

Risk Analytics in Consumer Finance

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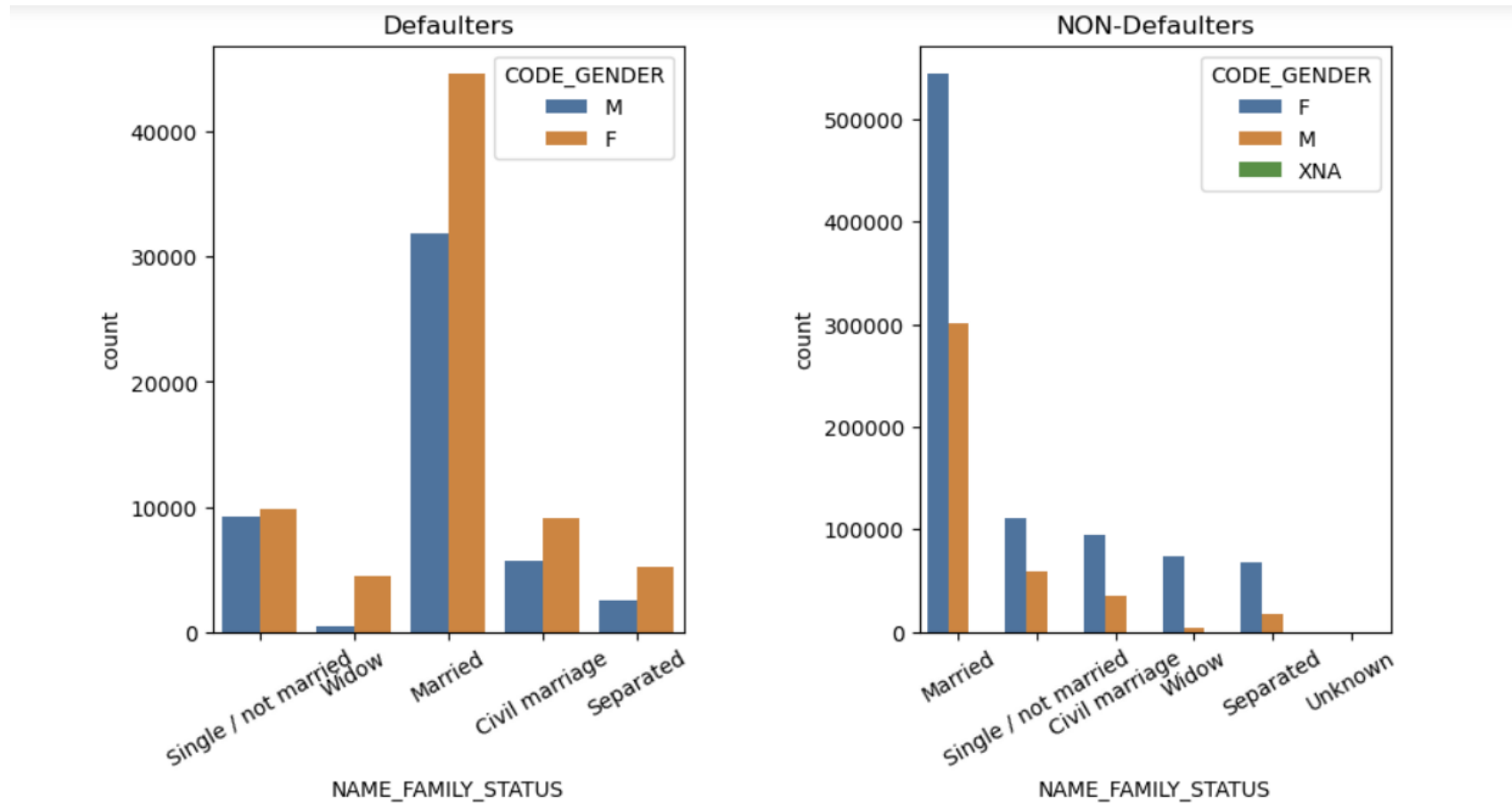
Problem Statement.

- The consumer finance company, specializing in diverse loan offerings for urban customers, faces challenges in assessing loan applications. The primary concern is identifying patterns within the data that signal a client's potential difficulty in meeting installment payments. Two significant risks are associated with the company's decisions: rejecting a loan to a client capable of repayment and approving a loan to a potential defaulter, resulting in financial losses. The objective is to conduct Exploratory Data Analysis (EDA) to uncover these patterns, enabling the company to make informed decisions that minimize the risk of default and ensure that creditworthy consumers are not turned away. The company seeks to understand the key variables influencing loan default, utilizing this knowledge for portfolio management and risk assessment.

Approach and Methodology.

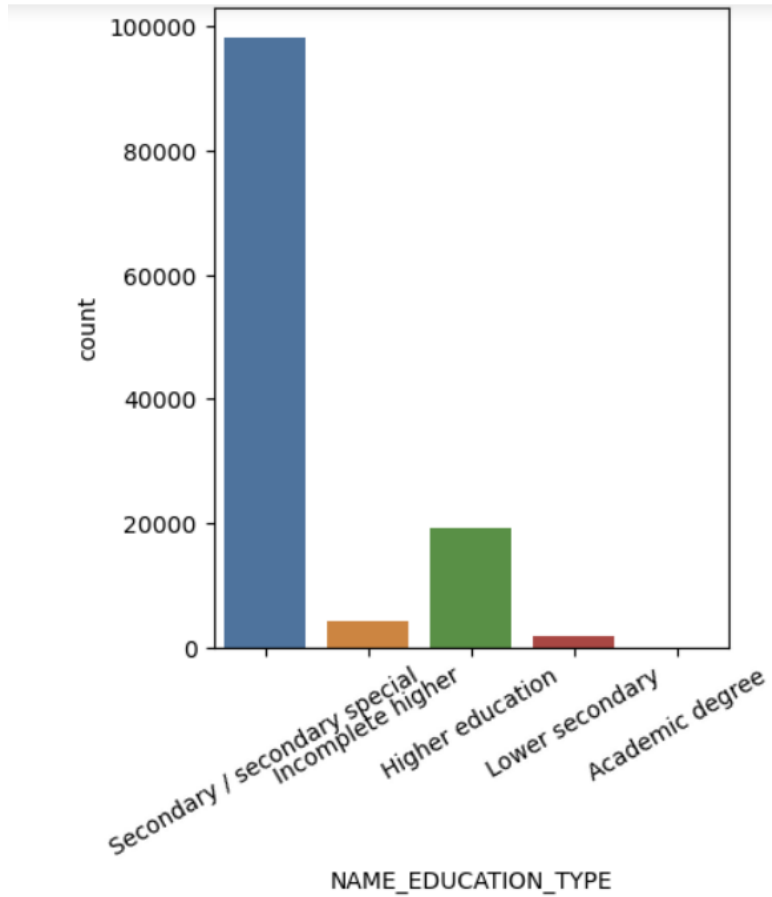
- I started by loading the data.
- Then I took time to just understand the columns of the data.
- For data cleaning, I found the columns with null values and suggested imputation techniques.
- I also checked for outliers using boxplot and displayed columns which contained outliers.
- I split the data into two data frames according to the two target variables.

- For univariate analysis of categorical variables, I used pie and bar graphs.
- For bivariate analysis of two continuous variables I used a scatter plot. For a categorical and a continuous column, I used a boxplot.
- For multivariate analysis I used scatter plot.

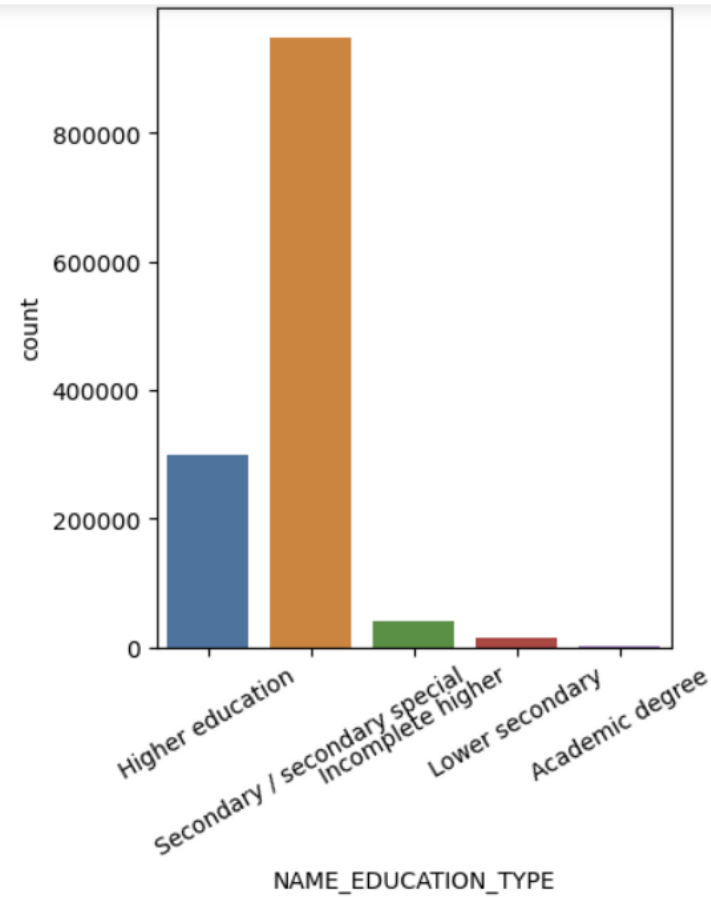


- As we can see, females who are married have difficulty paying back.

DEFAULTERS

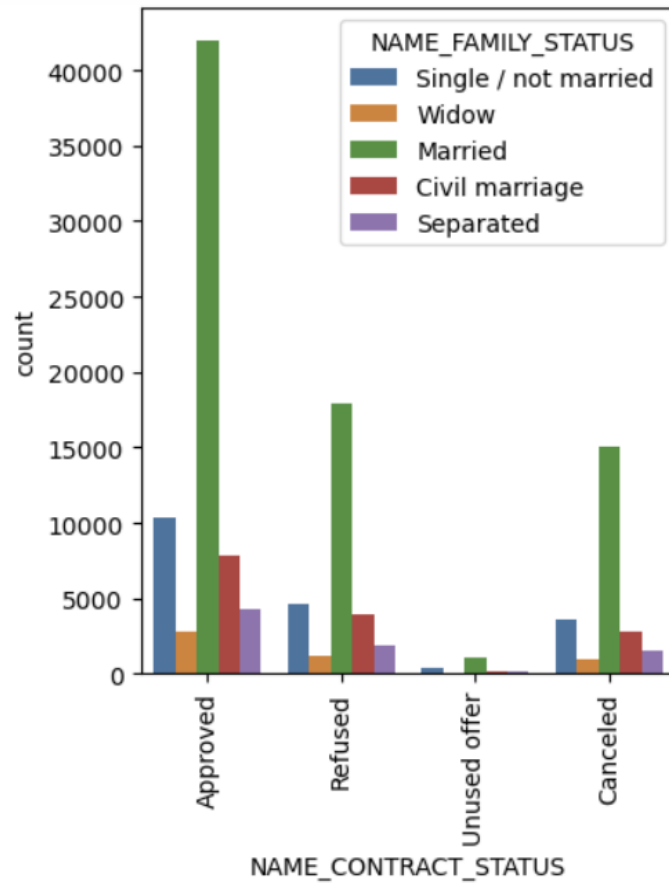


NON-DEFAULTERS

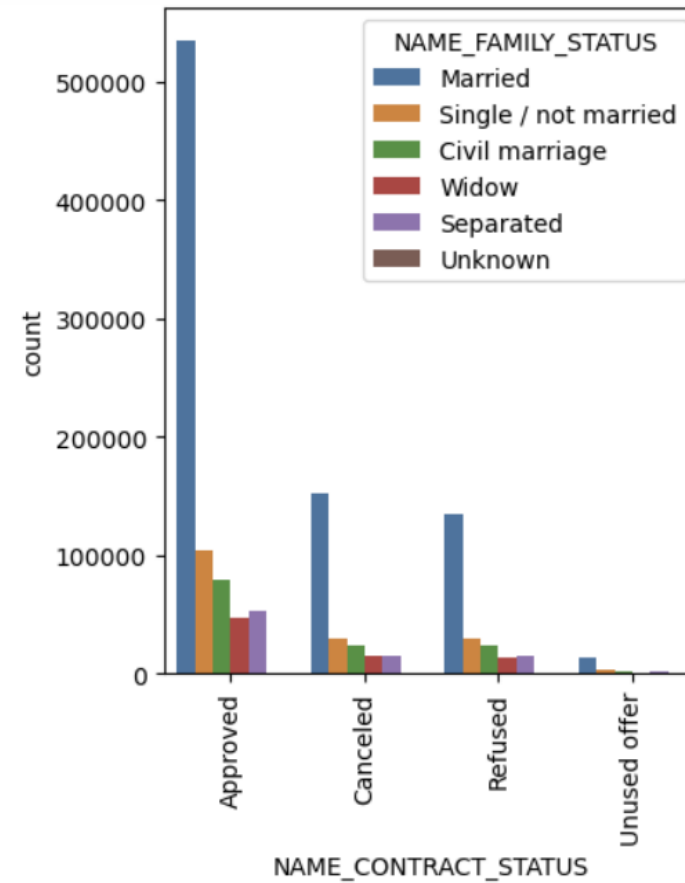


- People who hold secondary/secondary special education are high defaulters.

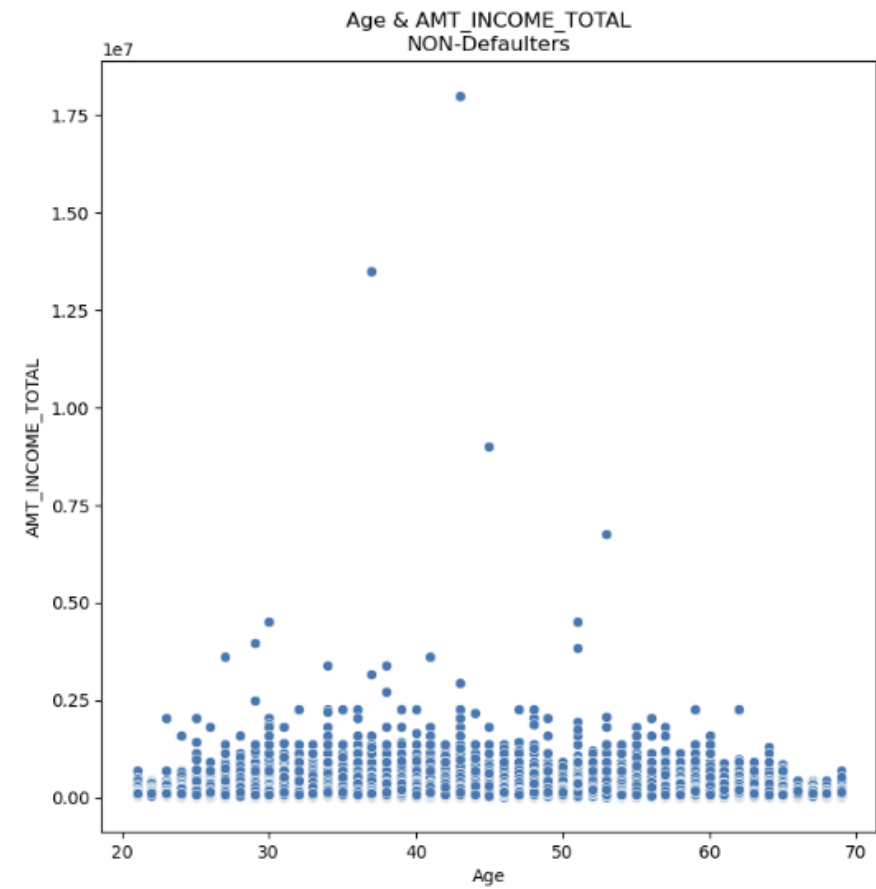
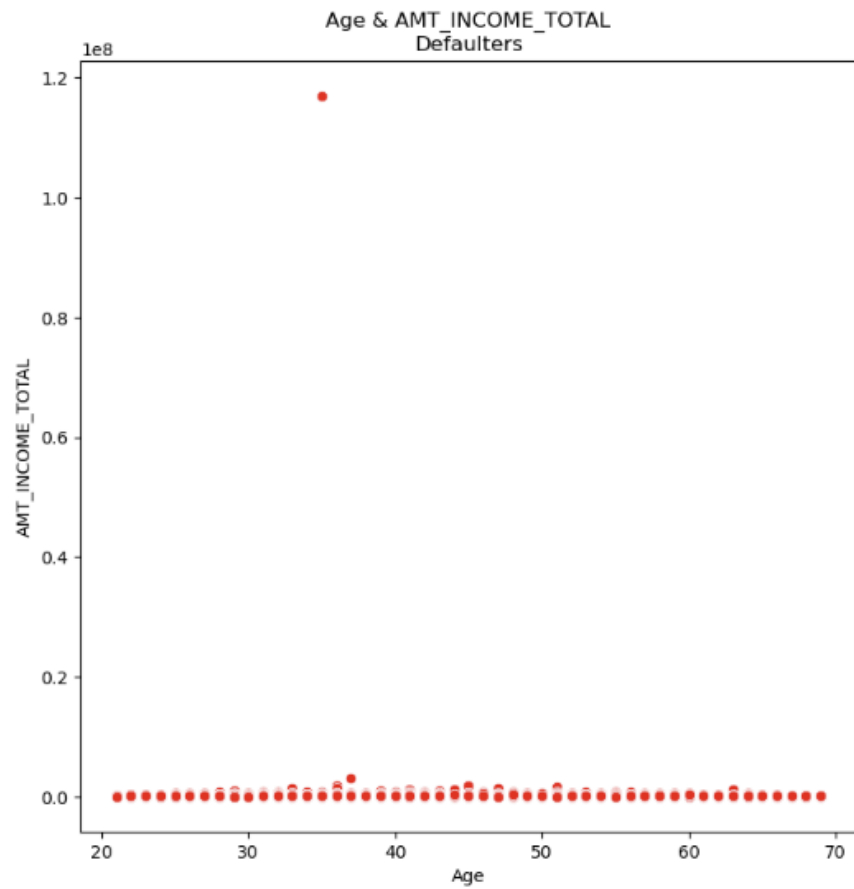
DEFAULTERS



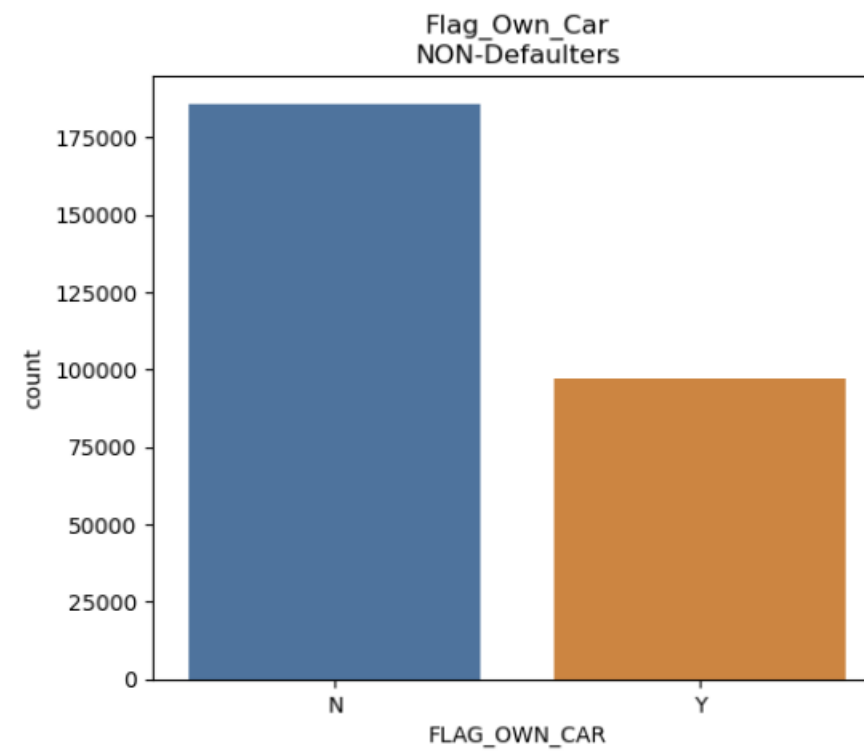
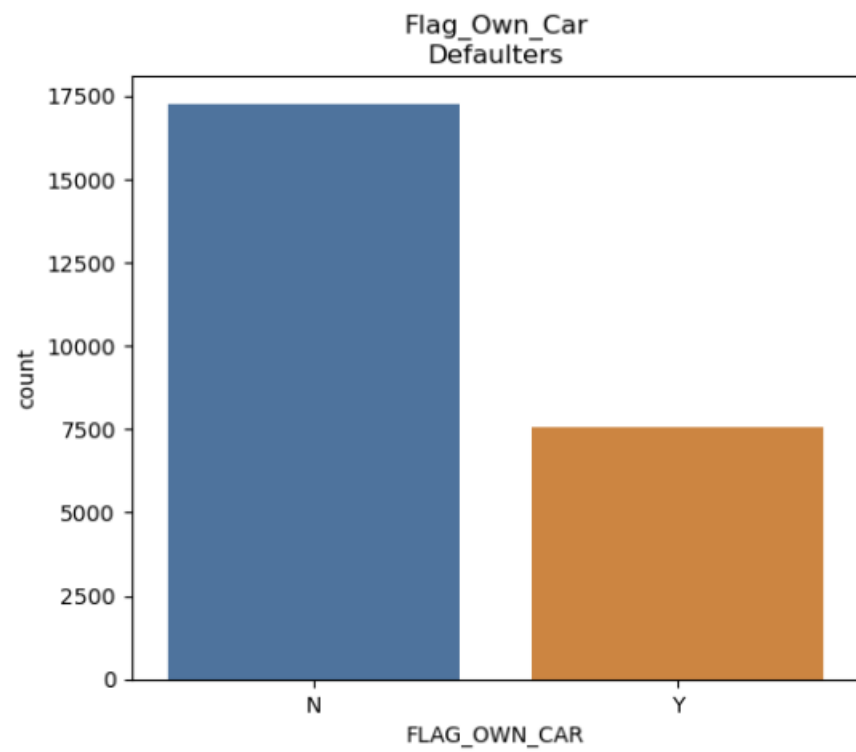
NON-DEFAULTERS



- Many loans were approved for married people.



- Most of the defaulters have low income.



- Most of the defaulters do not own a car.

Conclusion.

- Avoid giving lot of loans to married people. They tend to become defaulters. Focus on single and other types of relationship.
- Give loans to Academic degree holders as they are the least defaulters.
- Avoid giving loans to low income people as they are high in defaulters category.
- Accept loans of people who own a car. They tend to be non-defaulters.