

LOAN PROVIDING COMPANY

COMPANY DESCRIPTION

The loan providing company provide loans to the customers . Loans are as per customer demands. They have categories their funding as per requirement. If customer needs personal loans (50K-5 lac), Bike/Car loan(1 lacs-10 lacs) and Home loan(10lacs to 1 CRs) and their interest rates varies with the amount of loan.

PROBLEM STATEMENT

The loan providing companies find it hard to give loans to the people due to their insufficient or non-existent credit history. Because of that, some consumers use it to their advantage by becoming a defaulter. Suppose you work for a consumer finance company which specializes in lending various types of loans to urban customers

LOAN PROVIDING COMPANY

BUSINESS OBJECTIVE:

- Denying the loan application
- Reducing the amount of loan
- Lending (to risky applicants) at a higher interest rate

The agenda of EDA is to find the reasons

- Defaulter of loans(previous payment records)
- Taking loans (car loans, home loans, personal loans)
- How are people eligible for loans(Age, salary)

OVERALL APPROACH

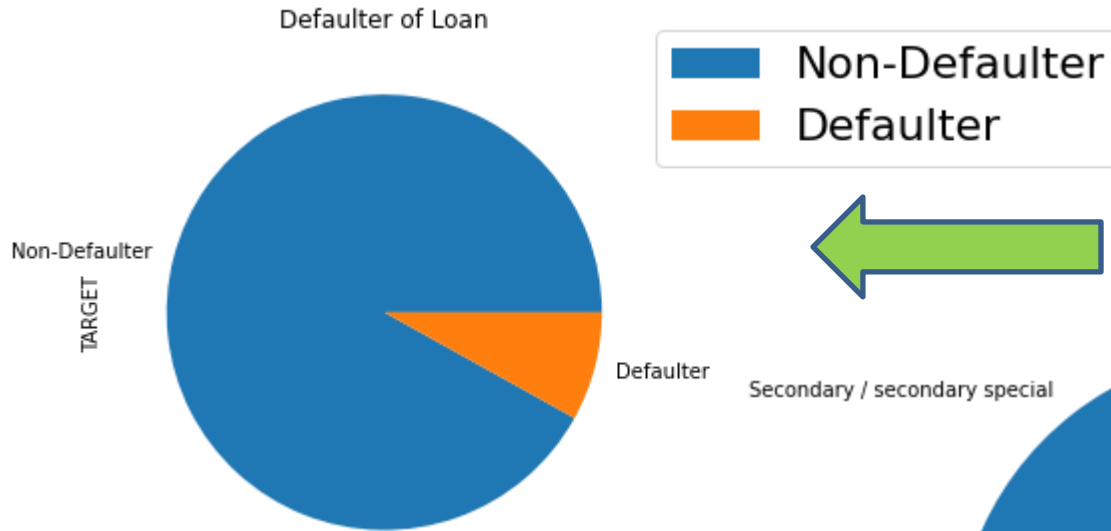
We had two datasets files for Data analysis. Those were previous data and application data.

- *'application_data.csv'* contains all the information of the client at the time of application. The data is about whether a **client has payment difficulties**.
 - *'previous_application.csv'* contains information about the client's previous loan data. It contains the data on whether the previous application had been **Approved, Cancelled, Refused or Unused offer**.
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- *'application_data.csv'* has 307511(rows) customers and their attributes 122 (columns) which consist of data required for loan processing. Like- Income, Education, their requirement of Loans.
 - ❖ *'previous_application.csv'* has 1670214 customers(rows) and their attributes 37(columns) which consist of detail information about customers.

OVERALL APPROACH

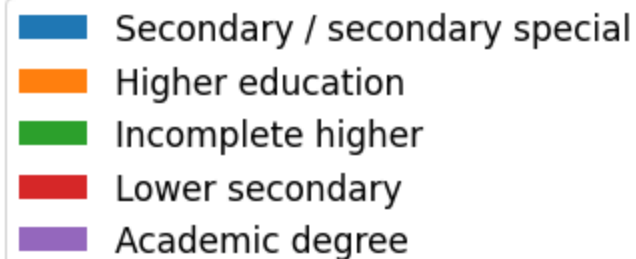
- There were many missing values in both datasets which consists of missing values. We decided to inspect the data and found that 30-40% of data were missing from some columns.
- These missing values will hampers our data analysis. We decided to remove those columns.
- After removing above mentioned columns, we still got some columns were missing values were less and manageable. We done data imputing for them.
- Data imputing were done considering that our data analysis sights will not hampered and explain us correct insight.
- There were some XNA and XPA which were not removed as they are those which would other factors. These factors will be explained reasons.

ANALYSIS on Application Data

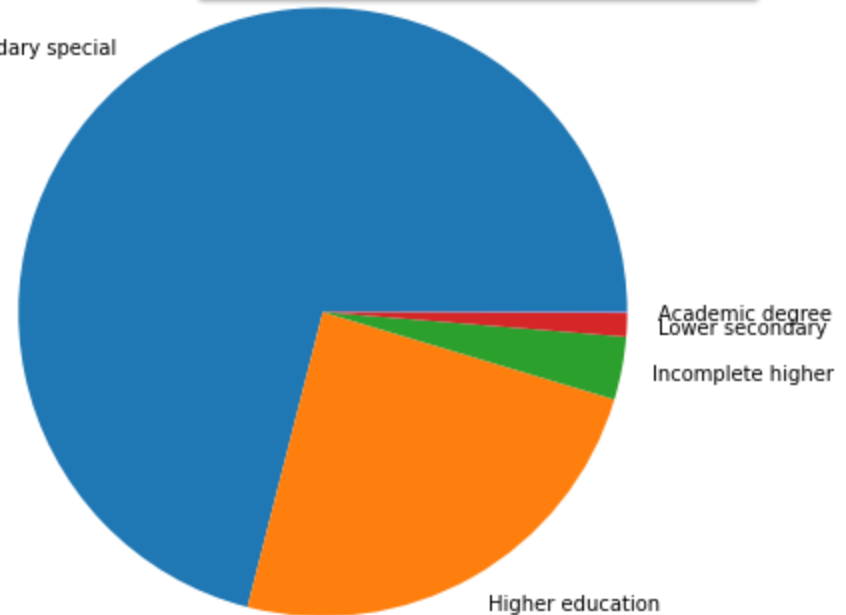


Success Rate

As we can from graph that recovering of loan is more.



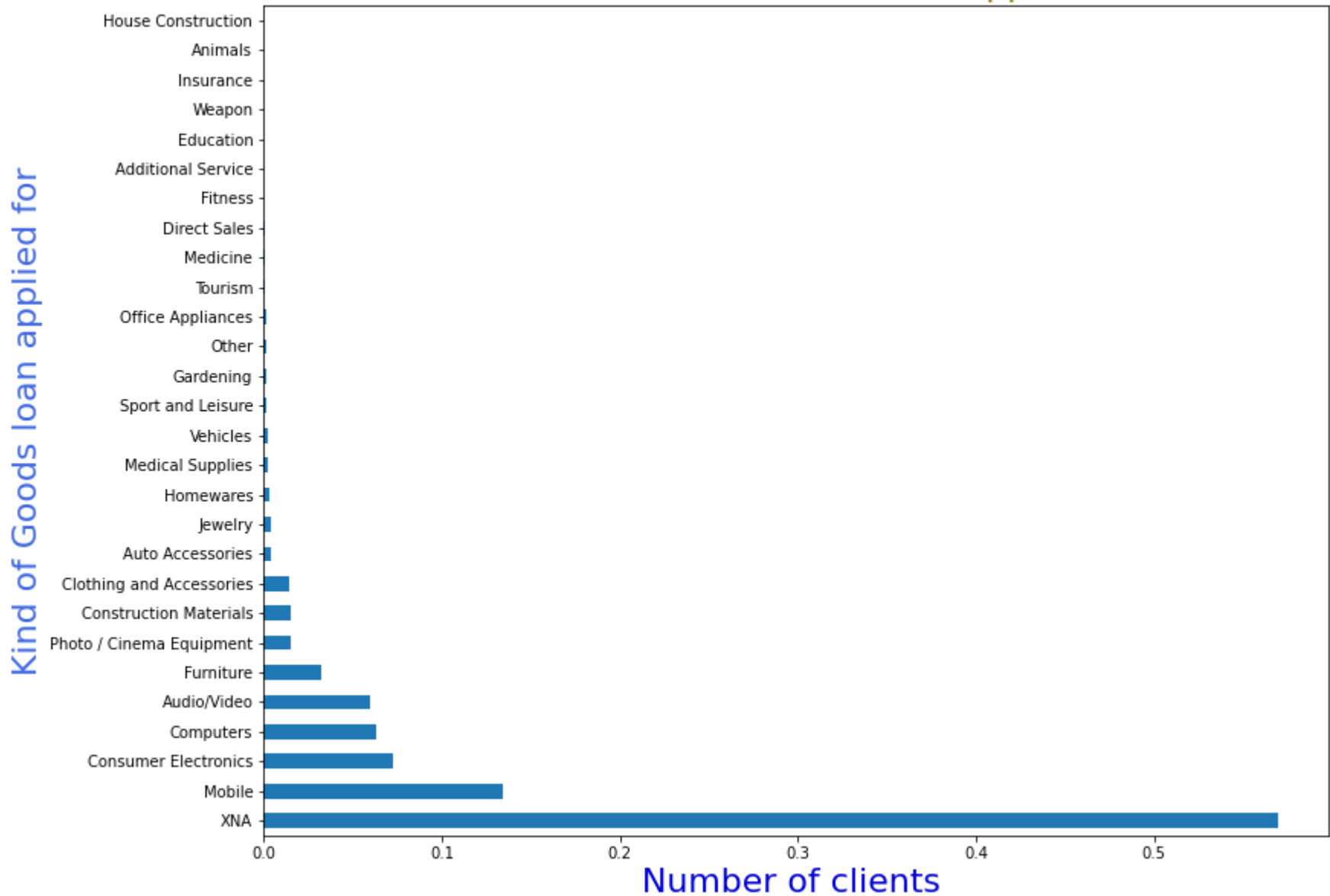
NAME_EDUCATION_TYPE



Education Qualification

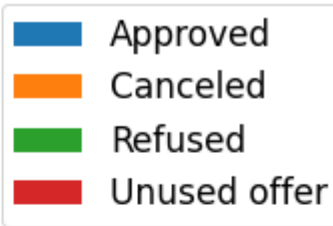
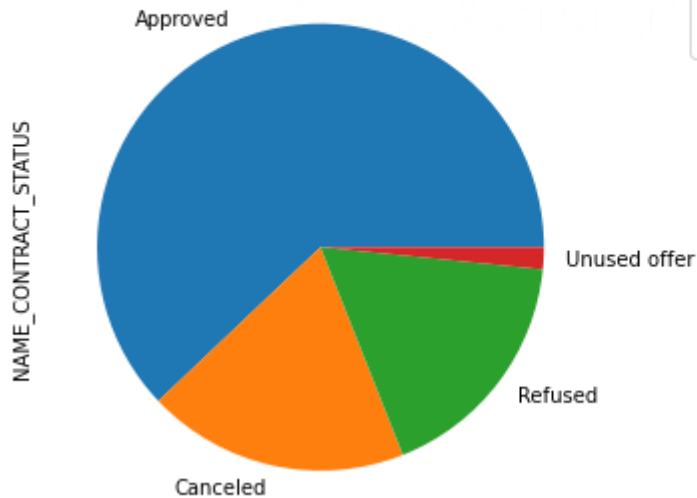
The highest qualification of our clients is Secondary / secondary special followed by Higher education and incomplete higher education and so on.

GOODS CATEGORY of Previous application



Most of the client didn't mentioned reason of the loan. We may consider this as **Personal loans**. The second reason of the loan was Mobile followed by Consumer Electronics and so on. Here we get that **Personal loan** more in demand.

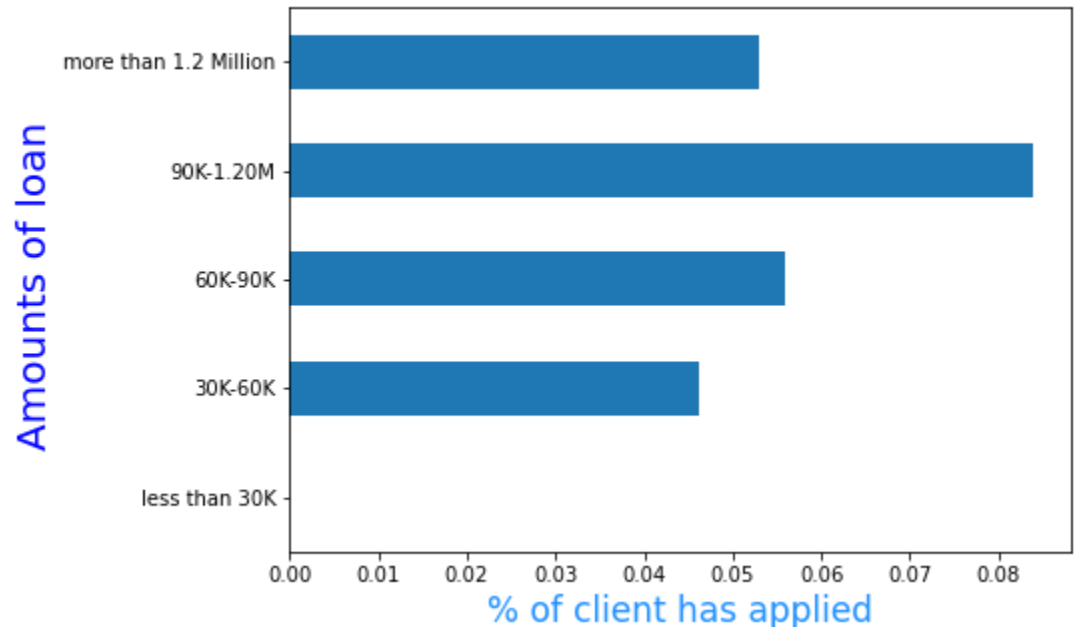
Status of application



Status of Loan of Previous Data

- We can see that most of loan application got approved.
- There were few application who got rejected.

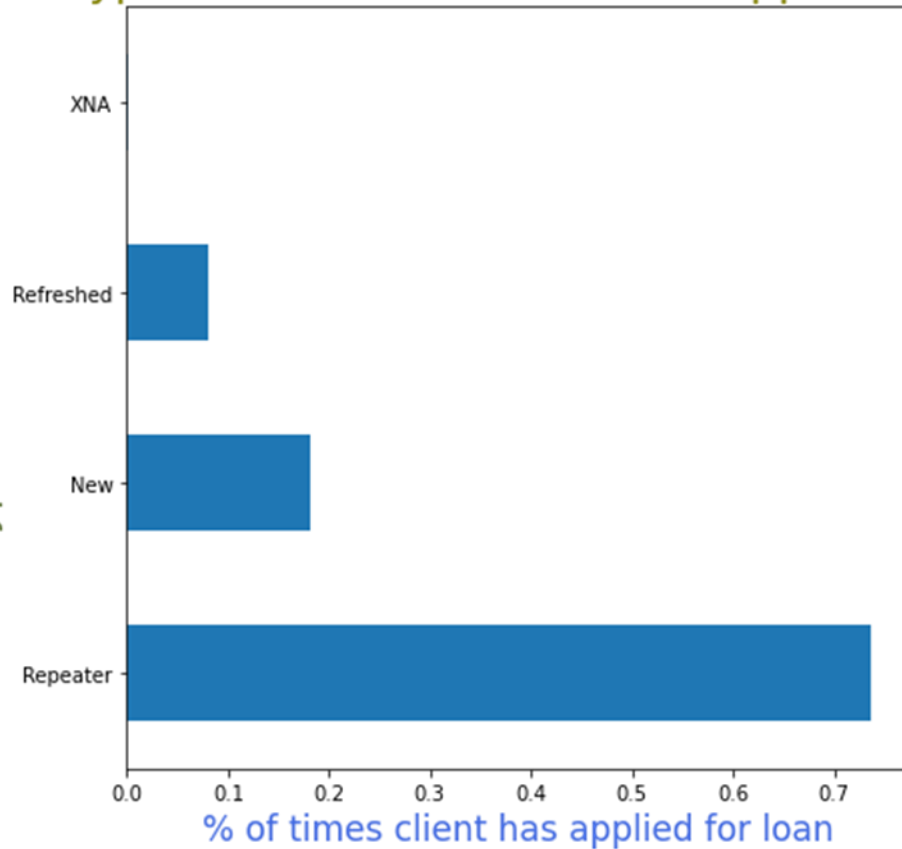
Loan Amounts VS TARGET



we see that most of our target customer opted for the 90k-1.20M.

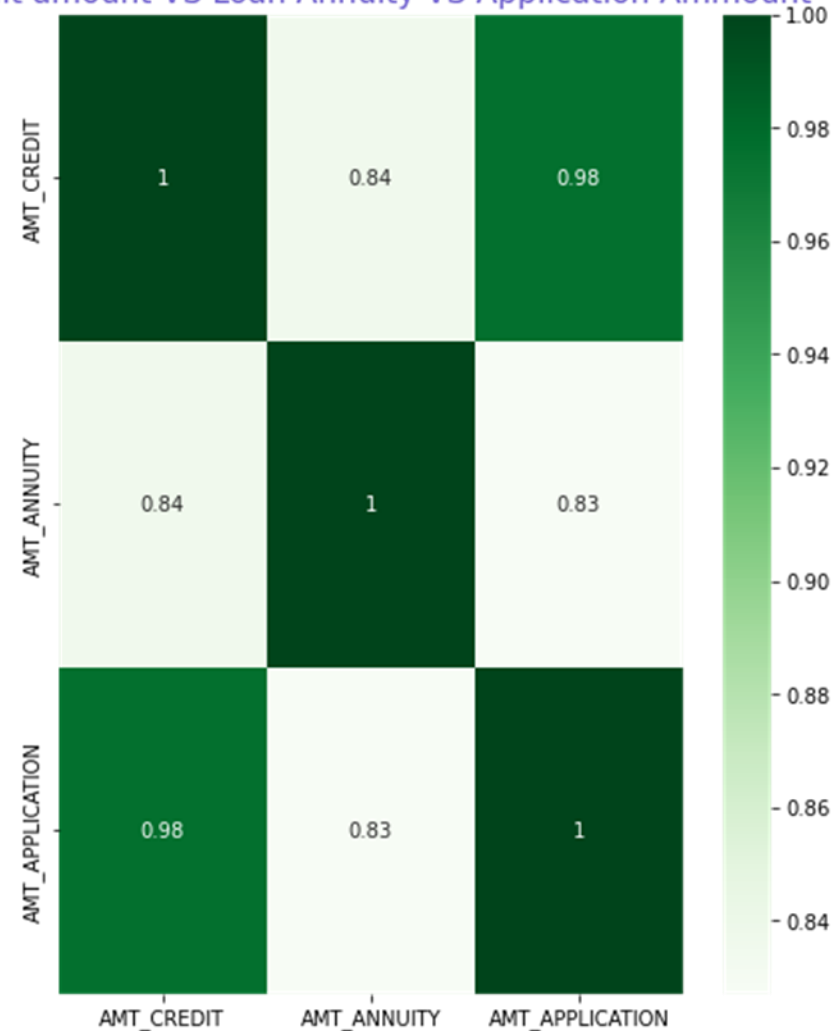
Types of Client from Previous application

Types of clients



Many of our clients are repeated customers. So we can focus on them.

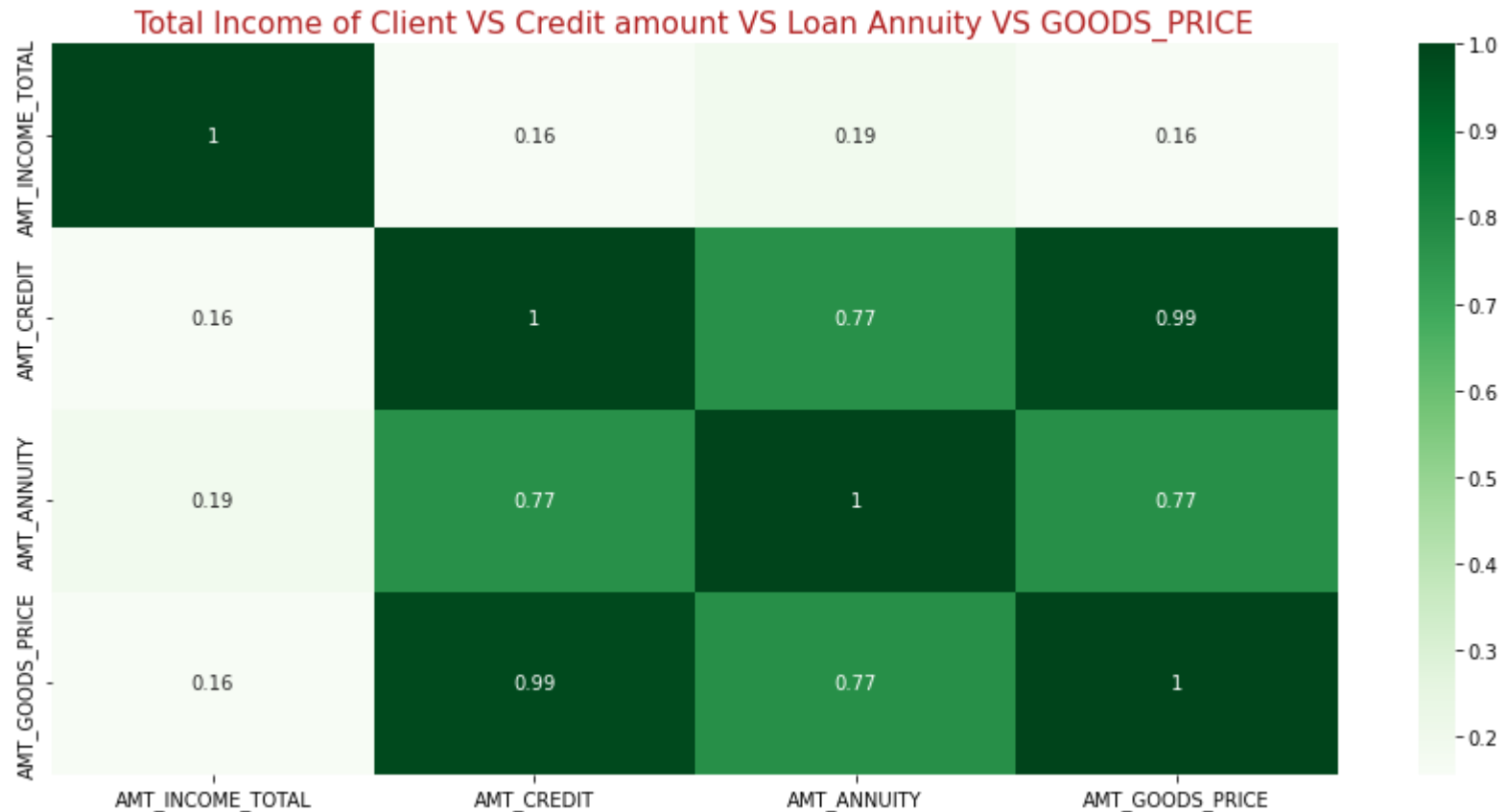
Credit amount VS Loan Annuity VS Application Amount



Loan Amount Analysis from previous application

All three variable has good correlation which emphasizes that recovery rate does matter on all three variable.

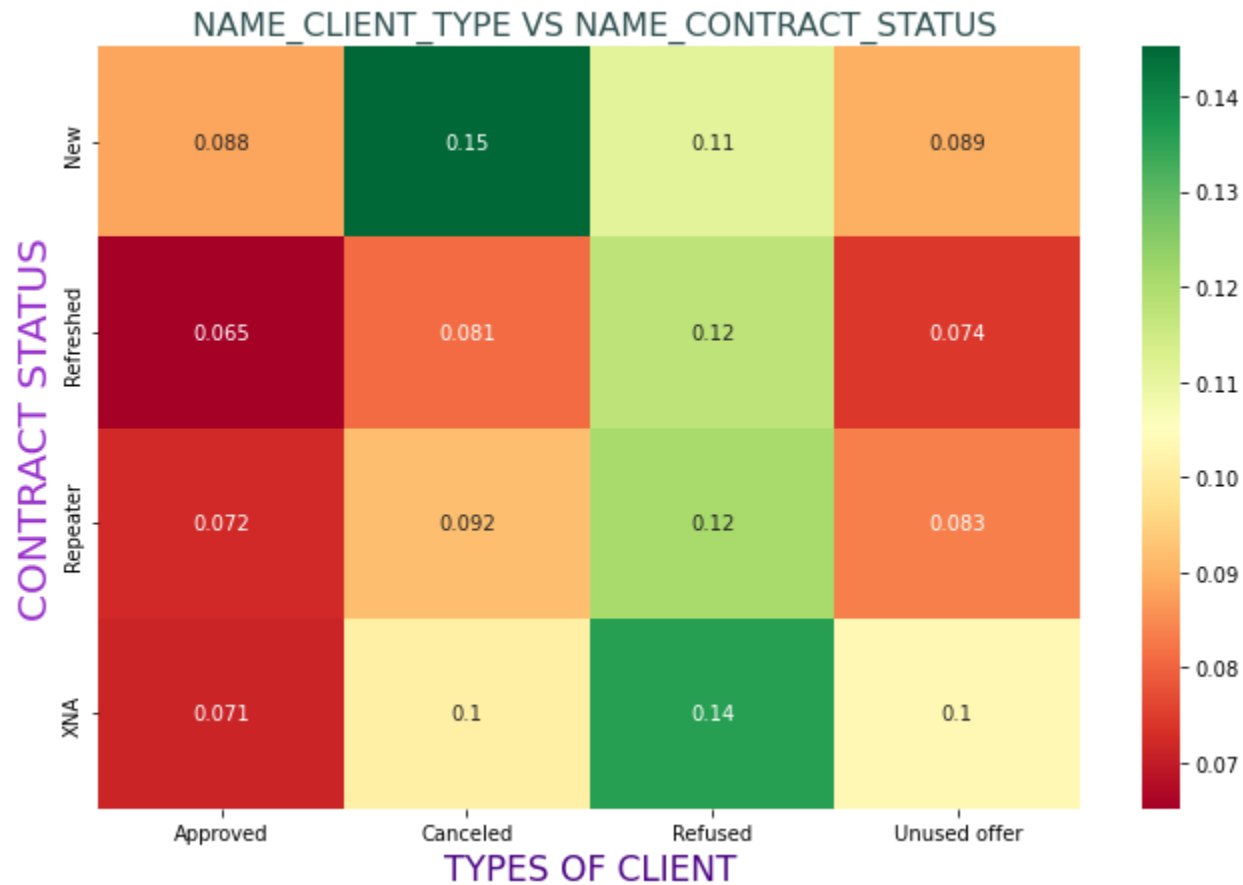
ANALYSIS on Application Data



Loan Amount Analysis

- ❖ Total Income has less relationship with Credit amount of loans , Annuity and the price of goods for which loans has been given.
- ❖ Amount Credit has good relationship with Annuity but strong relationship with the price of goods for which loans has been given

Here we can consider that loan are given on basis of Annuity and price of goods.



- We see that most of our client loans were Cancelled and we also refused to give loans to those clients whose contract status were unknown to us.
- We also see that refused columns has high values.

We should see the reasons behind the refusing the customer for loans.

CONCLUSION & RECOMDETATION

- We saw that our recovery rates of loans is goods.
- Most of our clients are educated.
- We also visualized category of Goods for which client asked loans was Personal.
- Our approval of loans is also high in comparison of Refusal, Cancelation and unused offer.
- Most of our clients adopted for 90K-1.2M of loans amounts.
- We saw that most of our clients are Repeated which means that our clients like our services which attract them most.
- As per previous record, Credit amount or loan amount and amount application has strong relation where Annuity also has good relationship with them.
- As per application data, Credit amount or Amount goods Price or Annuity has very strong relationship within them but we saw that income of client is causation of loan.
- At last we saw that our overall approval rates in much less.

We do need to find good new clients and with that we need to consider their Annuity and look at the reason of rejection of loans.