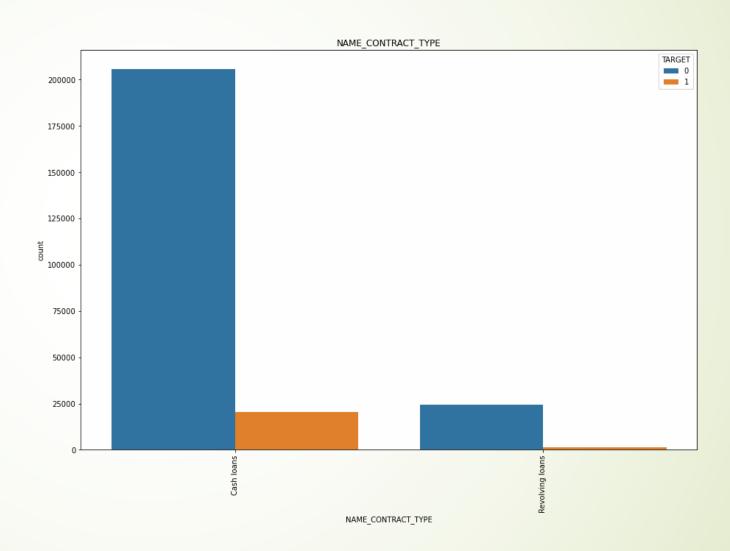
# Credit EDA Case Study

By Geetha Sagar Bonthu

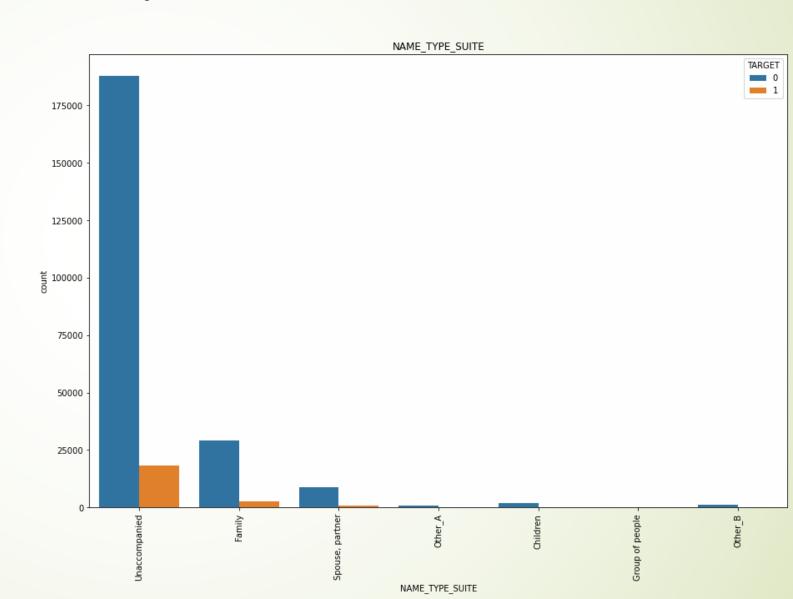
## Approach

- ☐ Reading Data Set
- Data Cleaning
- Removing columns with Null values greater than 3
- Remove missing values
- 🗖 Analysis Univariate, Multivariate and Bivariate

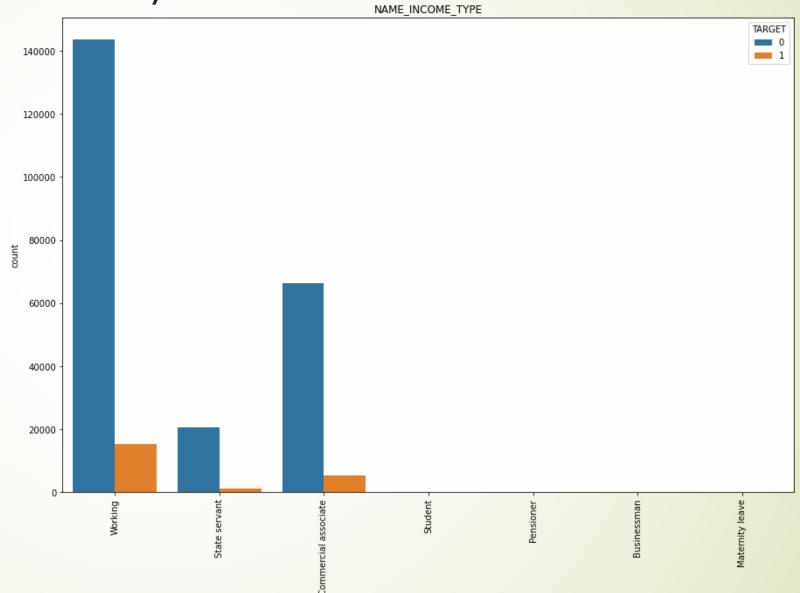
□ The majority opted for cash loans
- higher 9% default rate, default
rate for revolving loans - 5.65%



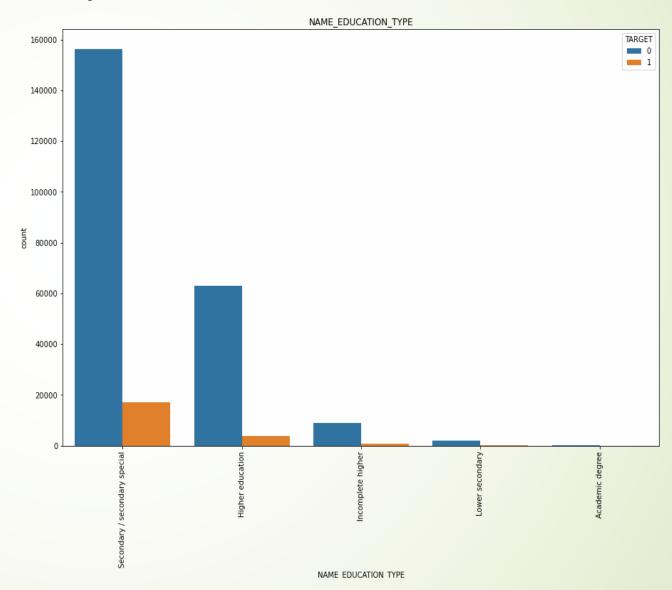
☐ Customers who are being accompanied take more loans, with an 8.5% default rate. Clients with children look less likely to default.



- Working professionals 9.5%default rate, seems secure with higher loan count.
- ☐ Maternity leave individuals show higher default rates.



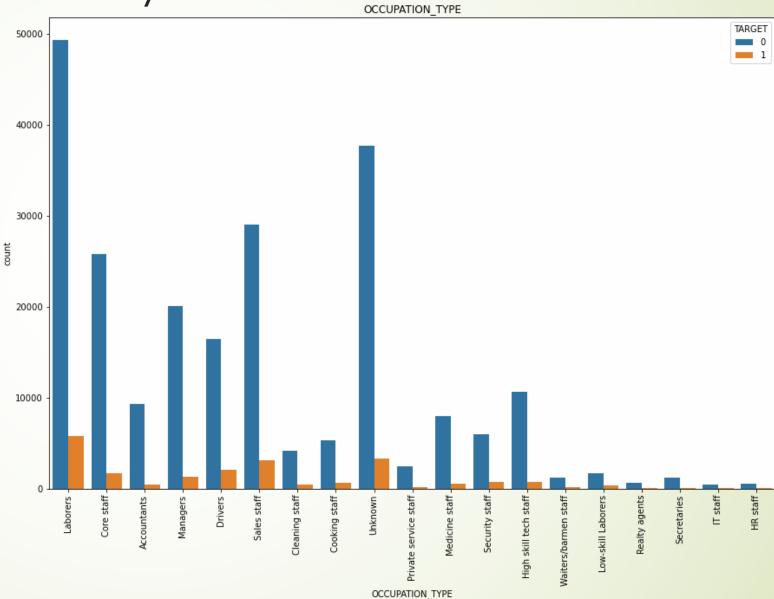
□ People with higher education or highly educated are less likely to default in vice versa with people who are low educated.



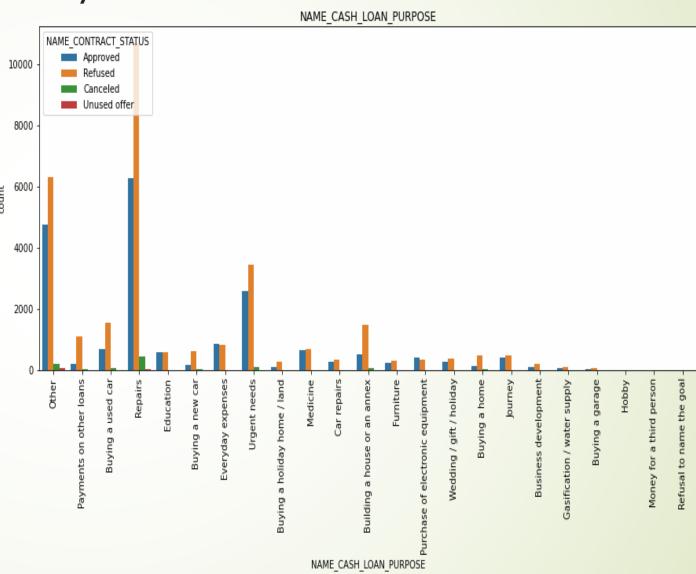
☐ Accountants have low defaults due to awareness on domain.

□ Core/HR/IT/Manager/Medicine staff show low default rates.

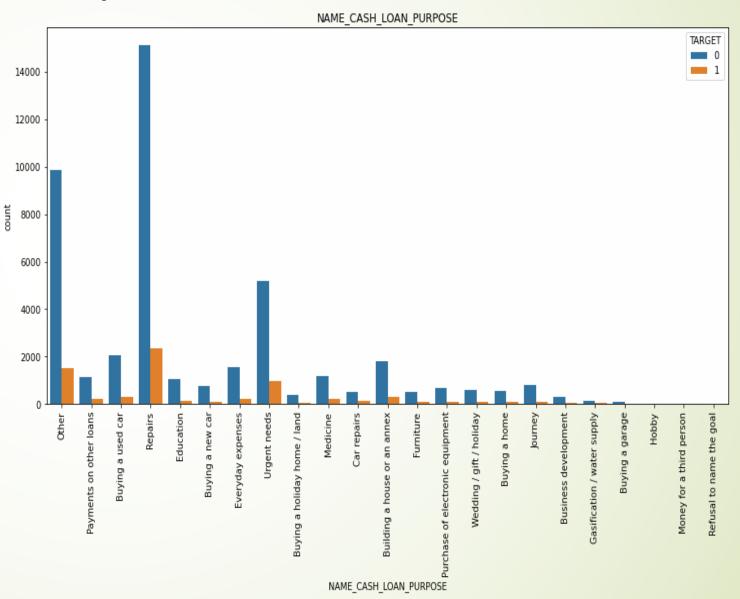
Low-skill workers - laborers, drivers, waiters, and barmen are likely to default.



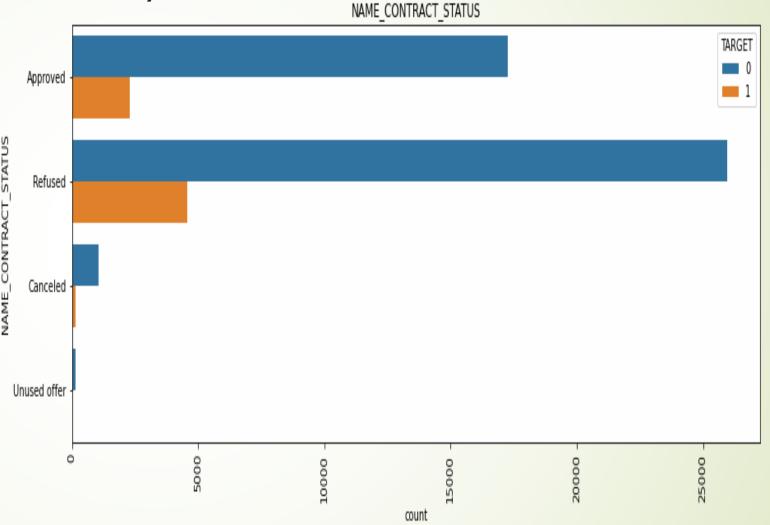
☐ Customers who applied loans for the purpose of Repairs has the most refusals and cancellations.



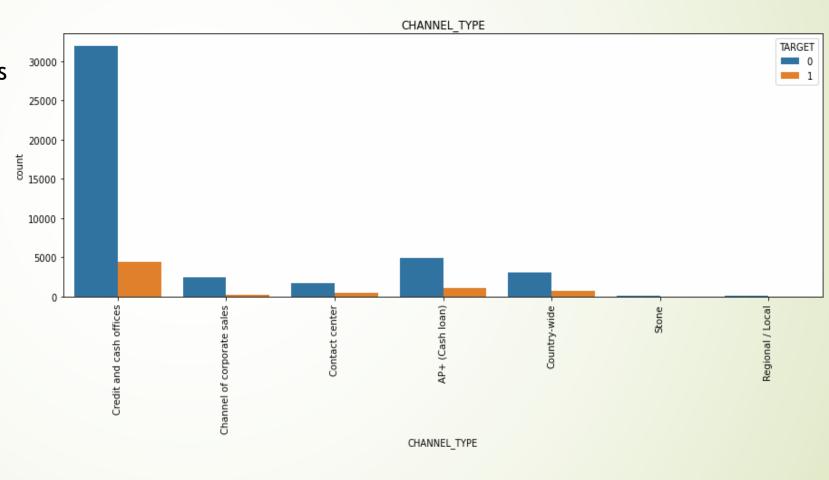
Repairs have high defaulters and repayers. 'Refusal to name the goal' & 'Gasification/water supply' show 25% default rate with low volume. Further analysis based on interest rates is needed for a clearer picture.



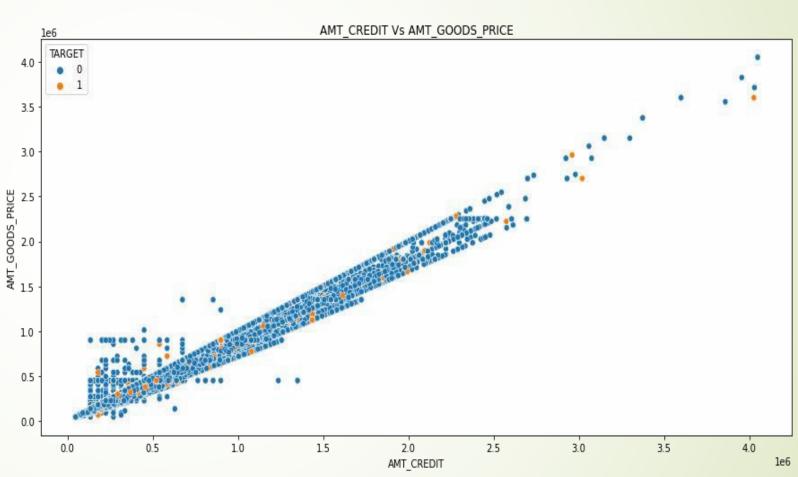
☐ Applicants whose loans were previously refused are more likely to become defaulters.



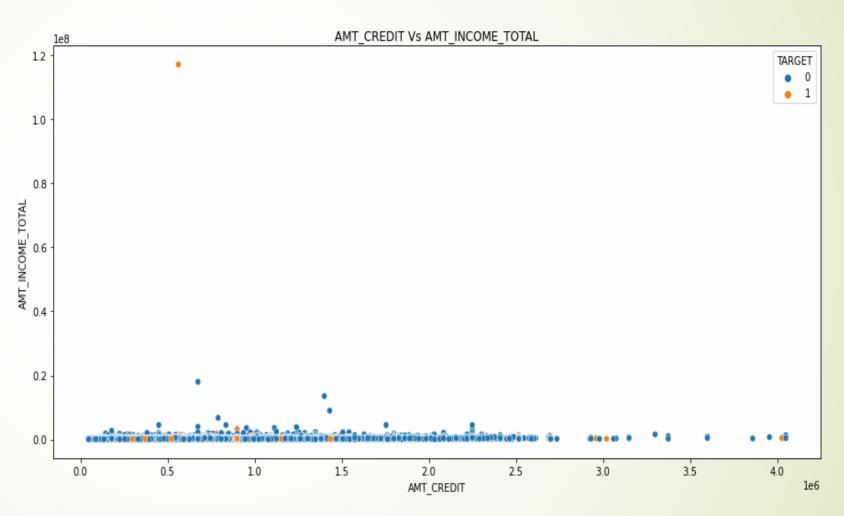
□ Corporate sales and local channels
-- most effective channels for acquiring new customers with a lower rate of defaulters



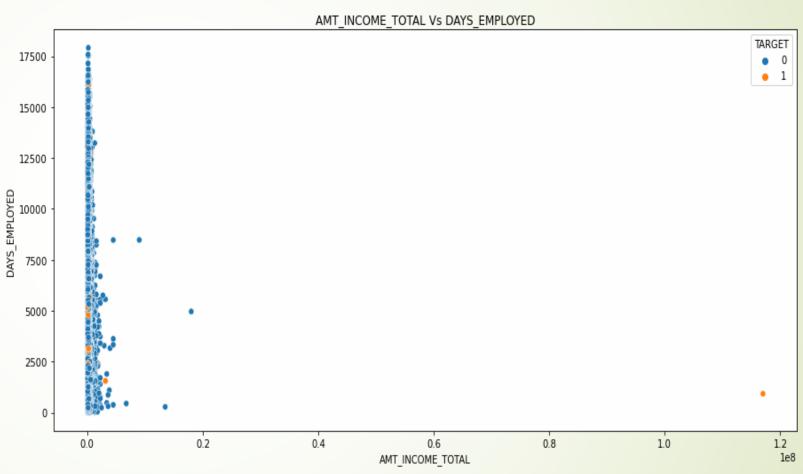
- ☐ AMT\_CREDIT and AMT\_GOODS\_PRICE are linearly corelated.
- ☐ The defaulters got decreased as the credit amount is increasing.



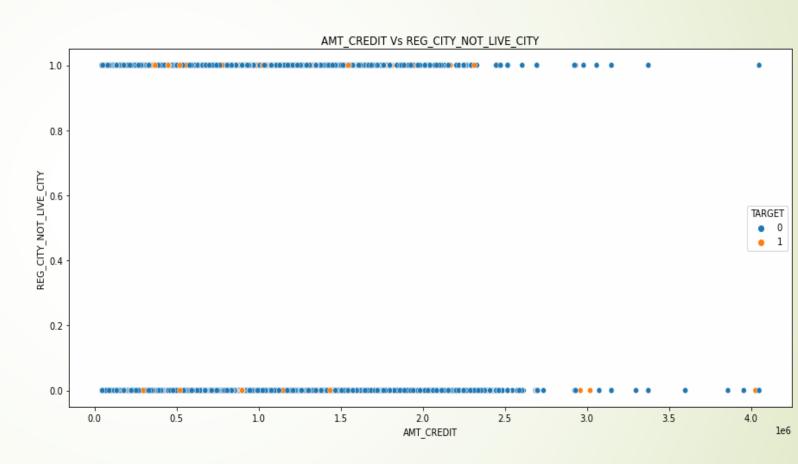
- Lower-income individuals take more loans.
- ☐ Defaulters decrease as income and credit amounts rise.



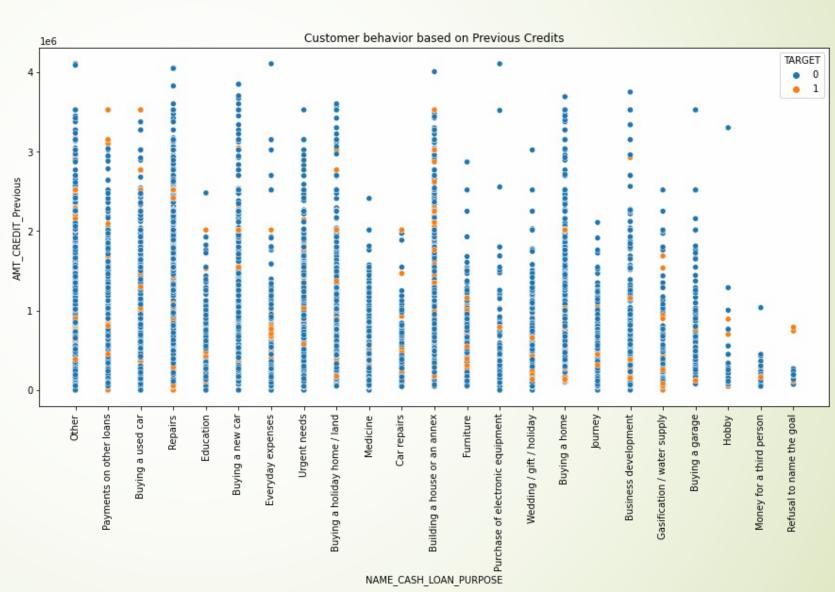
☐ Customers with extended employment duration are less likely to be defaulters.



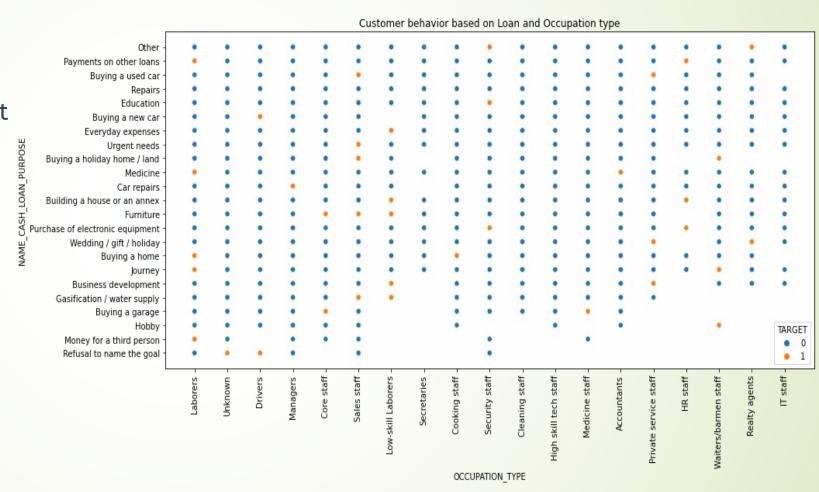
☐ Customers with credit under 5 lacs and mismatched contact addresses have higher default likelihood



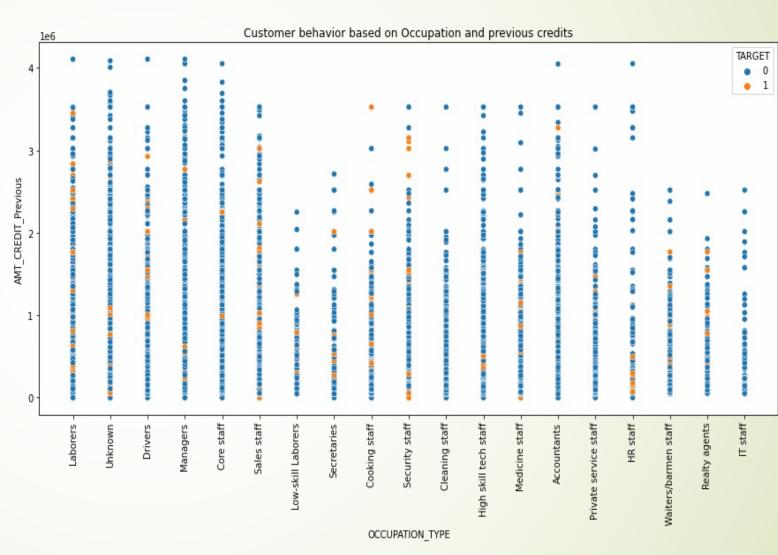
☐ There are some segments to be noted that Customers with medical and new car or home or garage loans are having low default rates and it suggests safe lending decisions.



☐ Skilled tech/IT staff show excellent repayment, while low-skilled laborers struggle with loans for home/business.



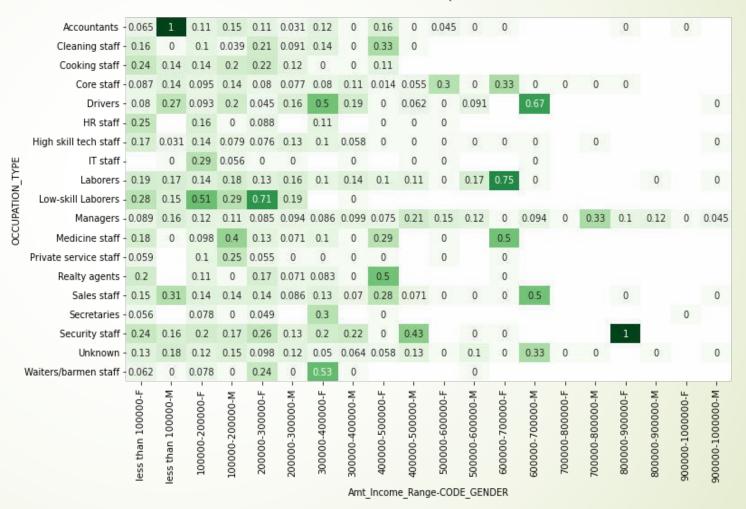
☐ Higher credit amounts lead to increased default rates among laborers, drivers, and security staff.



### Multivariate Analysis

- □ Certain jobs like drivers, laborers, and security staff are struggling with payments.
- Both Male and Female Customers with higher income are linked to lower defaults.

### Customer behavior based on Occupation, Income and Gender



### Multivariate Analysis

■ Payment issues noted among specific groups: co-op apartment residents without cars (e.g., drivers, medical staff), low-skilled laborers, and barmen in municipal apartments.

Cavition is advised for loans to these demographics.

Customer behavior based on Occupation, Housing type and own car

- 0.6

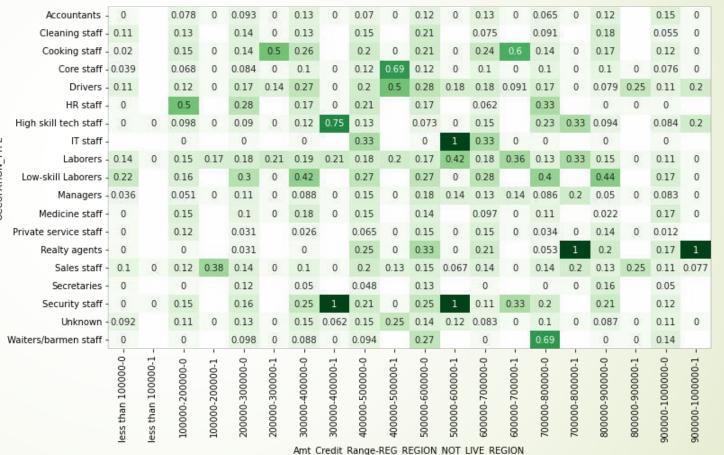
- 0.2



### Multivariate Analysis

□ High credit customers with mismatched permanent and contact addresses, especially among security staff and realty agents, exhibit higher default tendencies. Customer behavior based on Occupation, Credit range and region mismatch

- 0.6



### Findings from Case Study

- Higher incomes correlate with lower defaults, but extremely high incomes again have higher default risk which seems shocking.
- Data imbalance ratio is 10.55
- Few percentage of customers who are having different mobile numbers and permanent addresses are becoming huge liability.
- Cash loans seems to hold high liability compared to revolving loans.
- Customers with own cars are less likely to default may be because of financial stability
- Property owners have lower default rates

### Conclusion

- Considering the findings, banks should focus on customers with moderate/highly skilled occupations, stable income, and tenure.
  - Married individuals owning properties and cars are preferred, while caution is advised with low-skilled and less educated customers.
  - Attention is needed for accuracy in documents and matching contact regions.
  - Also with loan purpose "Repair" is having higher number of unsuccessful payments on time.

# THANK YOU