

# Exploratory Data Analysis

## *EDA Case Study*



# ***Introduction***

- This case study aims 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, lending (to risky applicants) at a higher interest rate, etc. This will ensure that the consumers capable of repaying the loan are not rejected. Identification of such applicants using EDA is the aim of this case study.

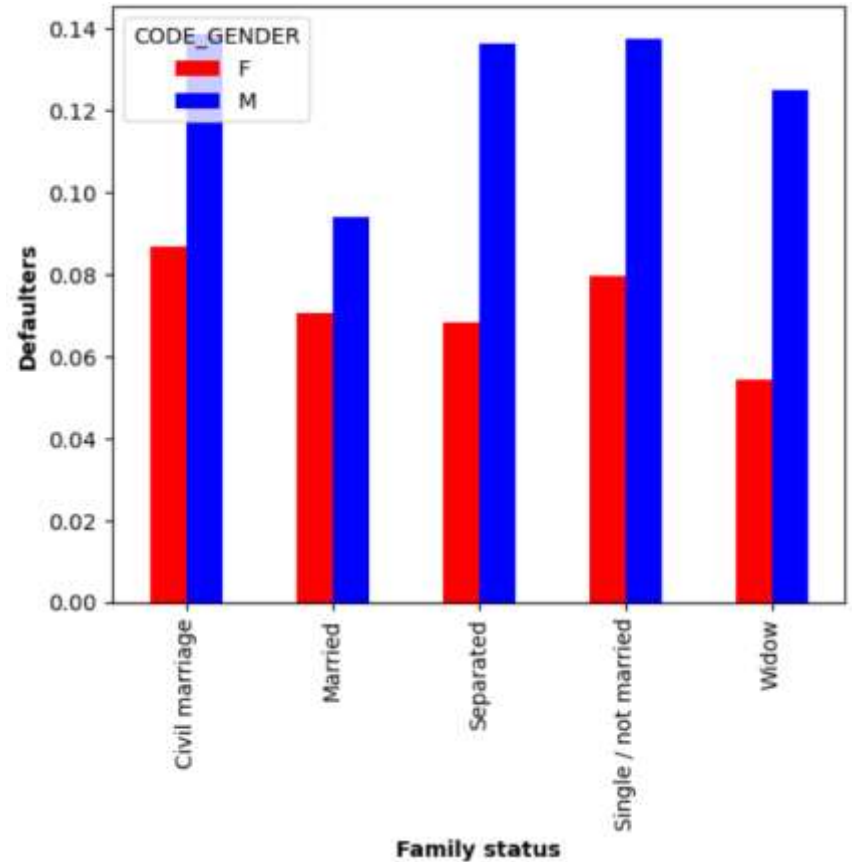
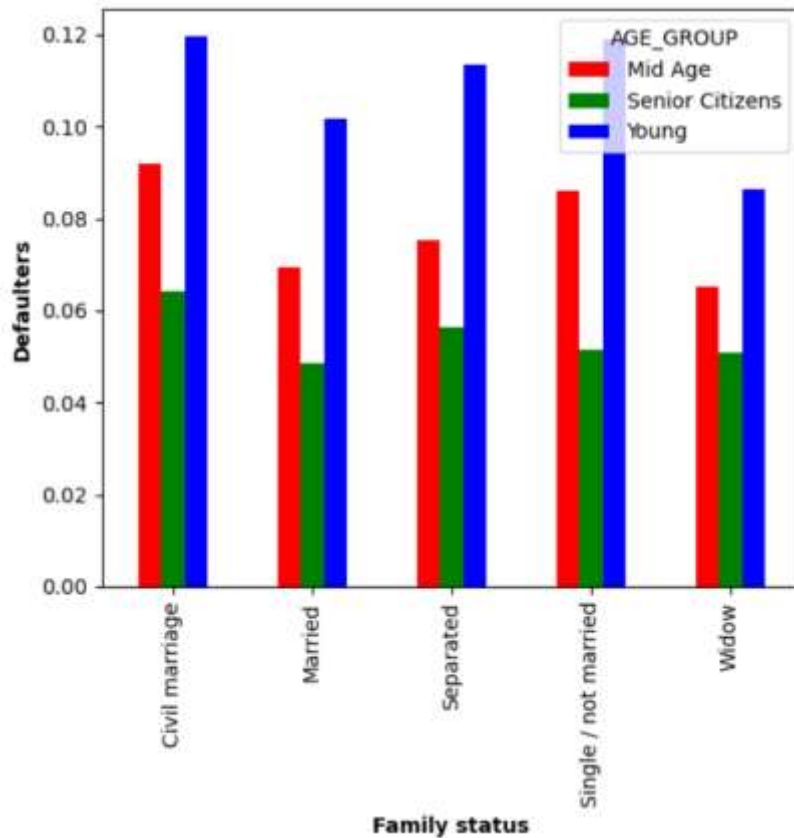
# ***Business Understanding***

- 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 specialises in lending various types of loans to urban customers. You have to use EDA to analyse the patterns present in the data. This will ensure that the applicants capable of repaying the loan are not rejected.



# ***Findings on Current Applications***

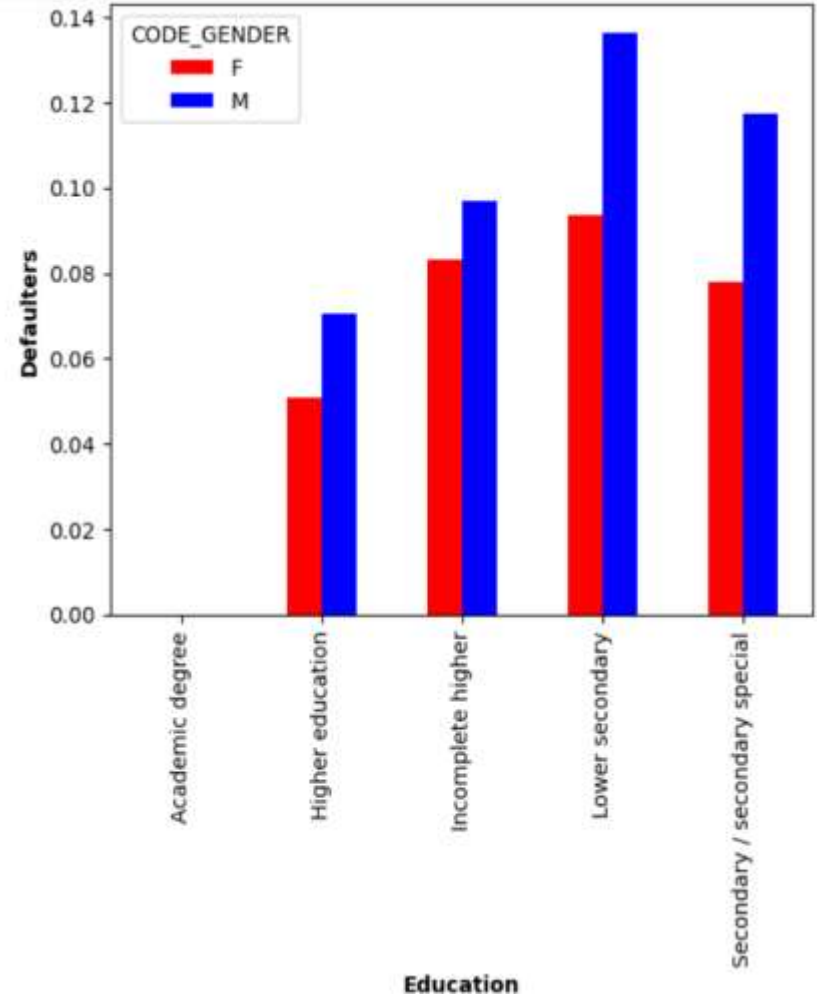
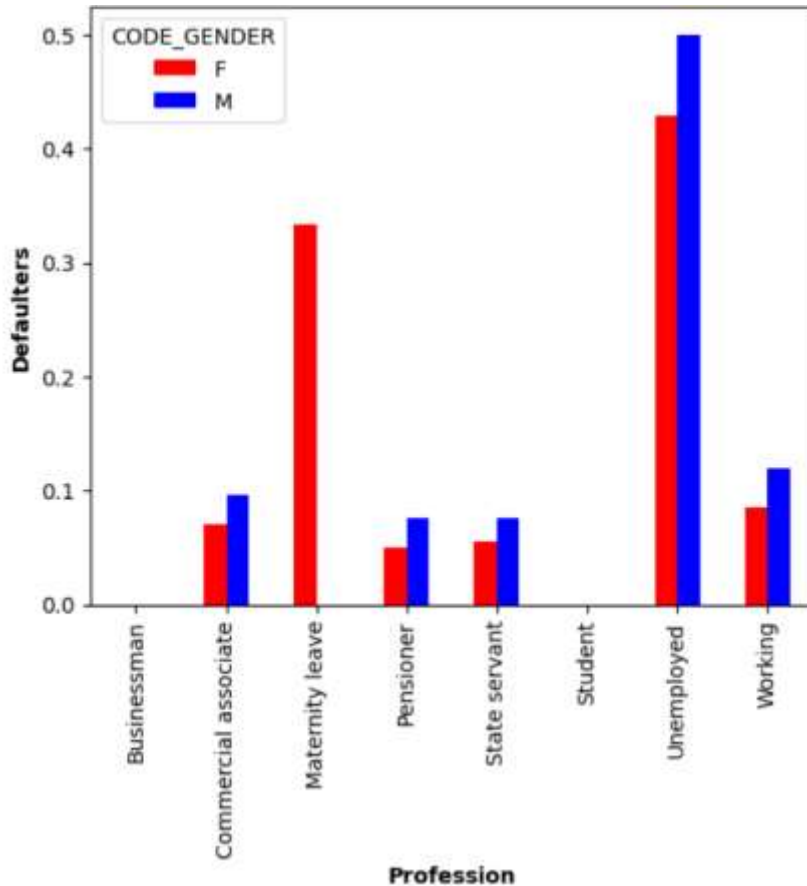
# *On the Basis Of Family Status*



# Findings-

- Senior citizens are less prone to be defaulter, regardless of family status.
- Younger People are more defaulted in all family status.
- Males are more likely than Females to be defaulter.

# *On The Basis Of Profession And Education*

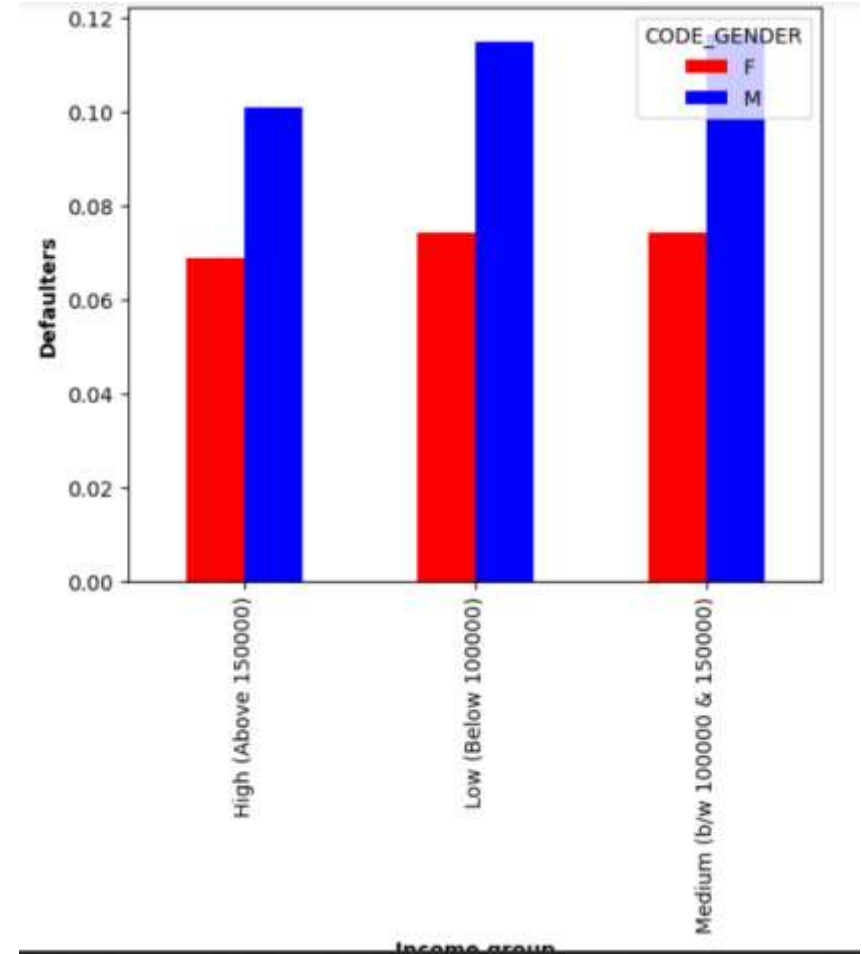
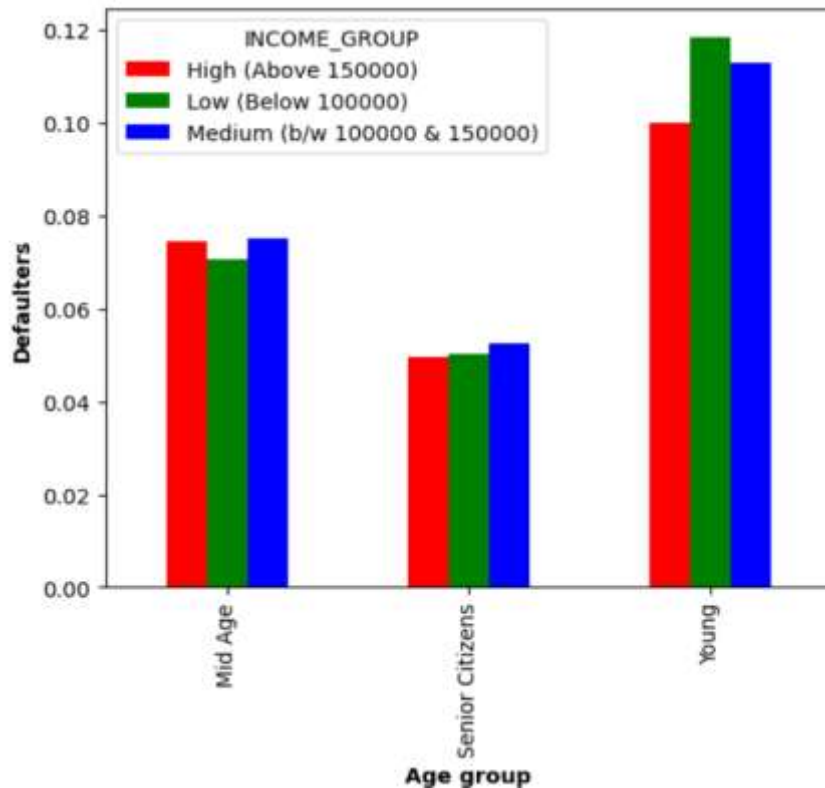


# Findings-

- Those with higher education are less defaulted frequently than those with lower secondary education.
- Clients who are on maternity leave or who are unemployed frequently are defaulter on their obligations.



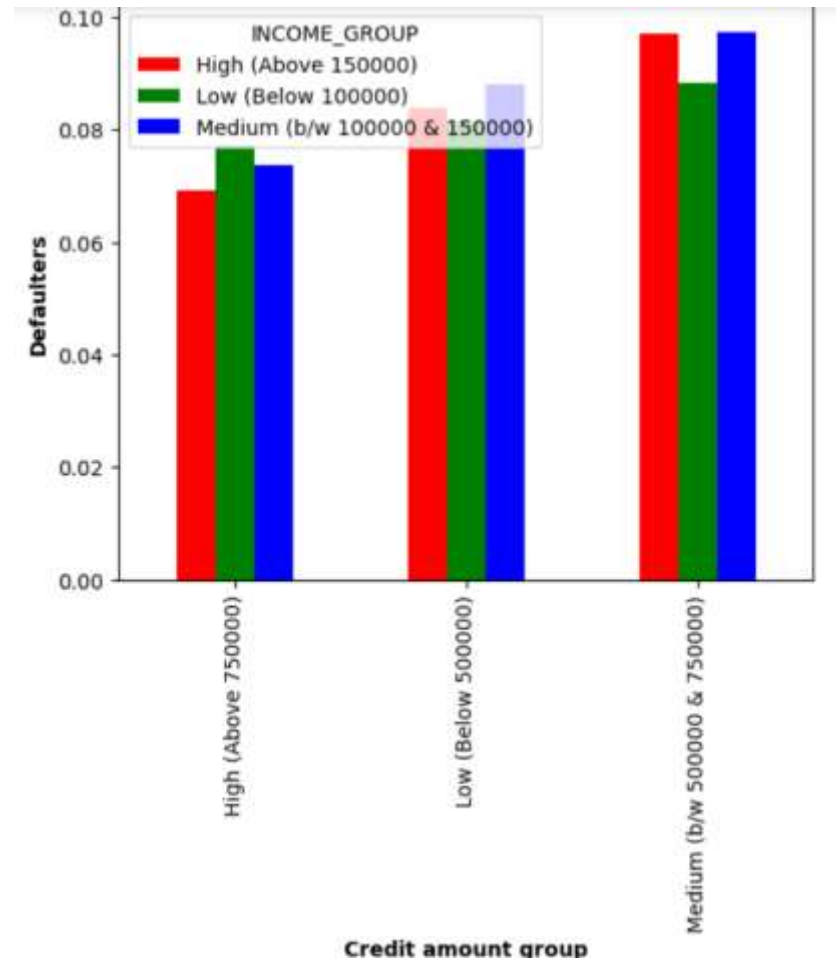
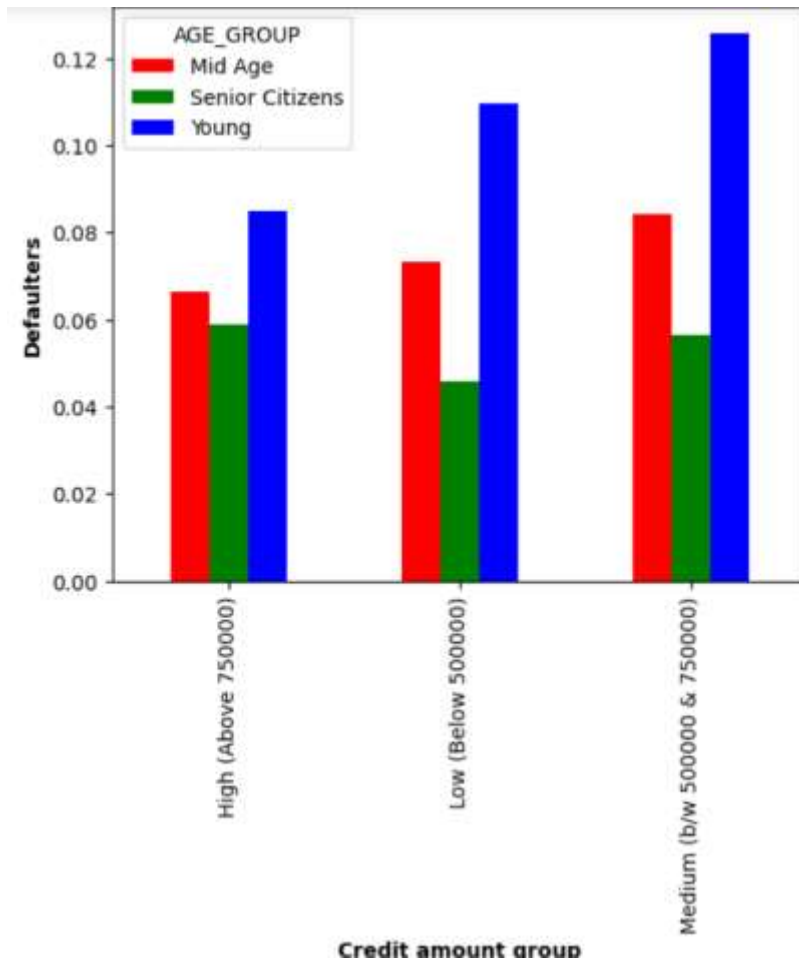
# *On The Basis Of Income Groups*



# Findings-

- Groups with higher incomes were defaulted less frequently than ones with lower incomes.
- Those in all income levels who are middle-aged and Senior citizens have lower defaulter status.

# *On The Basis OF Credit Amount Groups*



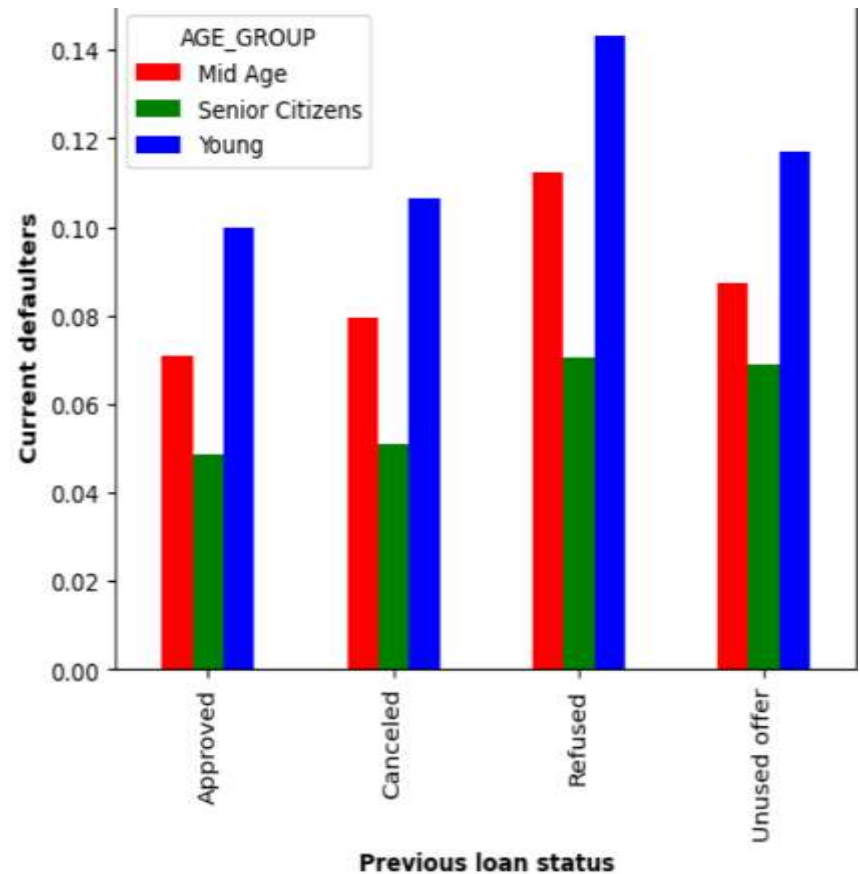
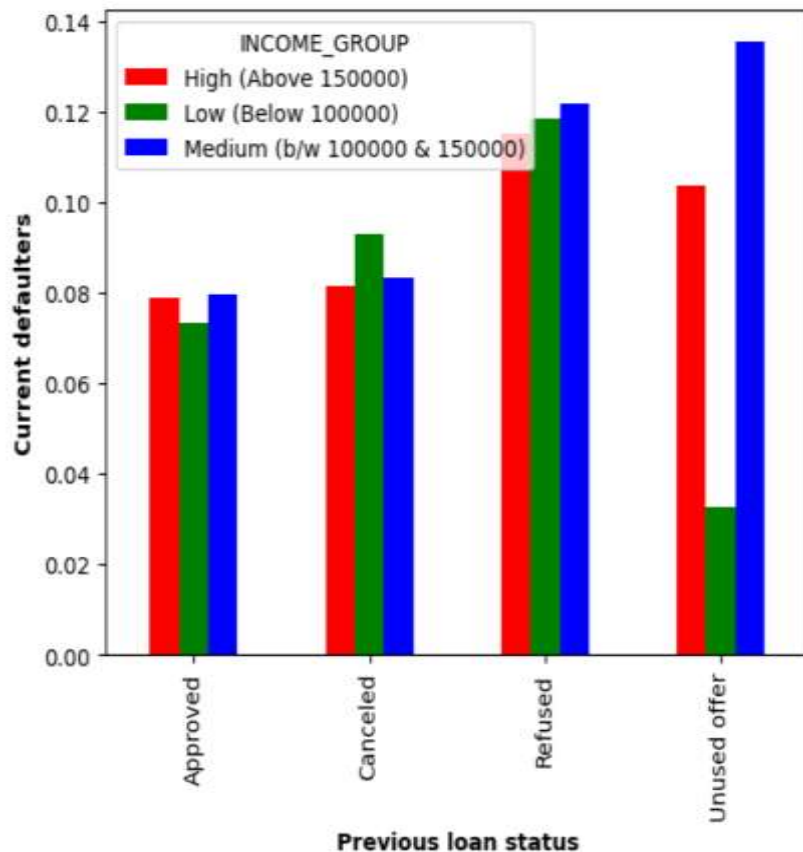
# Findings-

- Across all income groups, clients with medium credit amounts are defaulted at a higher rate than those with low and high credit amounts.
- The likelihood of default status is higher for young clients with medium and low loan amounts.

An illustration of a modern office environment. In the foreground, a man in an orange shirt sits at a desk, working on a laptop. A woman in a blue dress stands next to him, looking at a tablet. The background features large windows displaying various data visualizations, including bar charts, pie charts, and line graphs. A potted plant is visible on the left side of the desk.

# ***Findings On Previous Loan Applications***

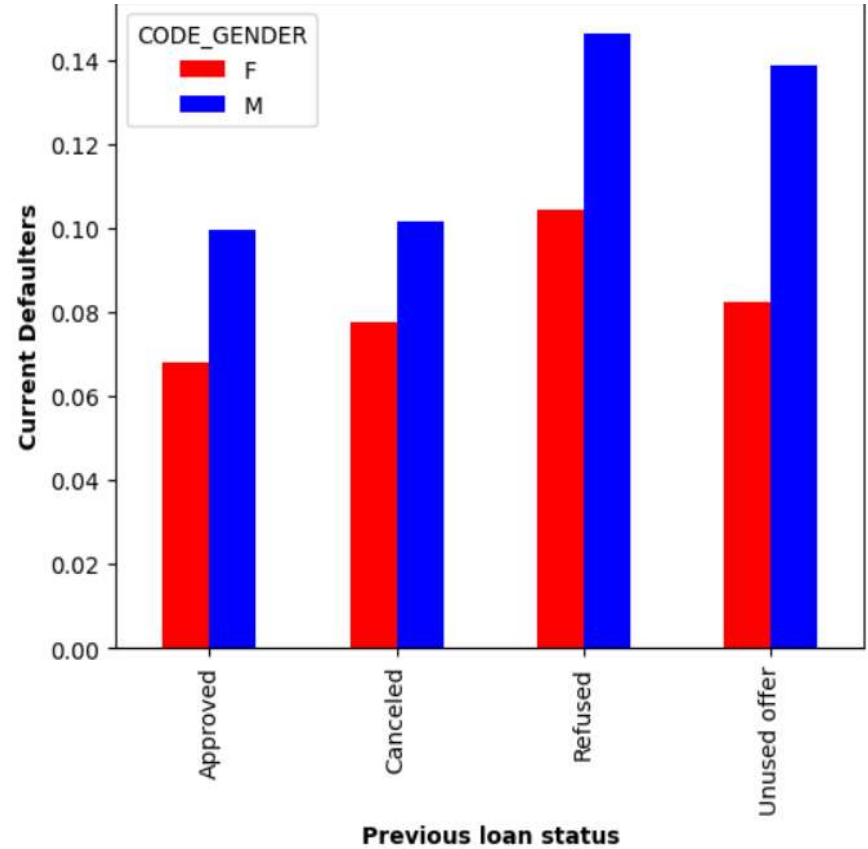
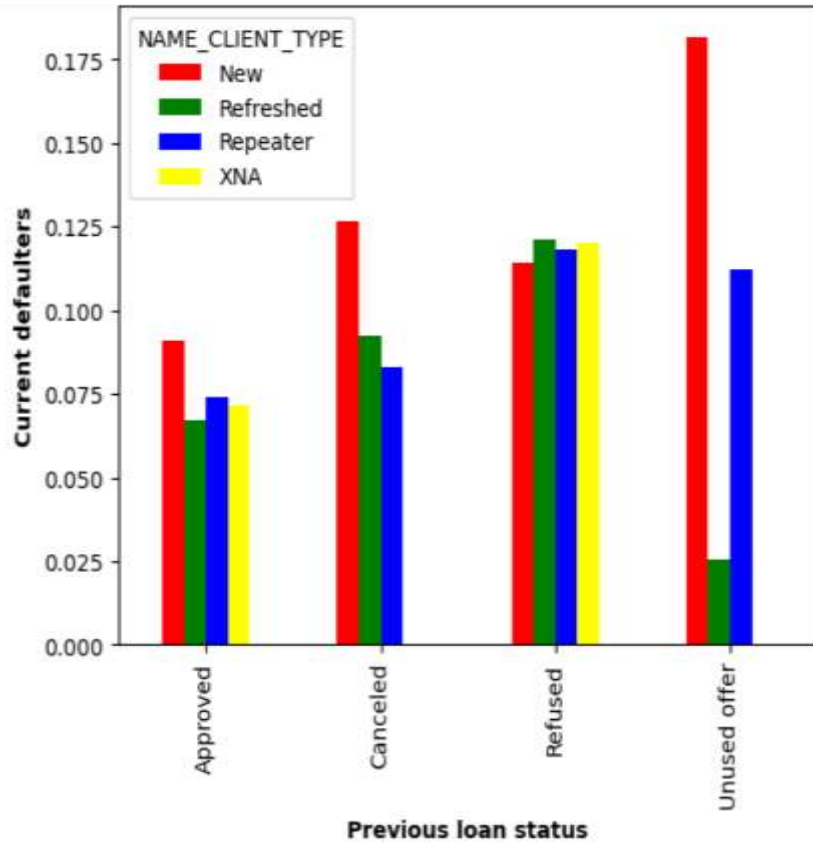
# *On the Basis of Income & Age Group*



# Findings-

- The majority of young individuals who had previously been rejected were defaulters.
- Regardless of their prior loan situation, seniors are good repayers.
- Defaulter are higher for applicants who had prior applications rejected.

# *On the Basis of Client Type & Gender*





# Findings-

- Male applicants with unused or previously rejected offers defaulted more frequently.
- New customers with empty offers defaulted more frequently.



***Thank You***