

UPGRAD – EPG DS C36 (SEPT 2021) CREDIT EDA ASSIGNMENT

SUBMITTED BY
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PURPOSE

- 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 as their advantage by becoming a defaulter.
- Hence, the purpose is to ensure that the applicants capable of repaying the loan are not rejected.

REAL-TIME RISKS

When the company receives a loan application, the company must decide for loan approval based on the applicant's profile. Two types of risks are associated with the bank's decision:

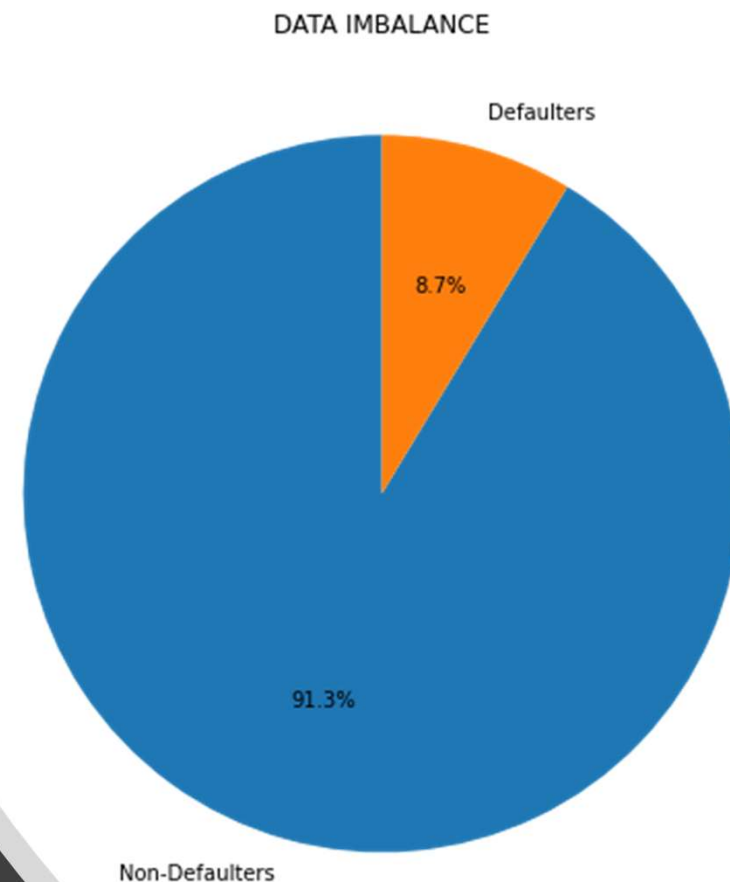
- If the applicant is likely to repay the loan, then not approving the loan results in a loss of business to the company.
- If the applicant is not likely to repay the loan, i.e., he/she is likely to default, then approving the loan may lead to a financial loss for the company.

STEPS INVOLVED IN EDA ANALYSIS

- The data analysis & hence the conclusions/recommendations arrived for the given real-life problem have been arrived by conducting EDA analysis. The steps followed throughout the analysis as below:
 - Importing the data
 - Cleaning the data
 - Fixing the rows/columns
 - Imputing the missing values
 - Handling outliers
 - Univariate Analysis
 - Bi-Variate Analysis
 - Multi-Variate Analysis
 - Data Visualization

SOME IMPORTANT VISUALIZATIONS & CONCLUSIONS

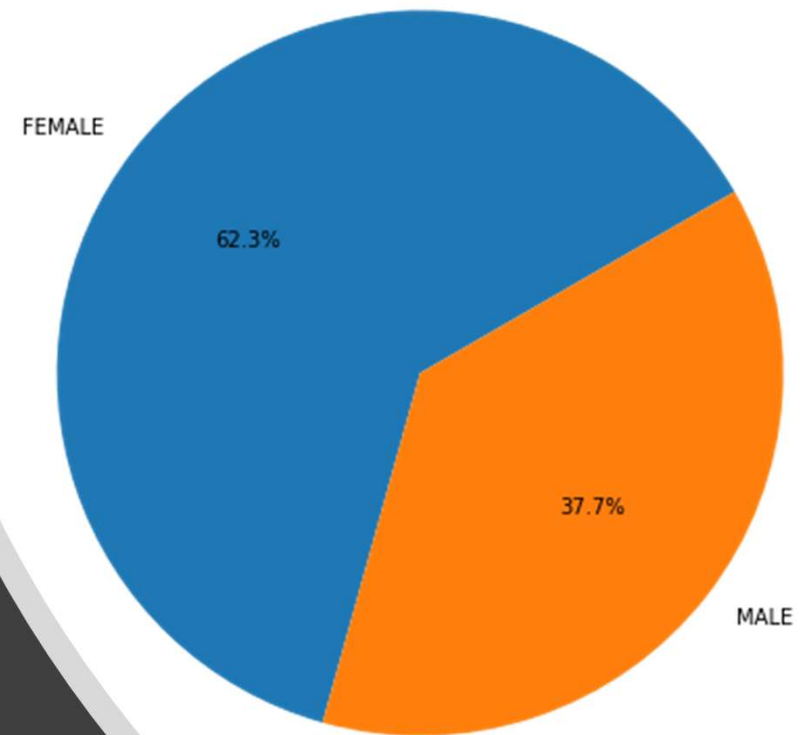
From the figure, it is visible that the data imbalance is high between Non-Defaulters & Defaulters.



SOME IMPORTANT VISUALIZATIONS & CONCLUSIONS

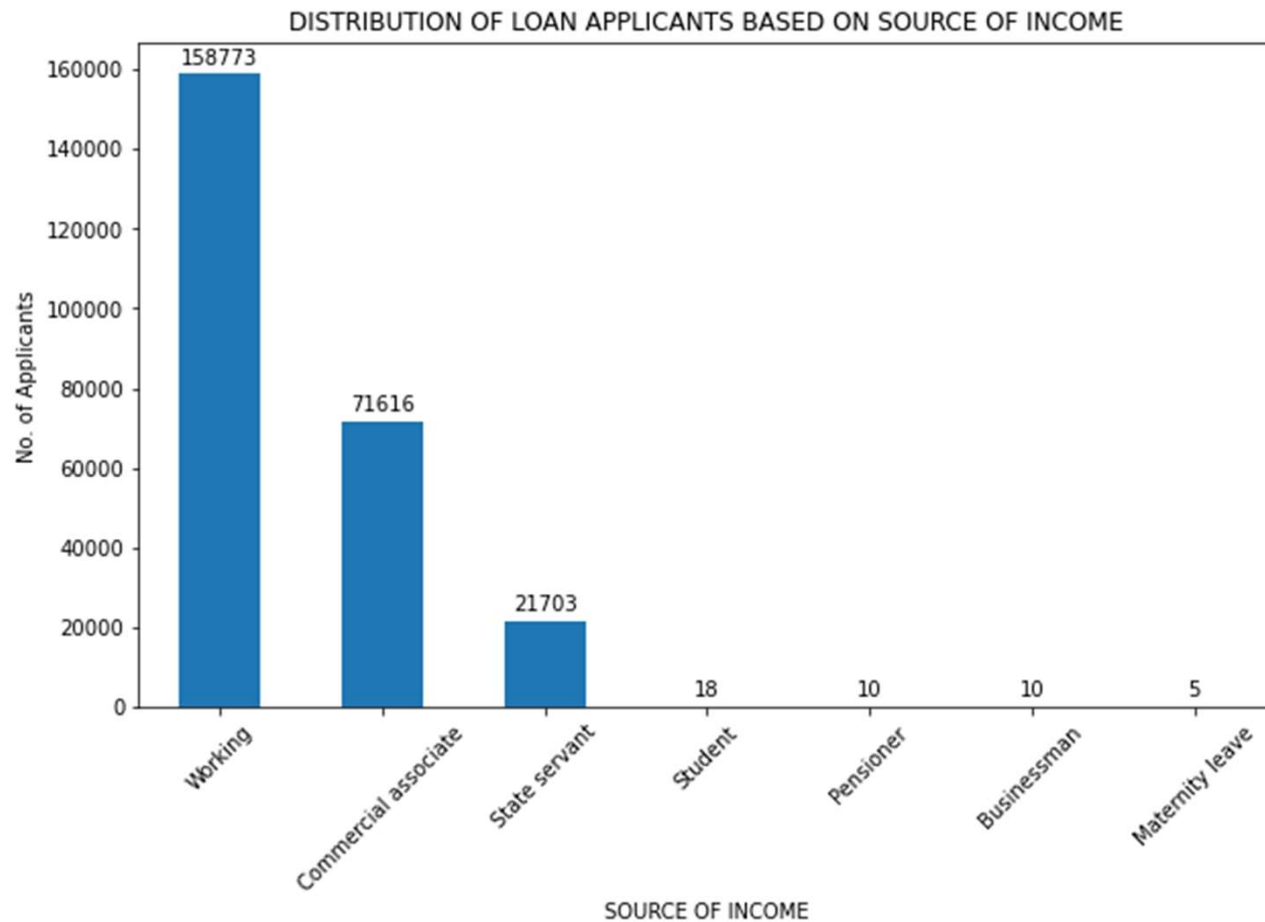
From the figure, it is visible that the Female loan applicants are more than the Male loan applicants.

DISTRIBUTION OF LOAN APPLICANTS BASED ON GENDER

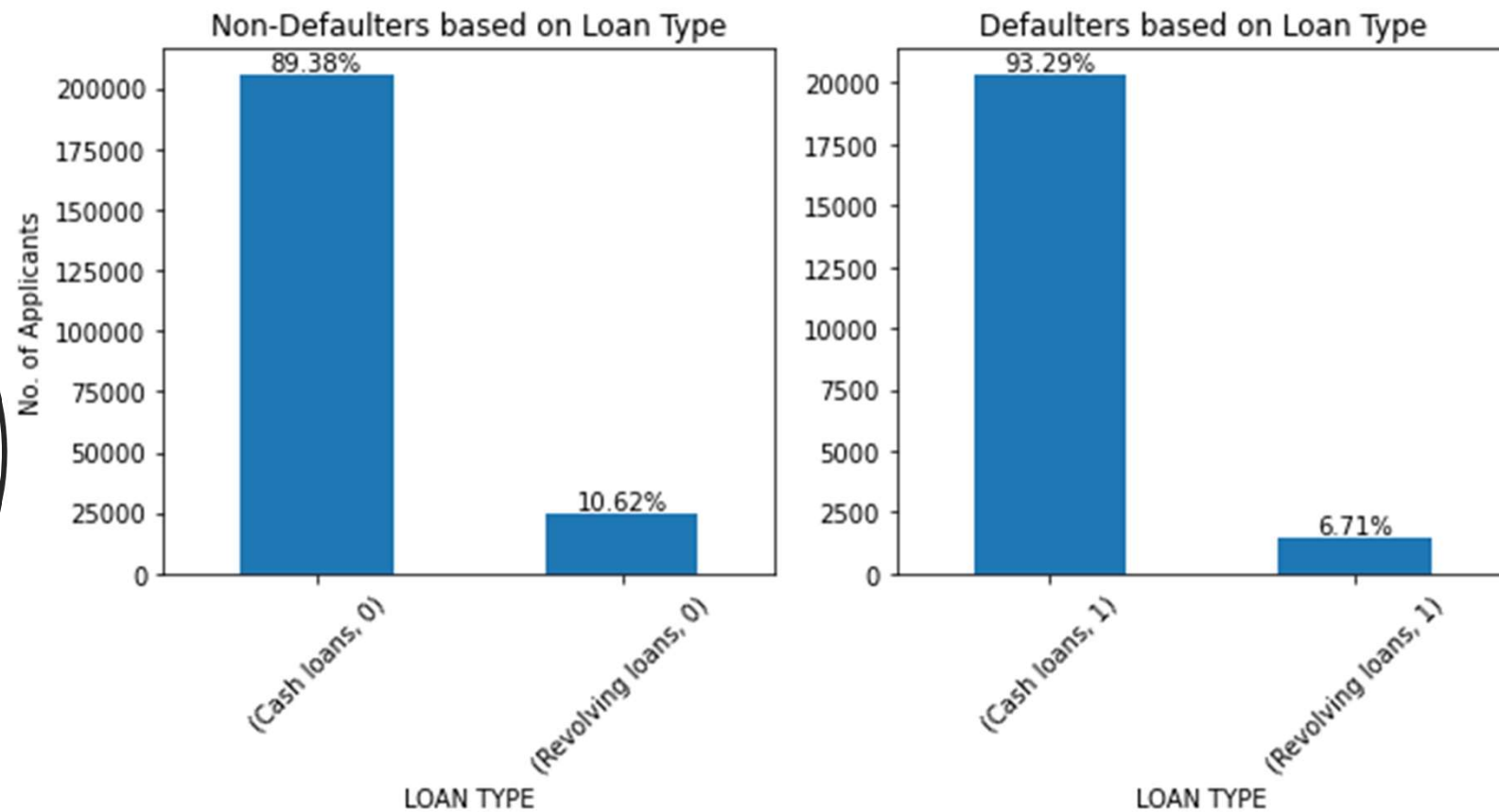


SOME IMPORTANT VISUALIZATIONS & CONCLUSIONS

From the figure, it is visible that the working people have applied for the loan in huge numbers.

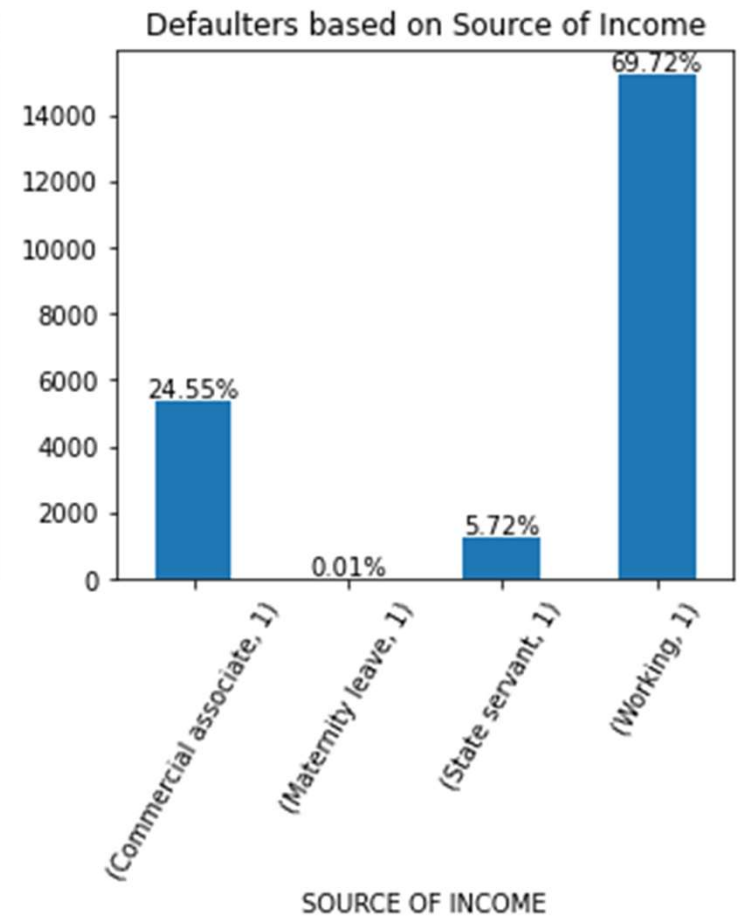
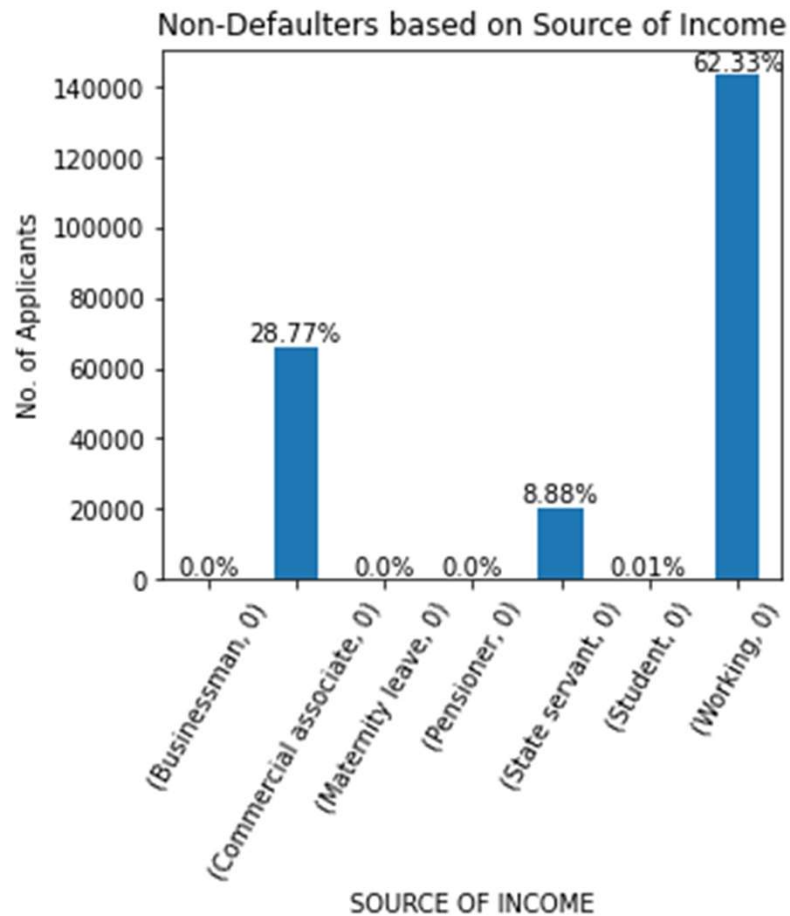


SOME
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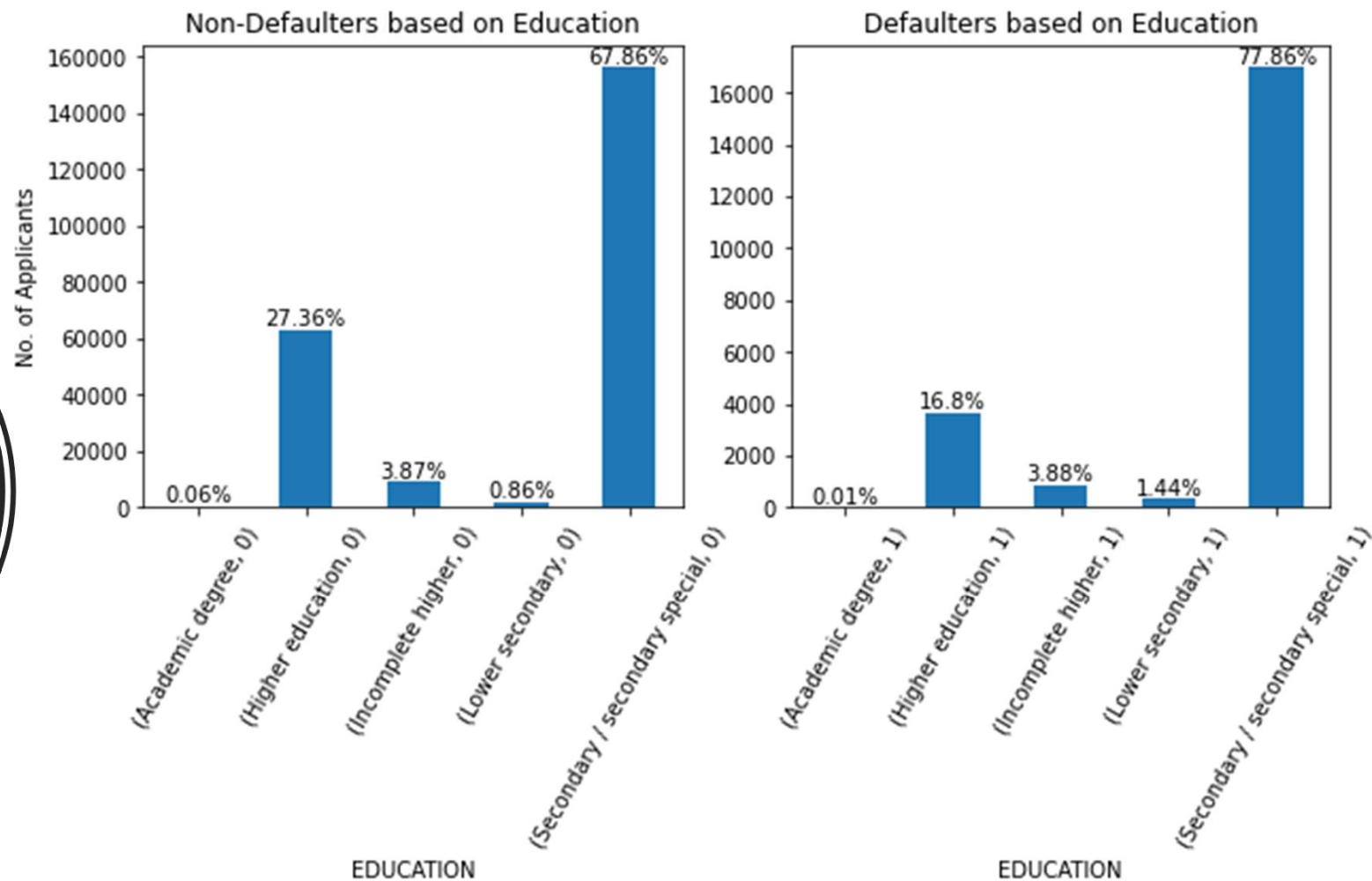
From the figure, it is visible that the defaulters are little higher in the Cash loan type applications.

SOME
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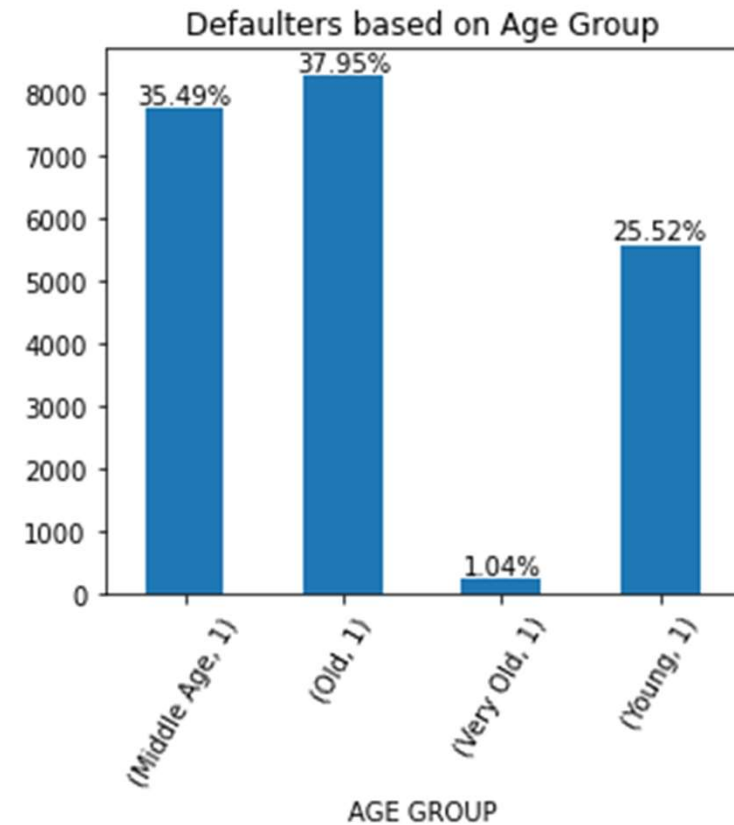
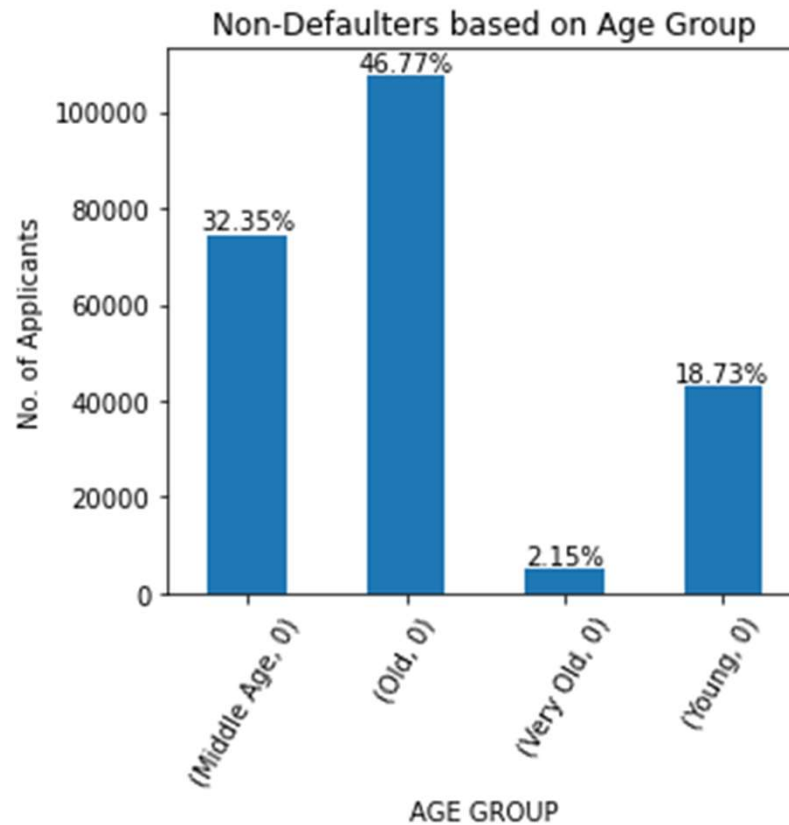
From the figure, it is visible that the people in “Working” category are more likely to default.

SOME
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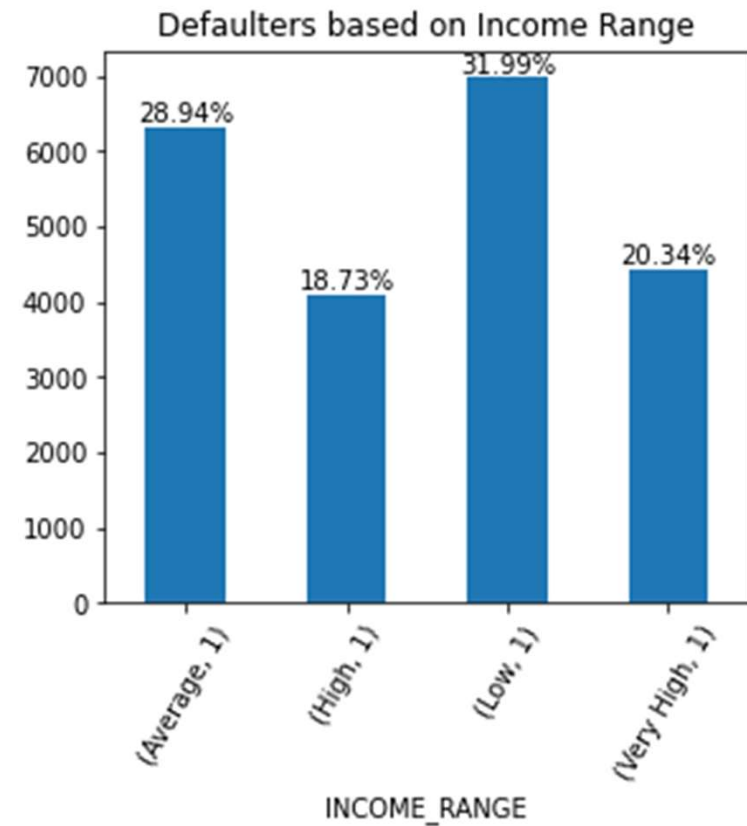
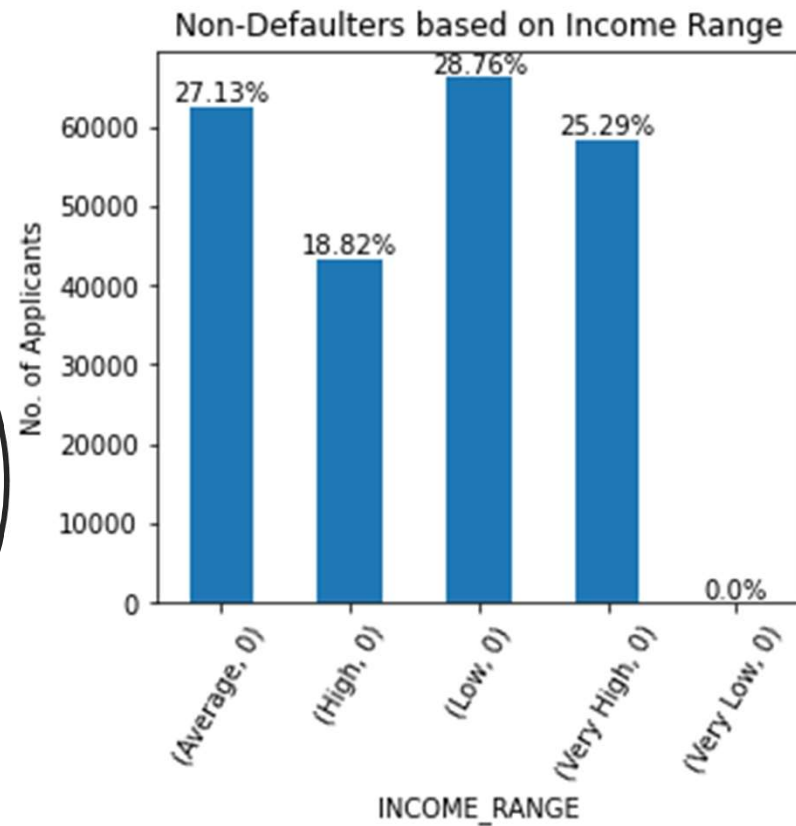
From the figure, it is visible that the people in “Secondary/Secondary special” category are more likely to default than the people in “Higher Education” category.

SOME
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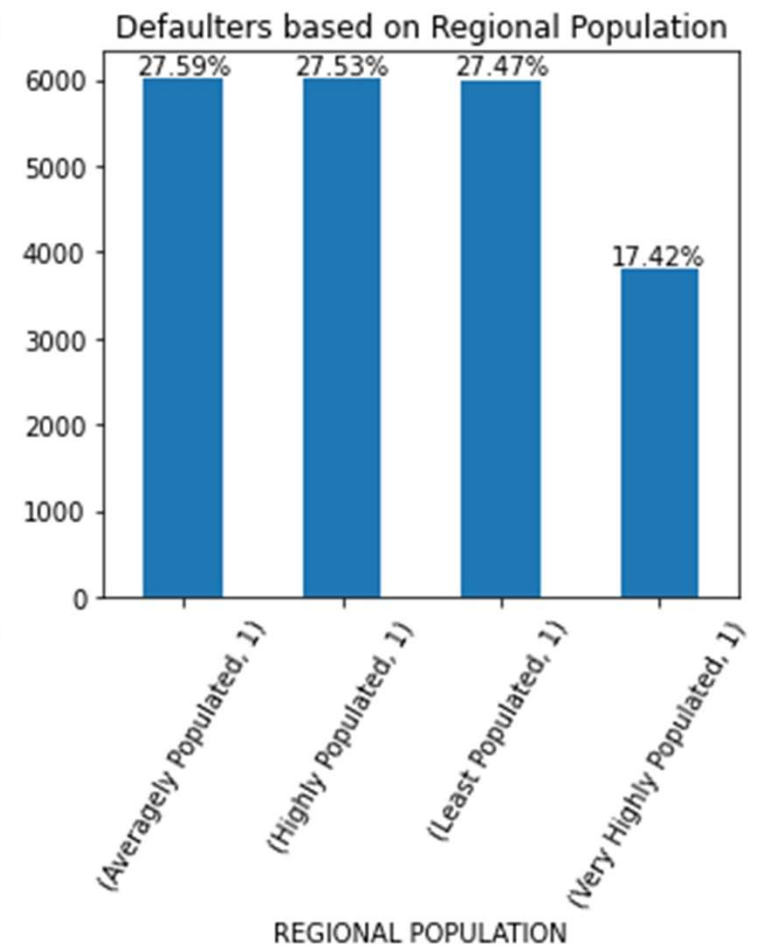
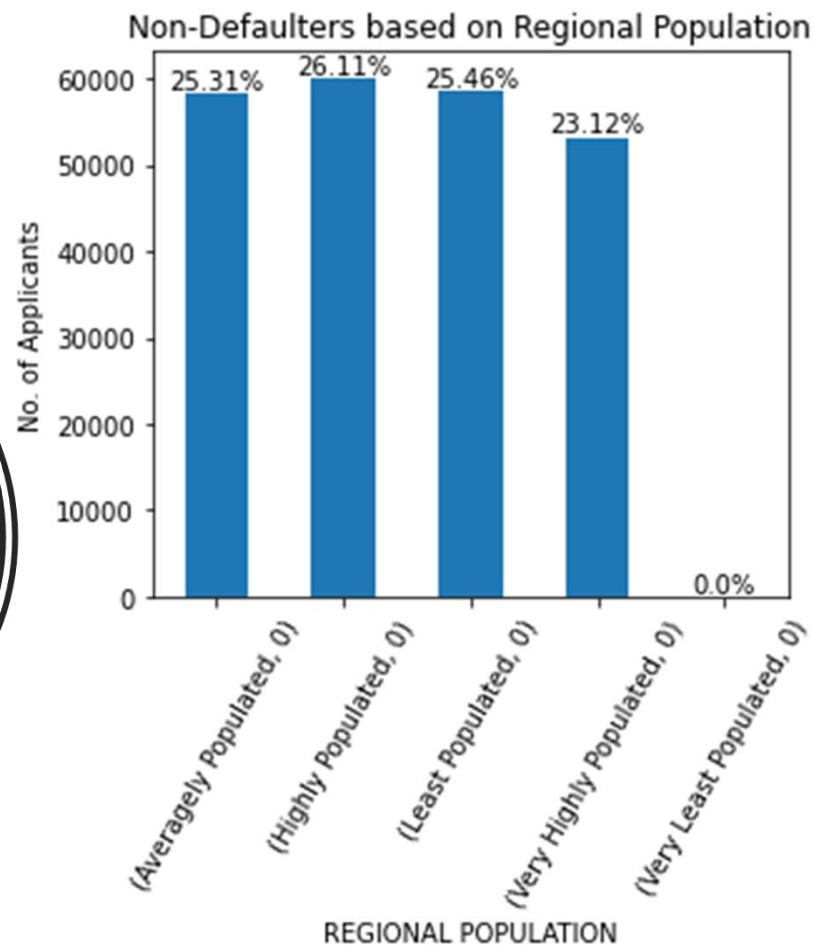
From the figure, it is visible that young people are more likely to default than the old people.

SOME
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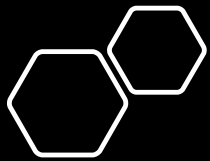


From the figure, it is visible that people with Low Income are more likely to default.

SOME
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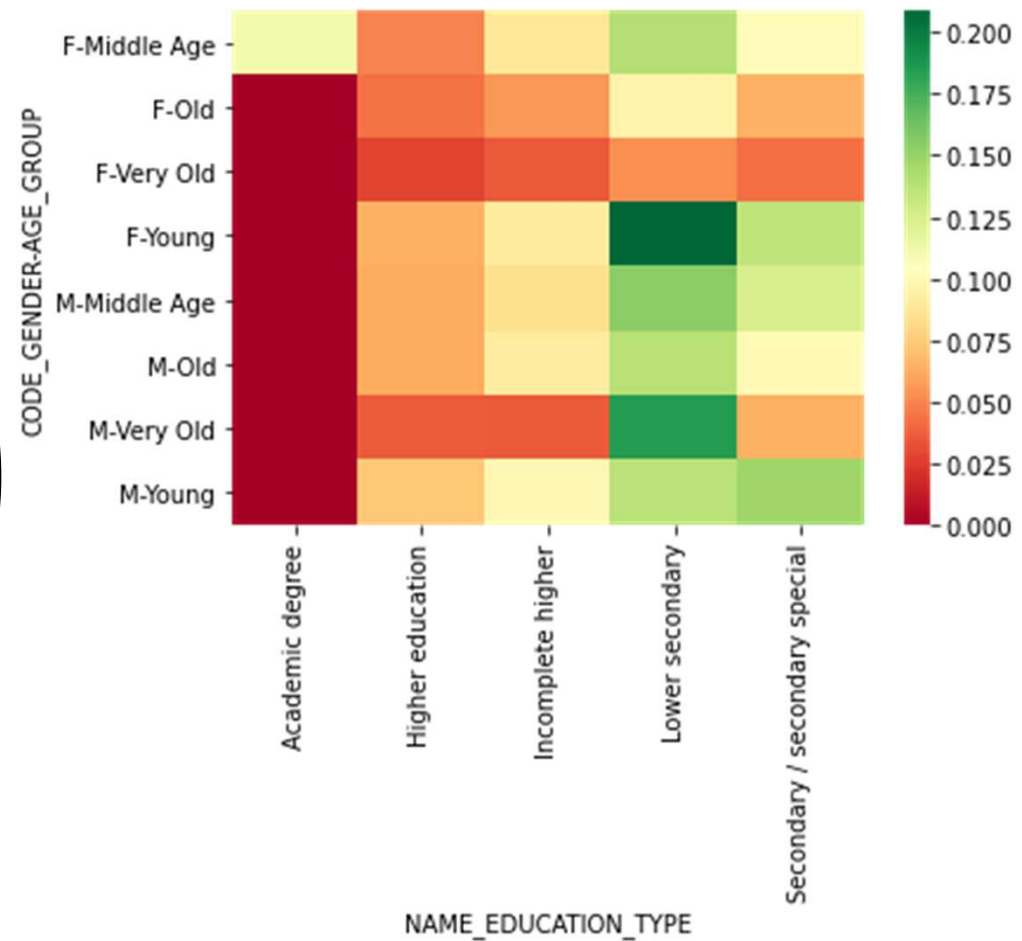


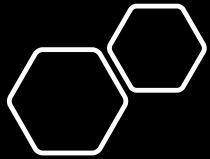
From the figure, it is visible that people in the Very Highly Populated area are least likely to default.



SOME IMPORTANT VISUALIZATIONS & CONCLUSIONS

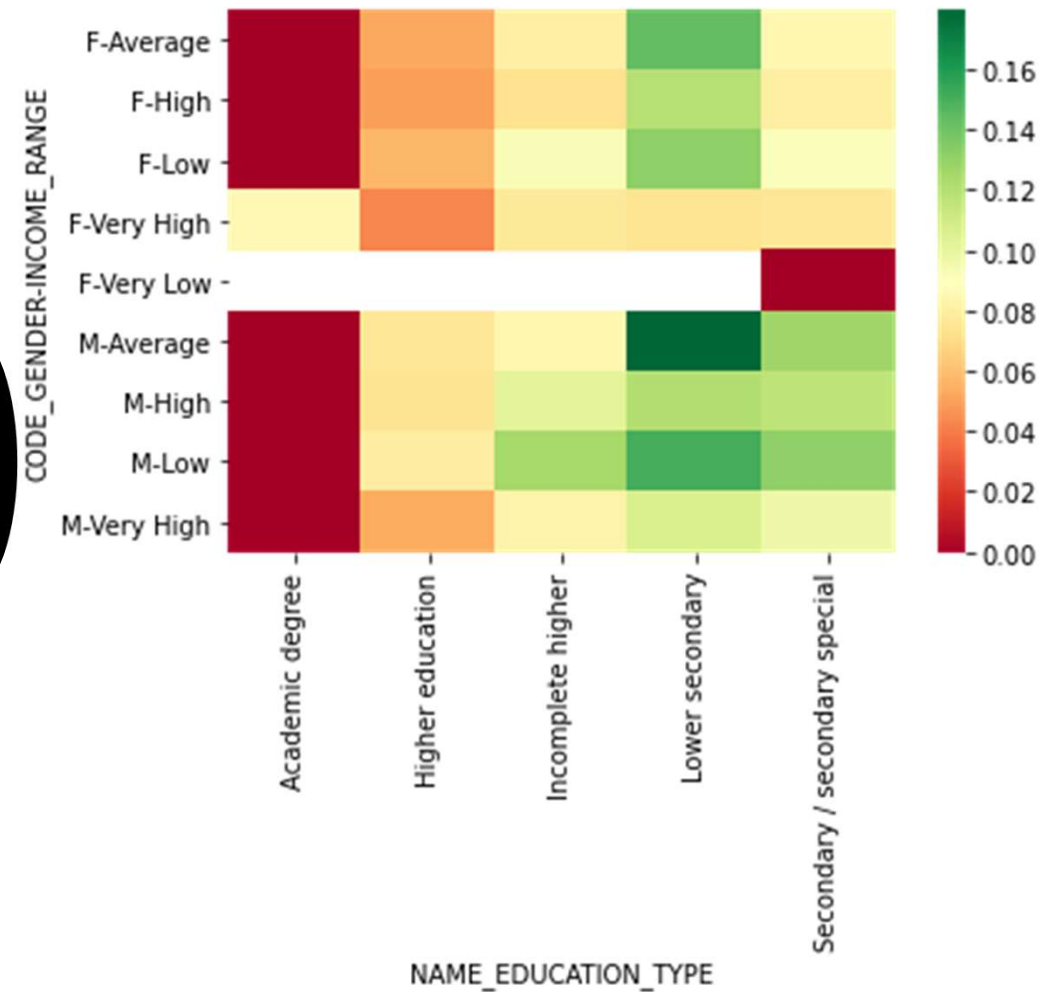
- From the figure, it is visible that the Female applicants who are Young & completed Lower Secondary are most likely to default.
- Also, the people who have completed Academic degree are least likely to default irrespective of the Gender & Age group.

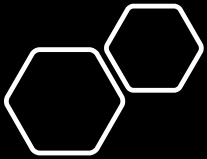




SOME IMPORTANT VISUALIZATIONS & CONCLUSIONS

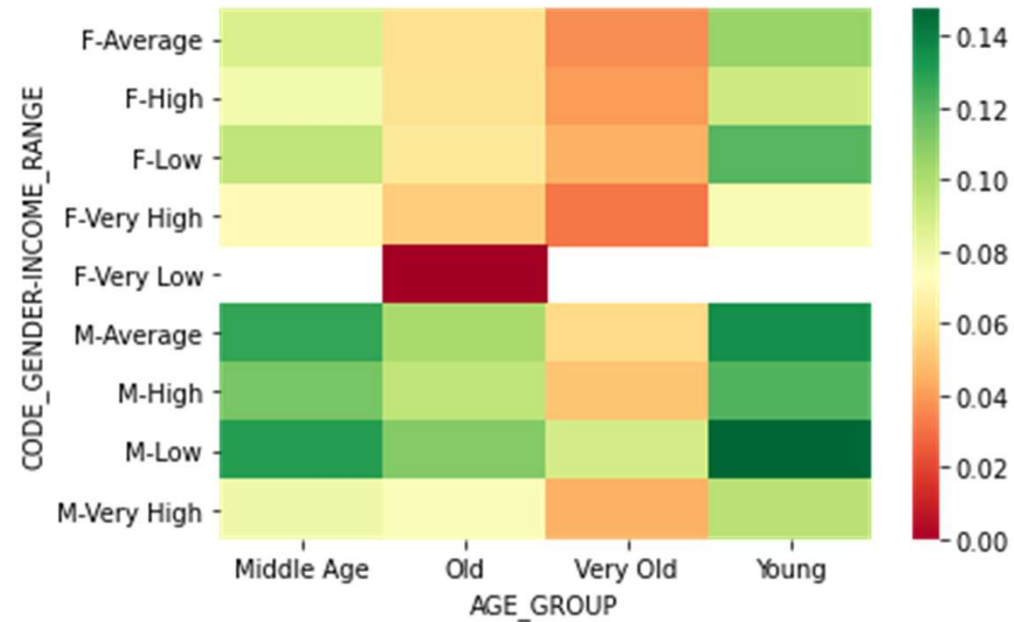
- From the figure, it is visible that the Male applicants who have completed Lower Secondary & having an Average income are most likely to default.
- Whereas the people who have completed Academic degree are least likely to default irrespective of the Gender & Income range.





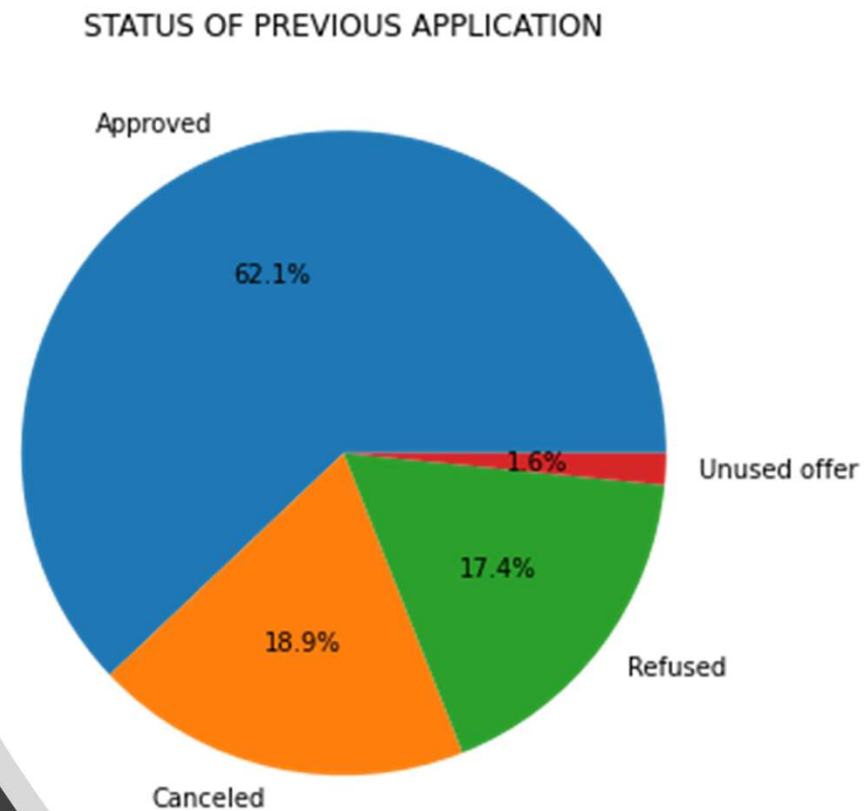
SOME IMPORTANT VISUALIZATIONS & CONCLUSIONS

From the figure, it is visible that the Male applicants who are Young & having a Low income are most likely to default.



SOME IMPORTANT VISUALIZATIONS & CONCLUSIONS

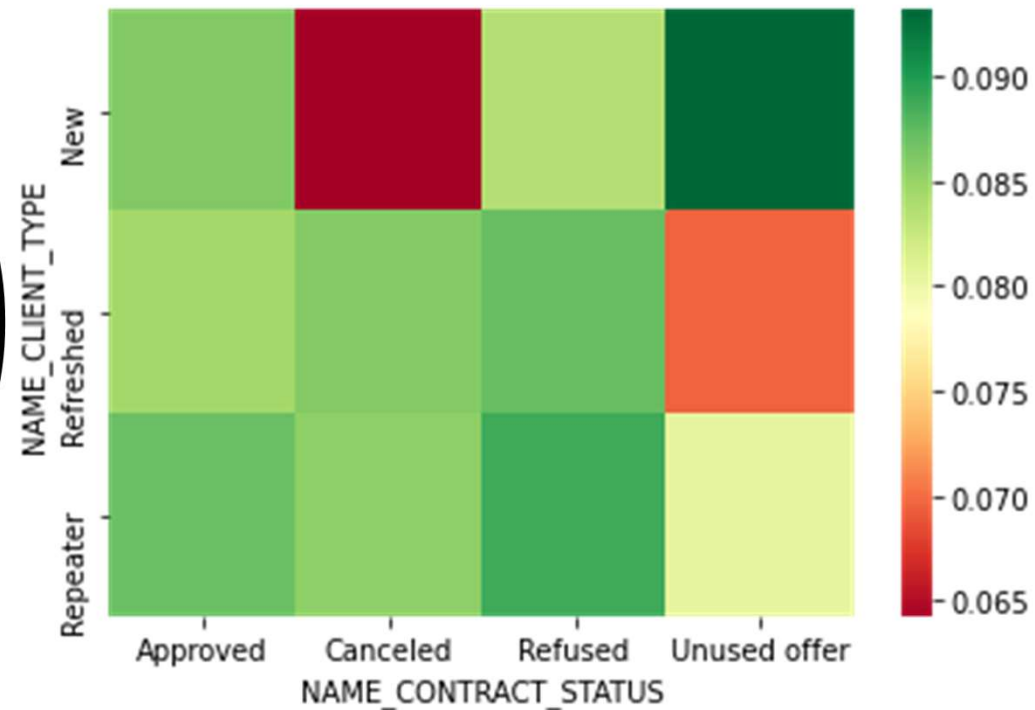
The figure shows the percentages of the statuses of the Previous applications.

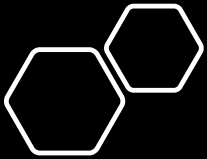




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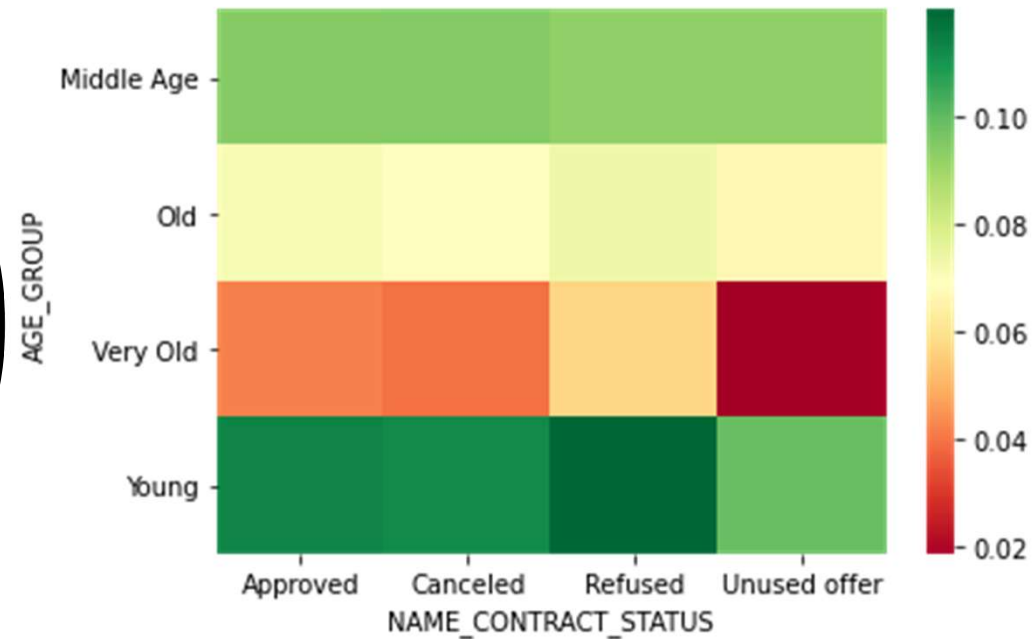
From the figure, the new clients who have not used their previous loan offer, are more likely to default.





SOME IMPORTANT VISUALIZATIONS & CONCLUSIONS

From the figure, the young people who have got their previous loan application refused, are more likely to default.



CONCLUSIONS

- Female loan applicants are more than the Male loan applicants.
- Generally, the Cash loan applications are more than the Revolving loan applications.
- The default-rate is comparatively less than in the Revolving type of loan applications than the Cash loan applications.
- People who earns through working, who have completed Secondary education, who are young, whose income is low are generally more likely to default.
- New clients, who have not used their previous loan offer, are generally more likely to default.
- Young clients, who have got their previous loan offer refused, are generally more likely to default.

RECOMMENDED GROUPS

- The people who have completed Academic degree are generally less likely to default irrespective of the Gender, Income range & Age group.
- People living in the “Regional Rating-1” are generally less likely to default.
- People working as State Servant are generally less likely to default.
- People living in the “Very Highly Populated” area are generally less likely to default.
- People who have applied for revolving type of loans are generally less likely to default.