, sales staff , core staff and Drivers are most likely having difficulties in payments
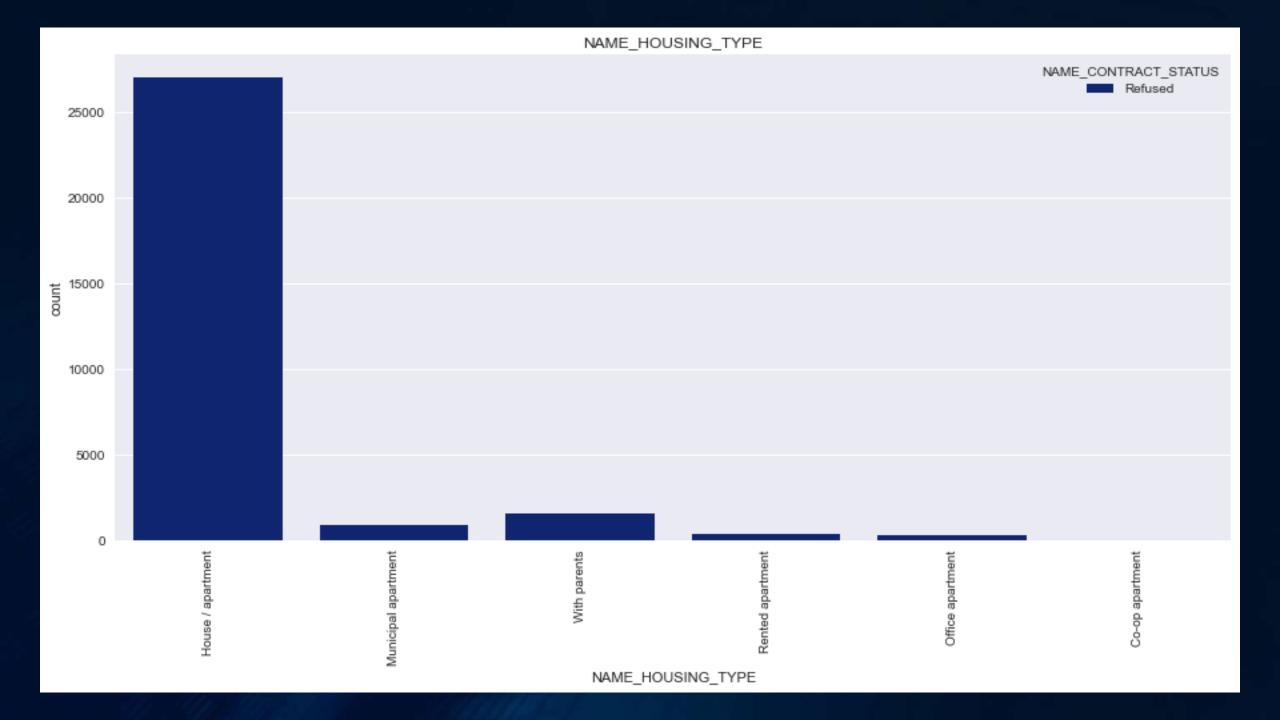
Observations
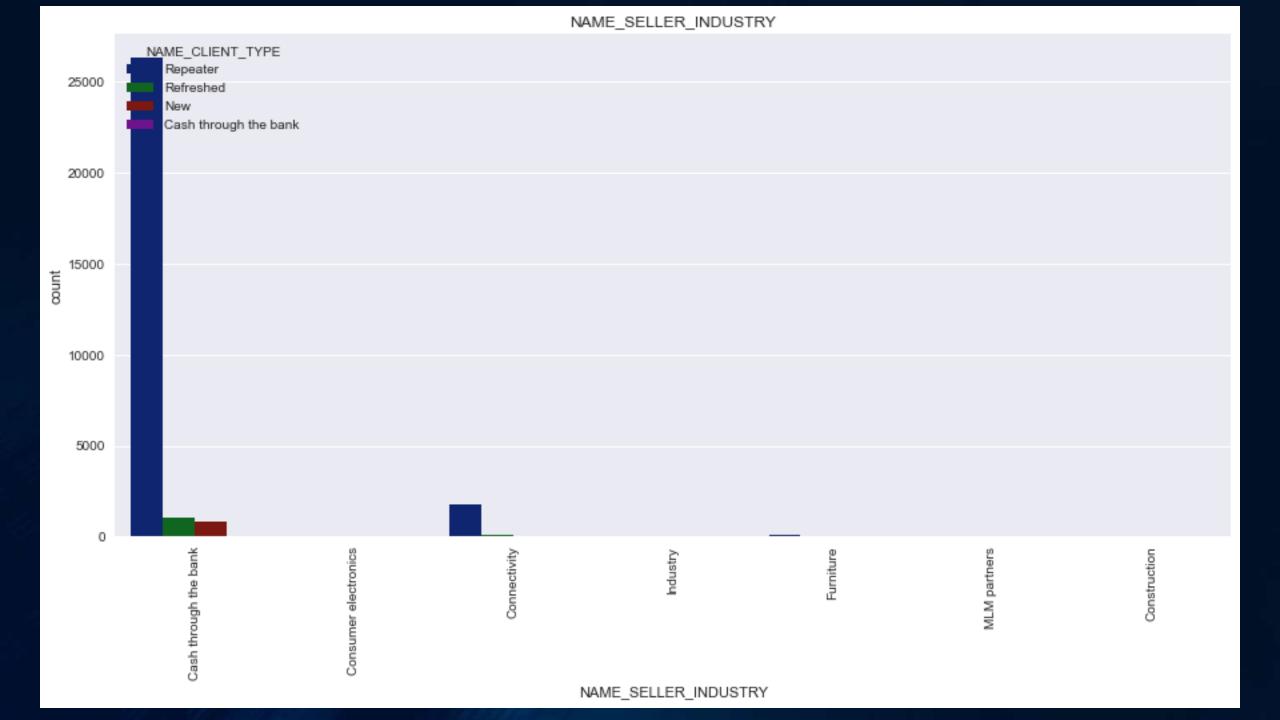• Single married are having more payment difficulties compared with no difficulties

Observations
- Peoples with age group of 49-57 are having less payment difficulties
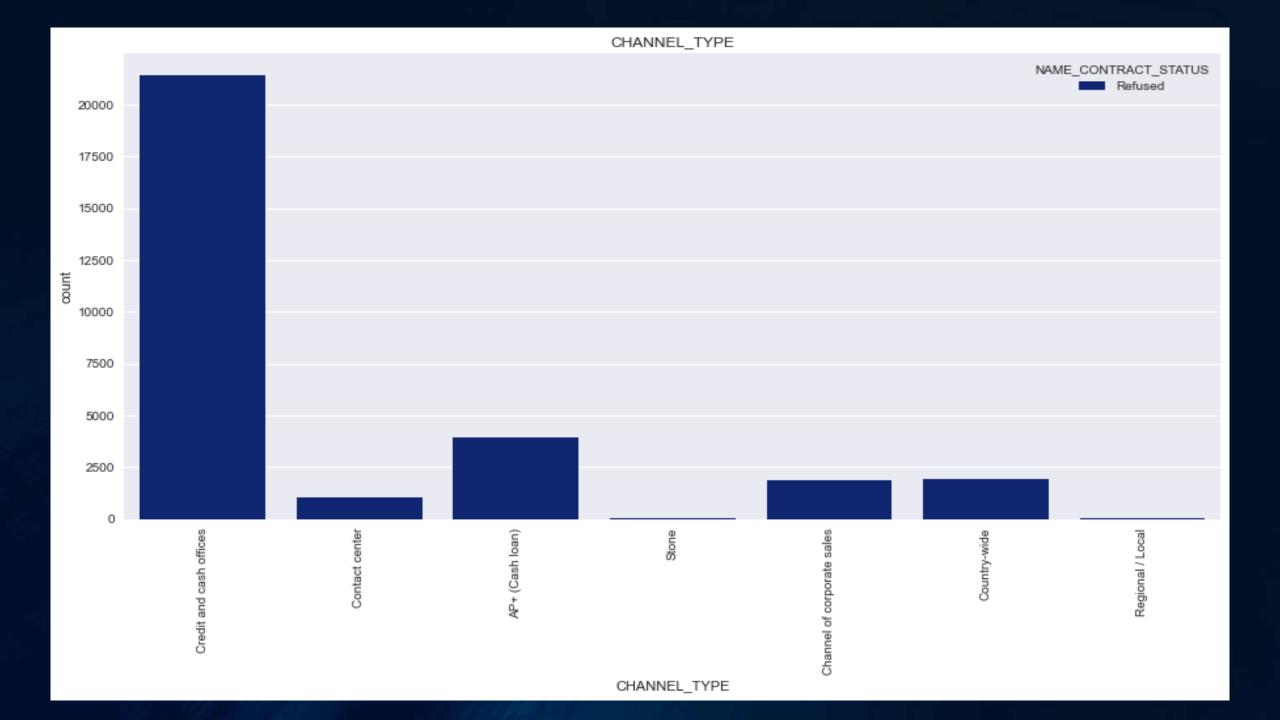- Peoples with age group of 20-33 are having more payment difficulties

Observations

- Peoples with loan purpose 'Repair' , 'Other' and 'Urgent Needs' are highly rejected try to avoid lending loan for these purposes

Observations
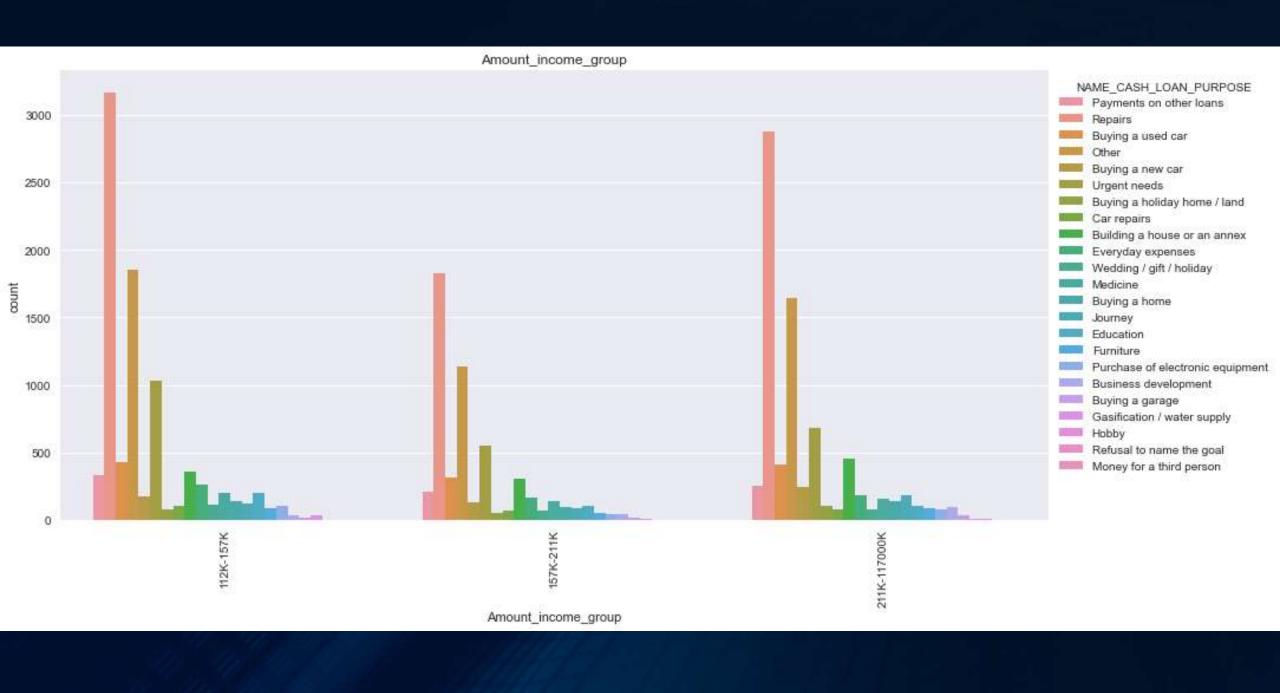
• Peoples Having 'House/apartment' were highly rejected try to avoid lending loans to housing type for 'House/apartment'

Observations

- Most of the repeated applications are from 'Cash through the bank' and 'Connectivity Industries
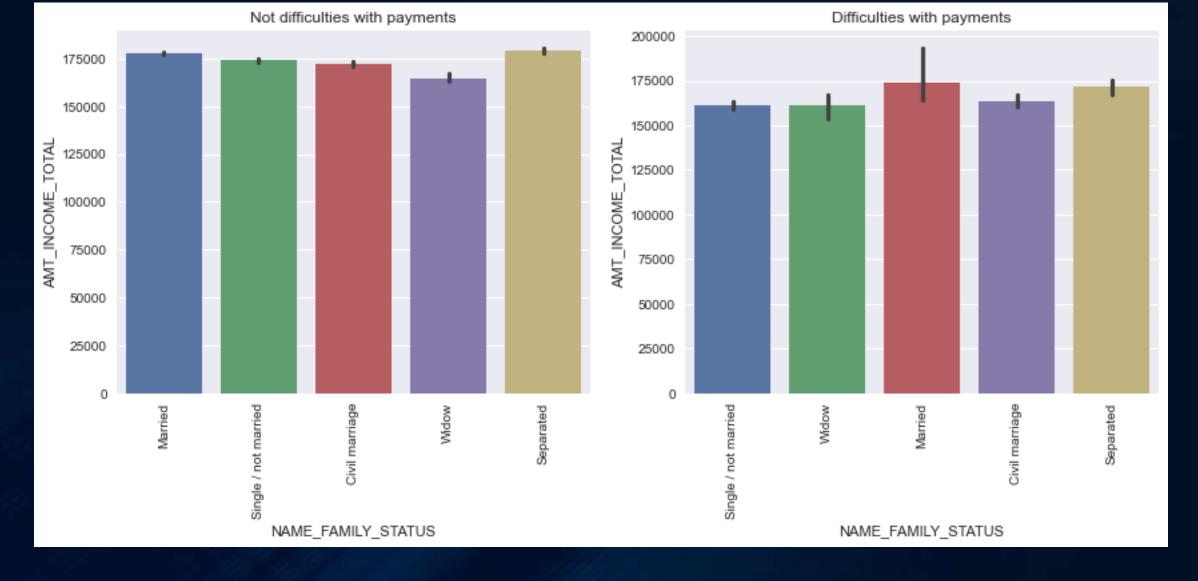
Observations

• The client from the channel 'Credit and cash offices' and 'AP+ (Cash loan)' on the previous applications are having higher rejection rate
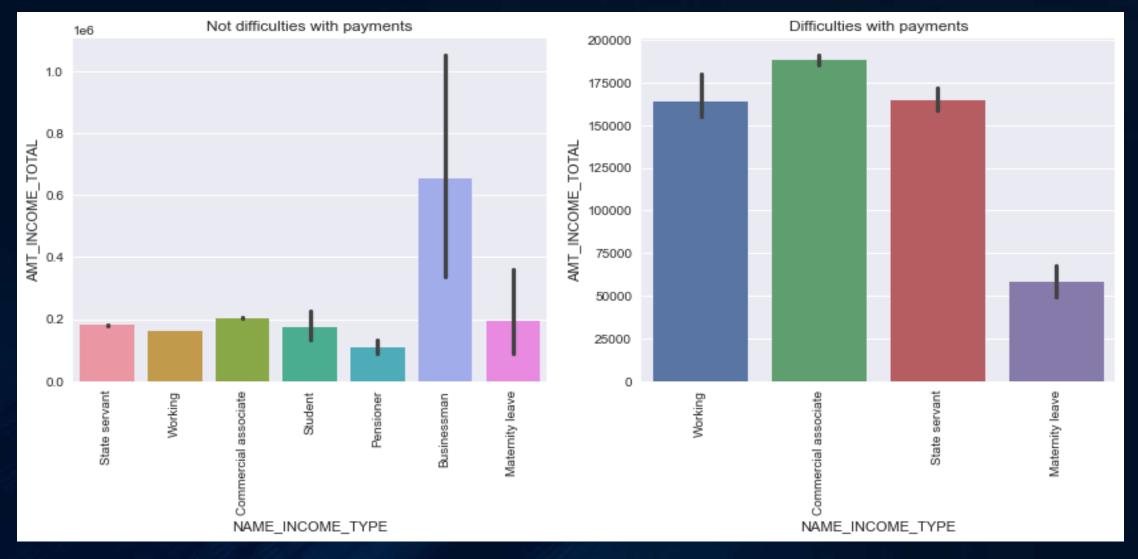
Observations

• Peoples of payment with no difficulties and across all the income gruops are most likey approaching for the purpose of Repairs but as we have seen that for the purpose of repair we have high rejection rate so it is good to seek for the customers who wants loan for buying a new car and buying a holiday home land etc.
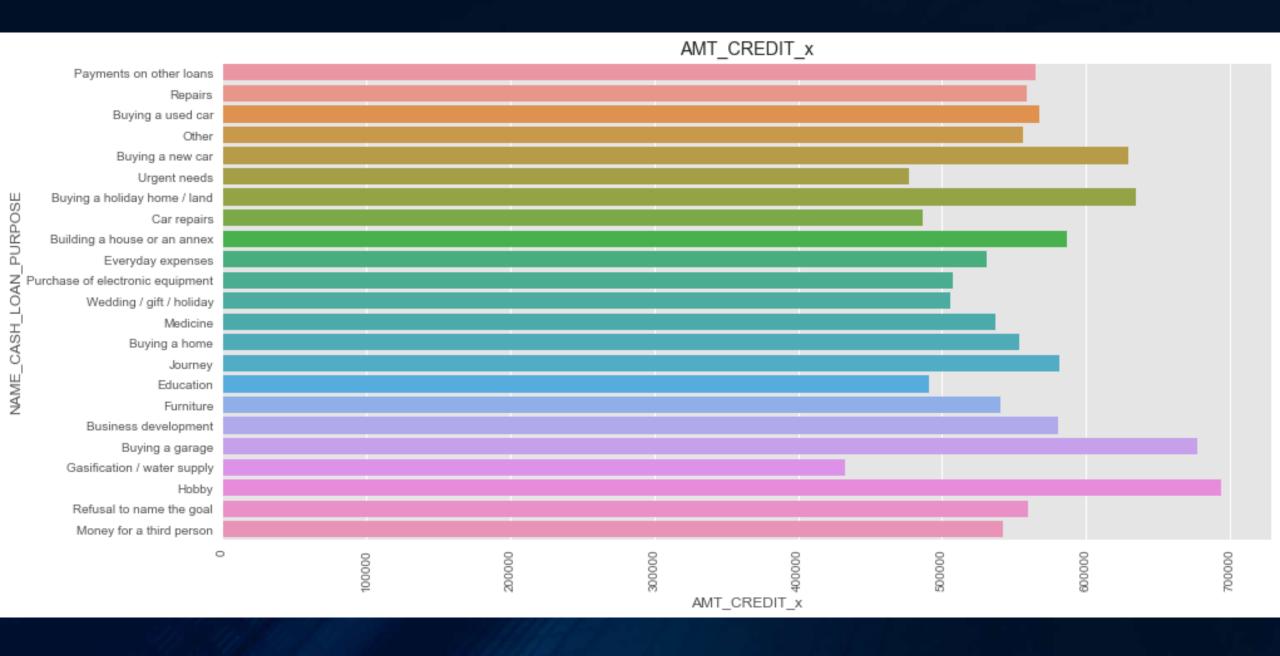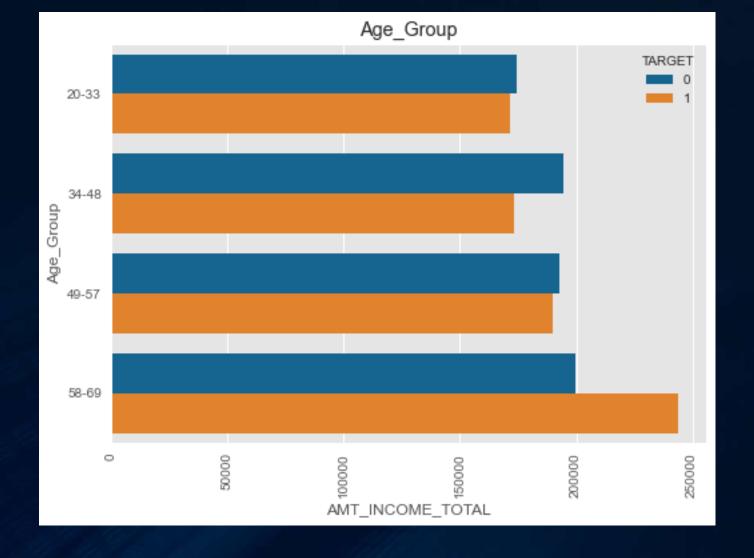
Categorical Bivariate Analysis

Observations
- Civil married peoples gets more difficulties in payments
- Separated peoples do not have payment difficulties

Observations
• The name income type with businessman have no difficulties in payments
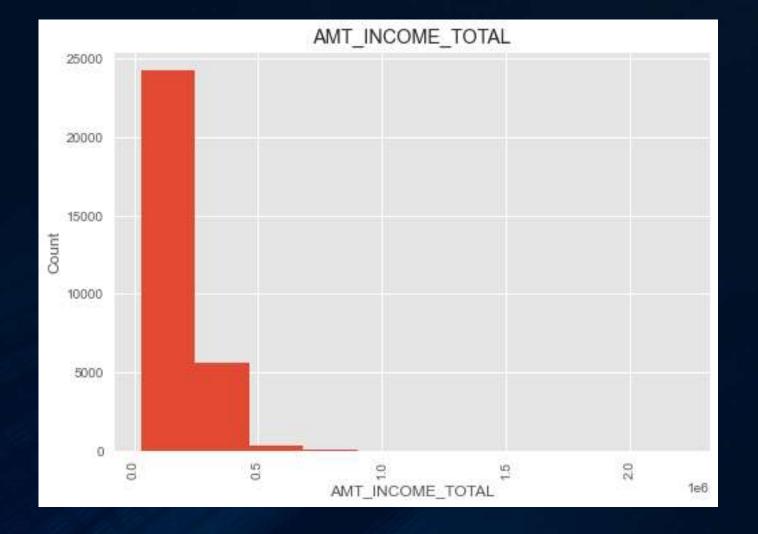• The name income type with commercial associates have difficulties in payments

Observations

1) From the graph we can see most of the time Buying a new car, Buying a holiday home/land Building a house or an annex , journey , buying a garage , business development and hobby are frequently credited
2) The highest credited amount is for hobby which is 700k
3) It is recommended that targeting these type of loan purposes would be profitable

Observation
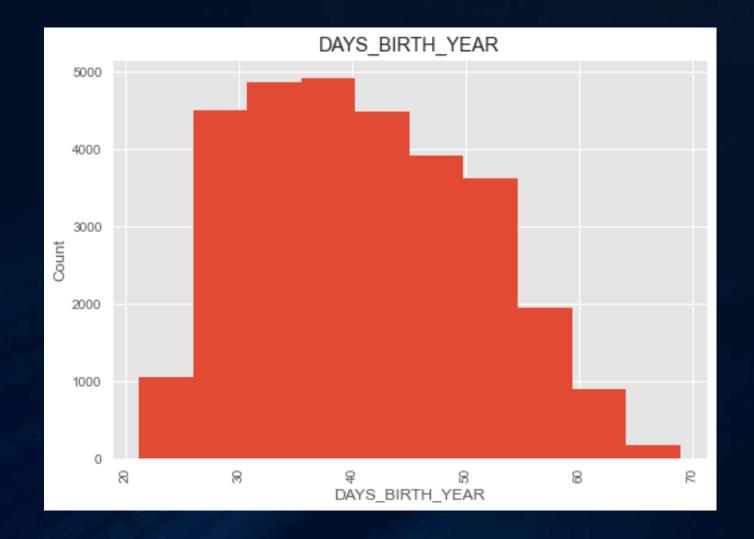
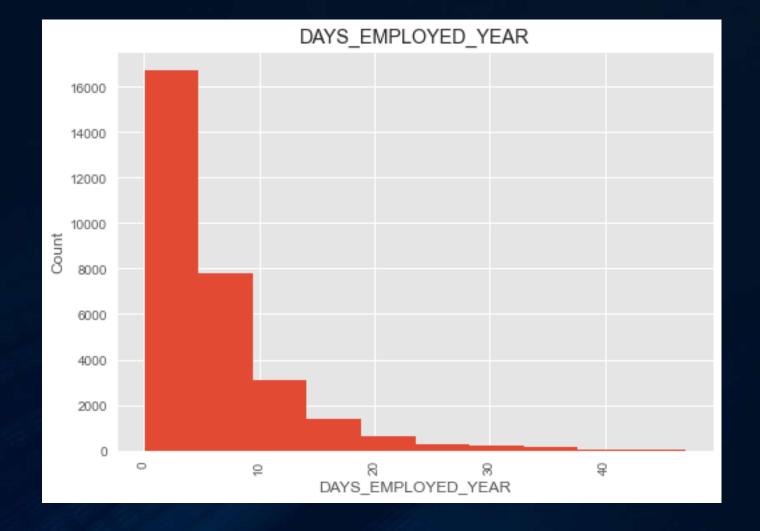•From the observation that peoples with age group 58-69 and income about 250k are having most of the time payment difficulties

Observations
- The Income amount is having higher distribution up-to 500k
- We can see that most of the applications were approached from the peoples having income about 500k
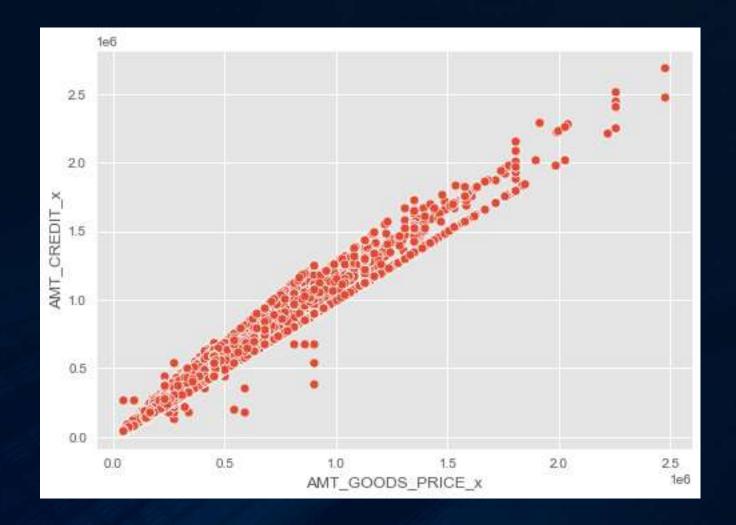
Observations
- The Distribution of the Age is higher between 30-50
- Most of the peoples approaching for the loans are between age group of 30-60

Observations
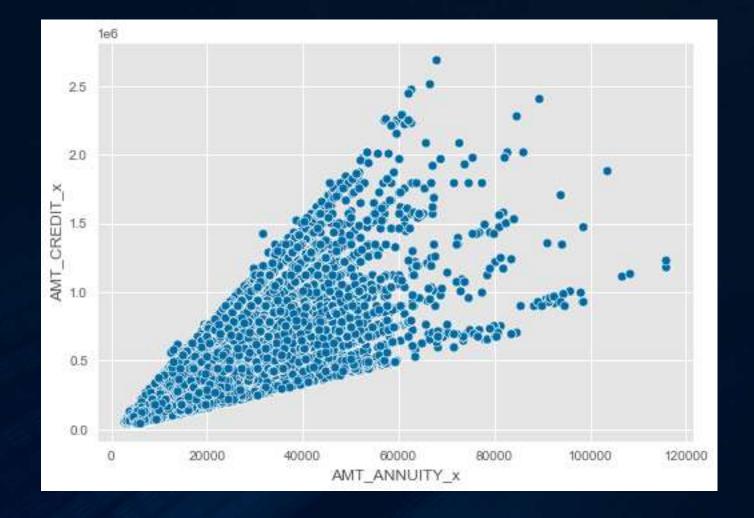- The Distribution of employed year is higher between 0-20 years
- Most of the employees approaching for the loan having employment year between 0-20
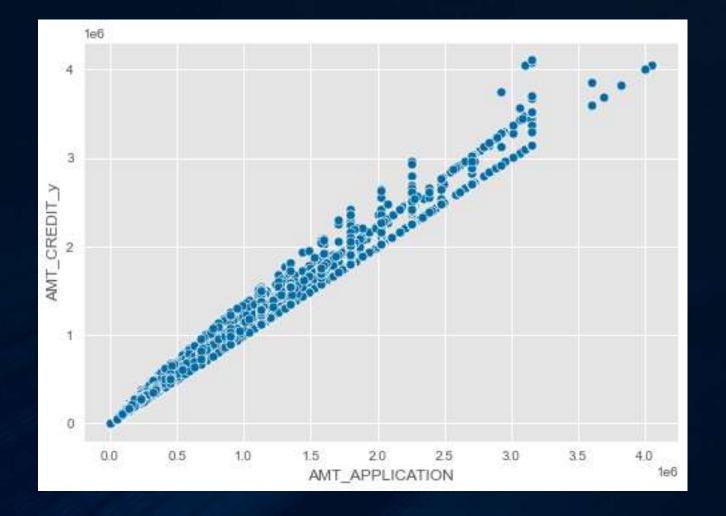
Numerical Bivariate Analysis

Observations
- As we can see there is a strong positive relation between Amount credit and Amount goods price
- As amount goods price increased the loan amount credit has also been increased

Observations
- As we can see there is a strong positive relation between Amount credit and Amount annuity
- As Amount Annuity increased the credit has also been increased

<u>Observations</u>
- As we can see there is a strong positive relation between Amount credit and Amount application
- As Amount application increased the Amount credit has also been increased

Recommendations:-

1. From the analysis we have found that the loan purpose for repair, others and urgent needs are highly rejected we recommend to avoid approving loans for these type of purpose which will leads to a financial loss to the company.

2. From the analysis we have found that the organization types of business entity type 3 and self employed do not Have payment difficulties targeting these organizations type would be profitable to company.

3. From the analysis we have found that the occupation type of laborers, drivers , sales staffs, managers, core staffs were having difficulties in payment so it is recommended to avoid lending money to these type of customers to overcome from financial loss.

4. From the analysis we have found that housing type of House/apartment and with parents are highly rejected it is recommended to avoid lending money for housing type of House/apartment and with parents.

5. From the graph we can see most of the time Buying a new car, Buying a holiday home/land Building a house or an annex , journey , buying a garage , business development and hobby are frequently credited

6. The highest credited amount is for hobby which is 700k

7. It is recommended that targeting these type of loan purposes would be profitable

8. From the analysis we have found married separated peoples are good for the target because they do not have difficulties in payment

9. From the analysis we have fond that from name income type of commercial associates have more difficulties in a payment it is recommended to avoiding these customers.

10. From the analysis we have found that maximum applications for the loans are between the age group of 30-60 But peoples with age group of 50-69 are having difficulties in a payment it is good to target peoples of age group between 30-50.