



# EDA Case Study

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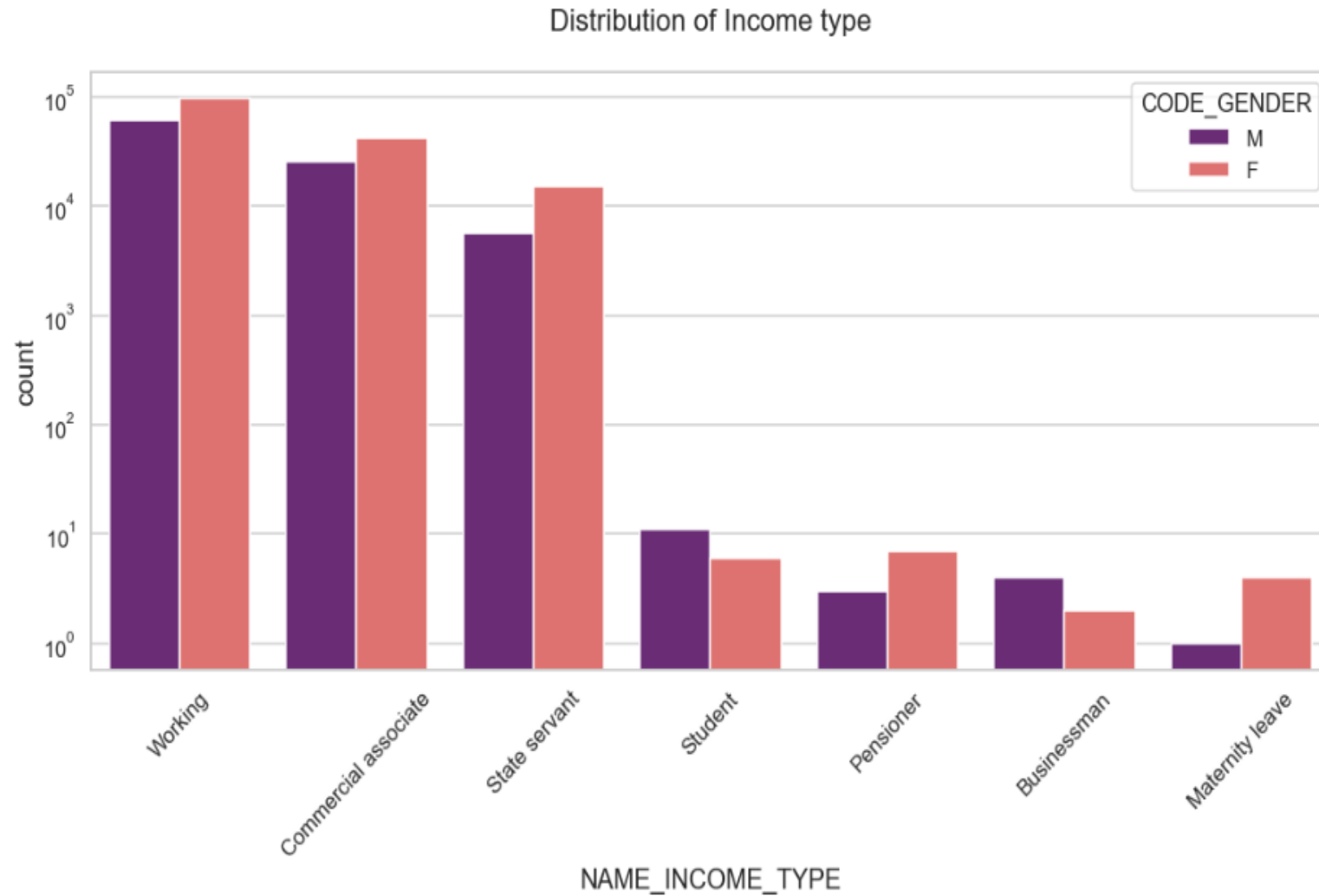
BY :- AJAY BENDALE

# Business Objectives

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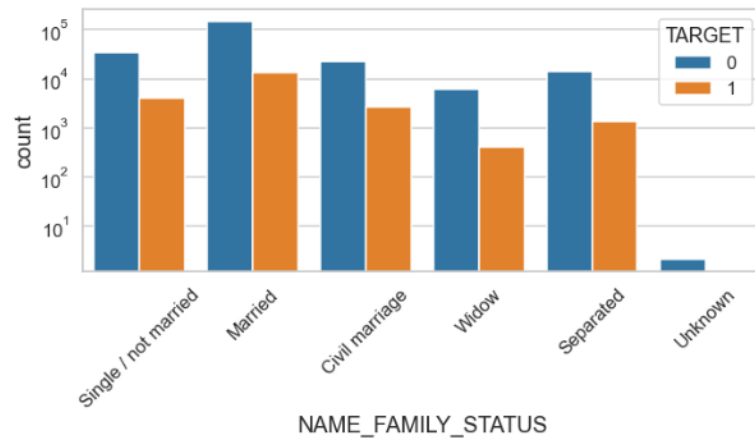
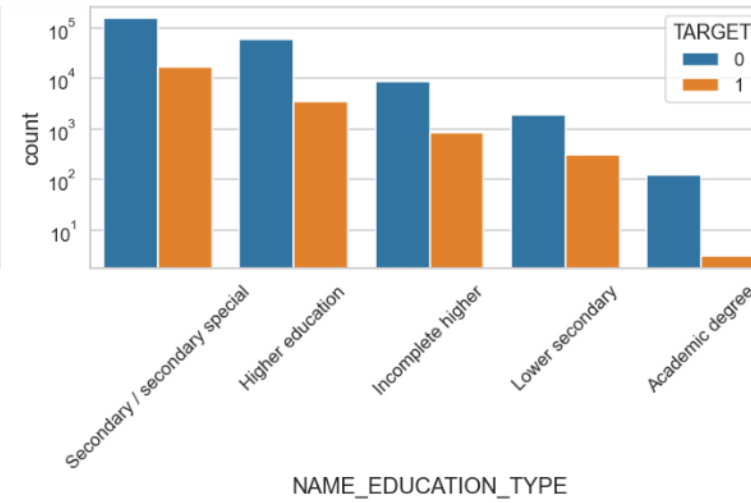
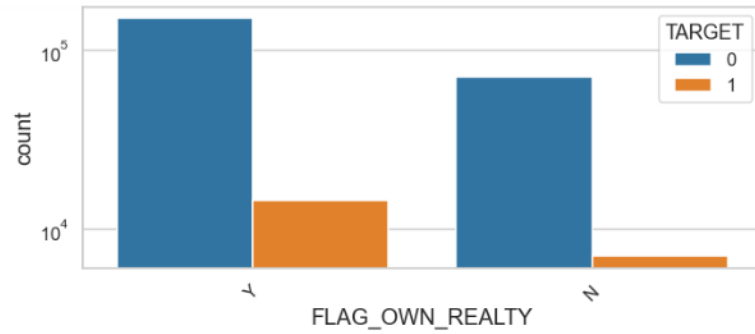
This case study aims to identify patterns which indicate if a client has difficulty paying their installments which may be used for taking actions such as denying the loan, reducing the amount of loan, lending (to risky applicants) at a higher interest rate, etc. This will ensure that the consumers capable of repaying the loan are not rejected. Identification of such applicants using EDA is the aim of this case study.

# Income type



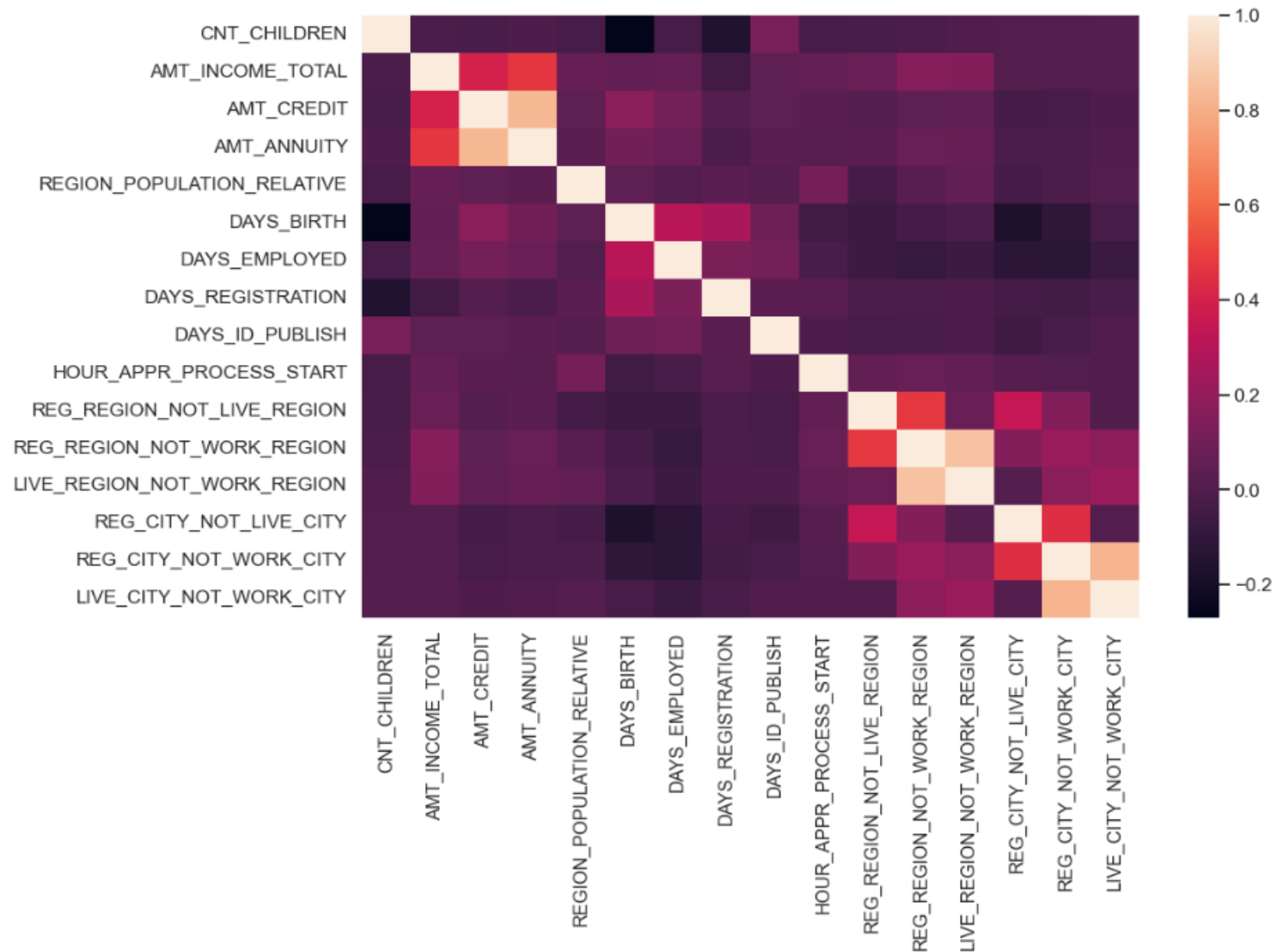
- For income type 'working', 'commercial associate', and 'State Servant' the number of credits are higher than others.
- For this Females are having more number of credits than male.

# Subplot of categorical columns



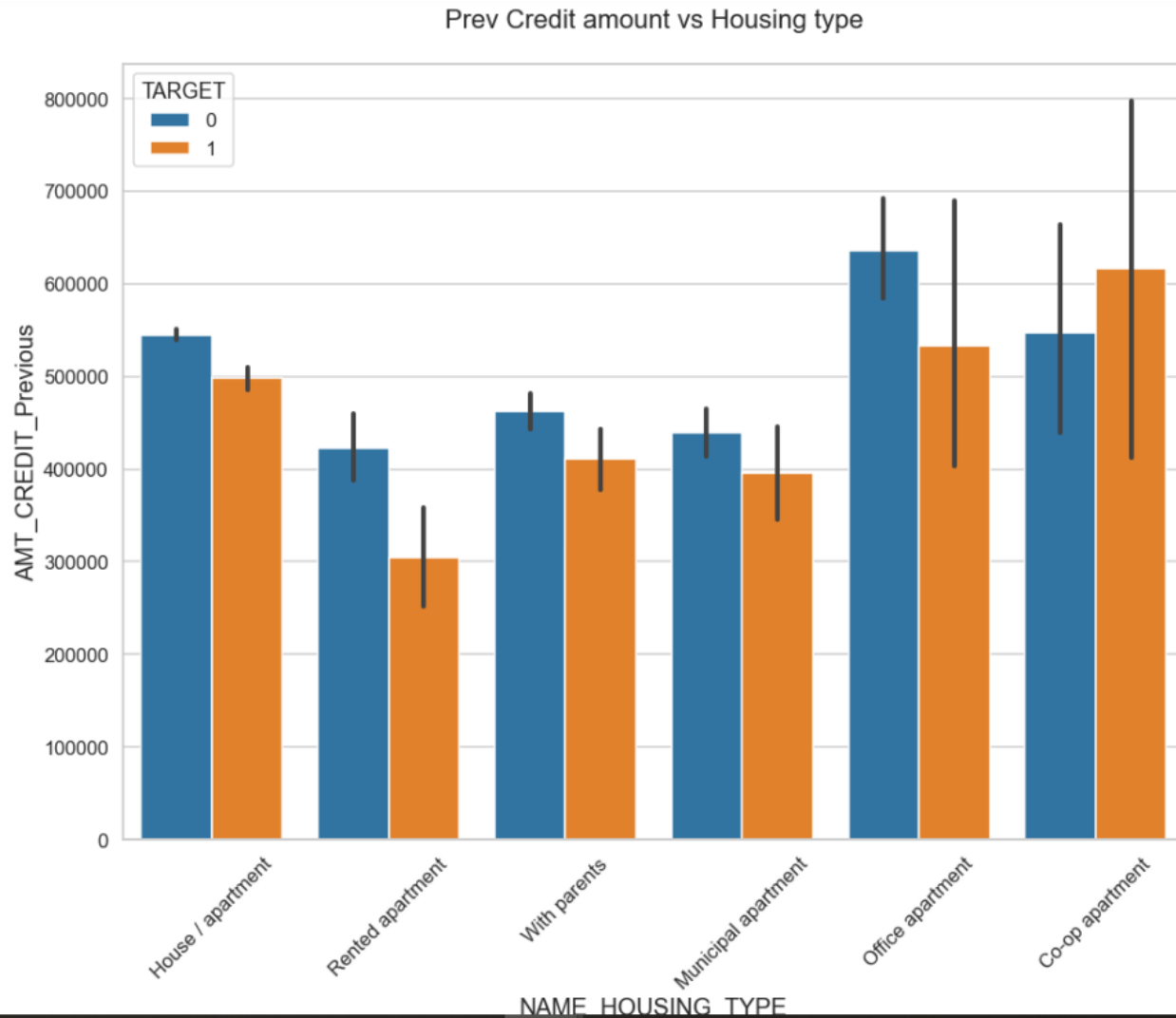
- People who started application process on Sunday are less likely to default
- Saturday and Sunday are less busy for bank in terms of loan applications
- People with house or apartment tend to take more loans
- We can say more married people tend to take more Loan as compared to other categories
- we can conclude that secondary/special educated people are applying loans in high in number
- People who don't own a car tends to take more loans
- Female tends to take more loans

# Correlation for data related to non-defaulters



- Credit amount is inversely proportional to the date of birth, which means Credit amount is higher for low age and vice-versa.
- Credit amount is inversely proportional to the number of children client have, means Credit amount is higher for less children count client have and vice-versa.
- Income amount is inversely proportional to the number of children client have, means more income for less children client have and vice-versa.
- less children client have in densely populated area.
- Credit amount is higher to densely populated area.
- The income is also higher in densely populated area.

# Credit amount previous vs Housing type



Here for Housing type, office apartment is having higher credit of target 0 and co-op apartment is having higher credit of target 1. So, we can conclude that bank should avoid giving loans to the housing type of co-op apartment as they are having difficulties in payment. Bank can focus mostly on housing type with parents or House\apartment or municipal apartment for successful payments.



## Recommended group where loan can be credited

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- Client with High income
- Female client with higher education
- Client who's previous loan was approved
- window who has unused previous loan status
- Refreshed client who has unused loan status previously

# For minimize risk of loss consider these variables for loan approval

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- NAME\_EDUCATION\_TYPE
- AMT\_INCOME\_TOTAL
- AMT\_CREDIT
- DAYS\_EMPLOYED
- AMT\_ANNUITY
- NAME\_INCOME\_TYPE
- CODE\_GENDER
- NAME\_HOUSING\_TYPE



THANK  
You!