EDA Case Study

Loan Defaulters and their driver variables

Case Study by:
Madhurima Deekonda
Ranu Goel

Layout

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The Problem

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

Problem statement

To identify patterns which indicate if a client has difficulty paying their installments which may be used for taking actions such as denying the loan, reducing the amount of loan, at a higher interest rate, etc.

Risks Involved in making a Decision

Risk 1

If the applicant is likely to repay the loan, then not approving the loan results in a loss of business to the company.

Risk 2

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.

Solution

Performing EDA on a sample data which will help us in making inferences about all the variables involved in a Loan Application and recognizing the driving factors in the data that will help us in making a decision about the Loan Applications.

Implementation

Top 5 Driver Variables for default in loan application derived after analysis

1. **AMT_CREDIT**

2. **AMT_APPLICATION**

3. **AMT_ANNUITY**

4. **CNT_PAYMENT**

5. **AMT_INCOME_TOTAL**

Credit Amount of the Loan

Loan Annuity

Income of the Client

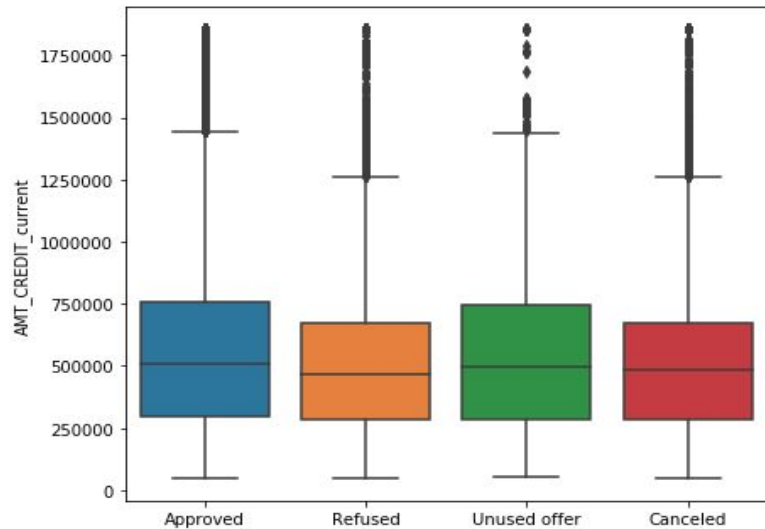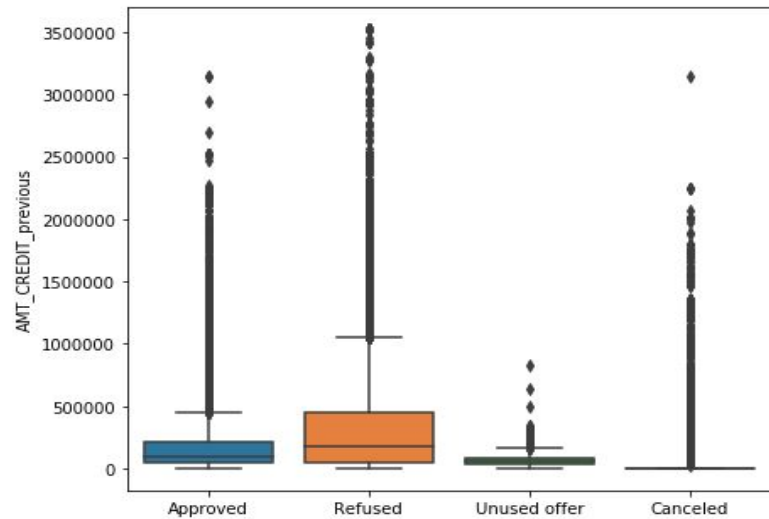AMT_CREDIT AMT_APPLICATION AMT_ANNUITY CNT_PAYMENT INCOME

Loan Amount requested by the client in the previous application

Term of Previous Credit at application of previous application
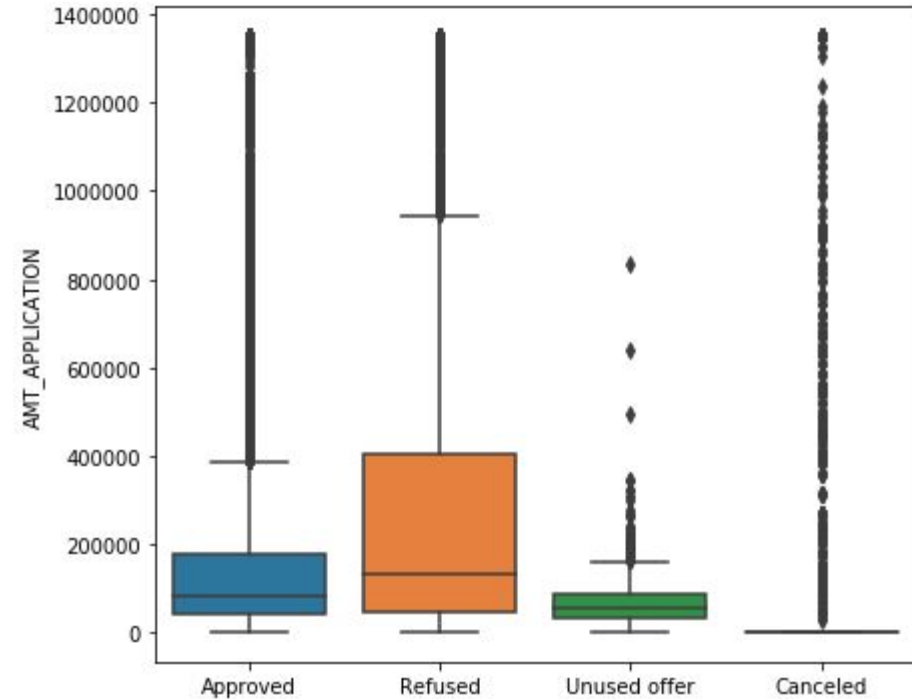
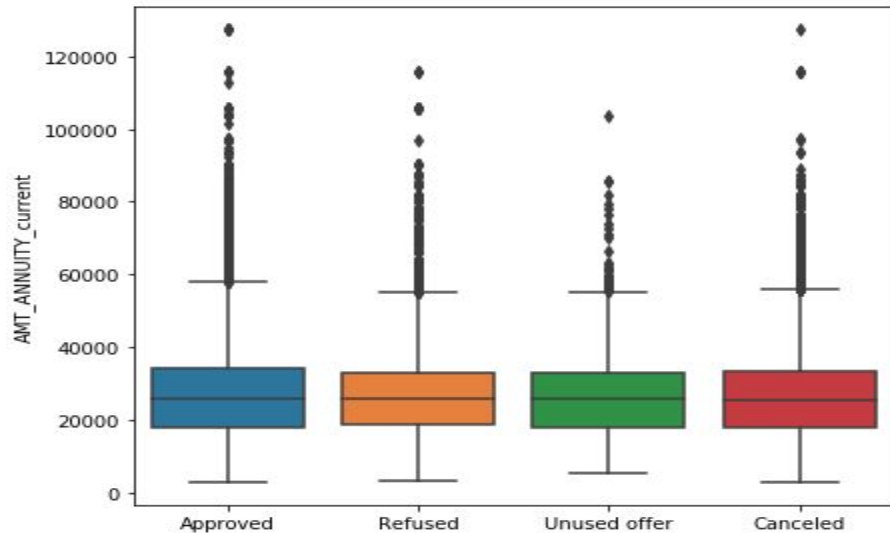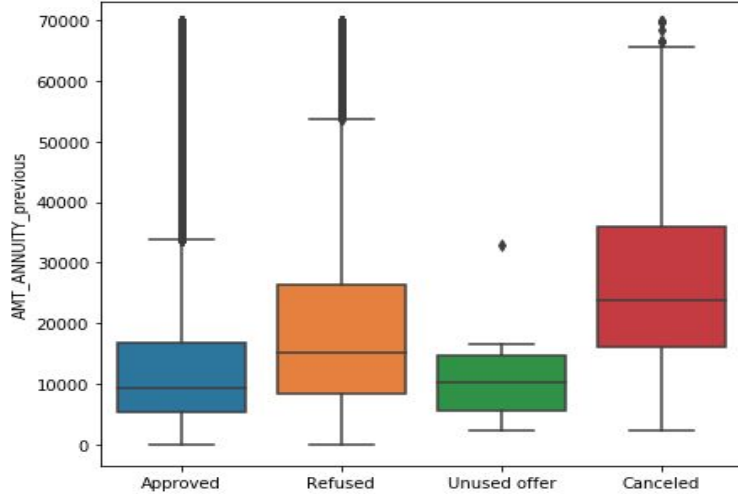# Graphs and Inferences

Amount Credit

The defaulters who were previously rejected had a credit amount roughly between 250000 to 500000.

The defaulters who had a credit amount of less than 750000 were rejected.

Amount Application

The defaulters who were previously rejected had the application amount ranging till 400000.
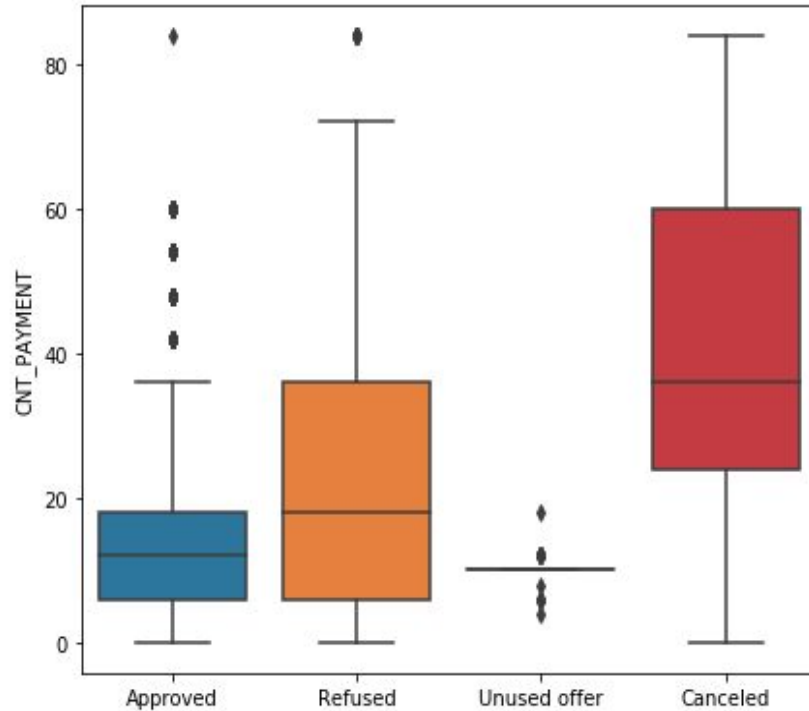
Amount Annuity

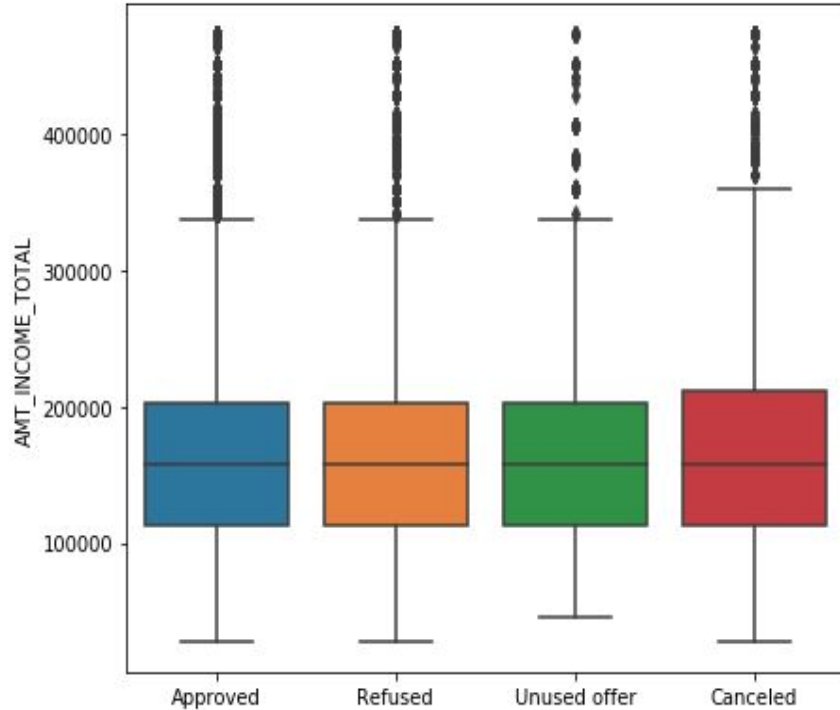The defaulters who were previously rejected had the annuity from around 10000 to 30000.

The defaulters who were previously rejected had the annuity from around 20000 to 40000 in the current data.

CNT Payment

The defaulters who were previously rejected had their term of previous credit in the range of roughly 5 to 40.

Client Income

The defaulters who were previously rejected had their income majorly between 100000 to 200000.

Thank - you