# CREDIT EDA CASE STUDY

FINANCIAL LOAN APPLICATION

INTRODUCTION

This assignment aims to give you an idea of applying EDA in a real business scenario.

In this assignment we want to develop a basic understanding of risk analytics in banking and financial services and understand how data is used to minimise the risk of losing money while lending to customers.

BUSINESS OBJECTIVES:

This case study aims to identify patterns which indicate if a client has difficulty paying their instalments 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.
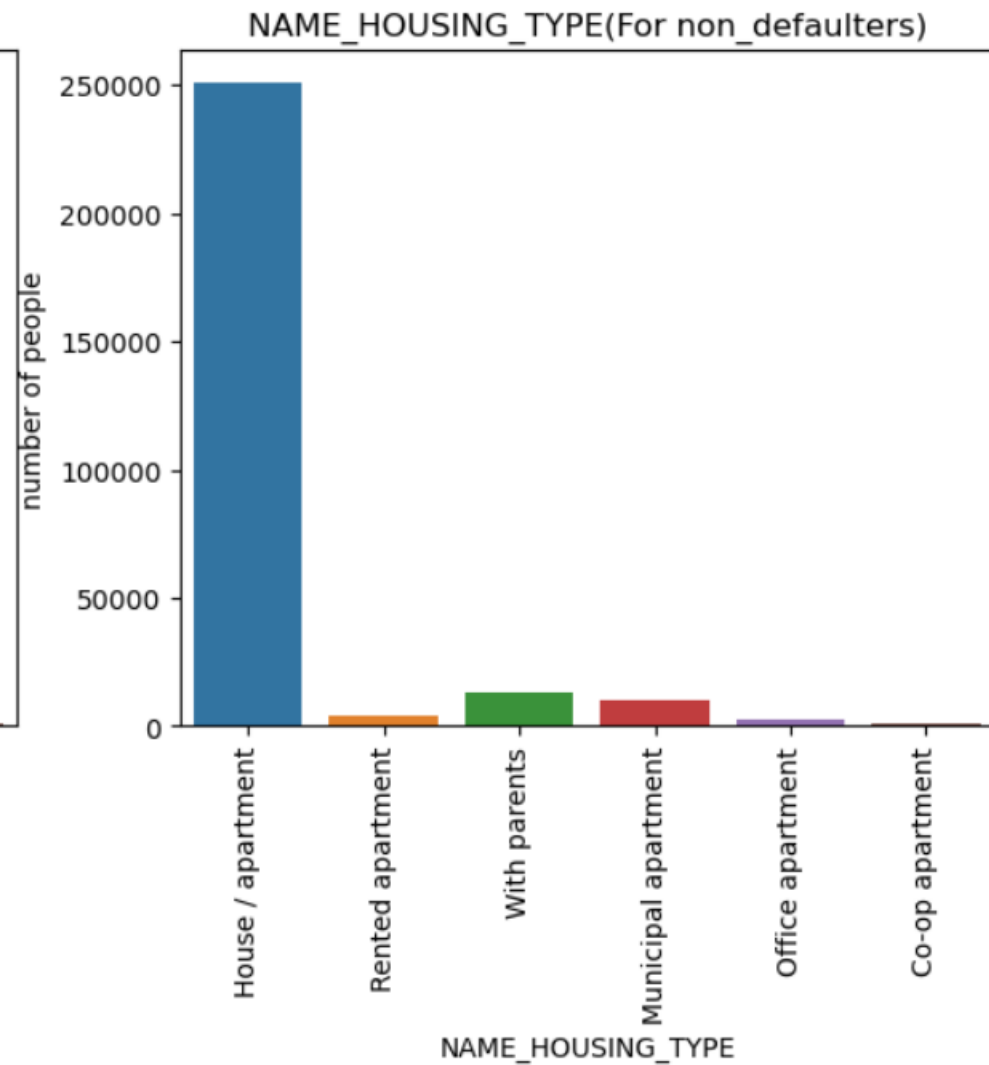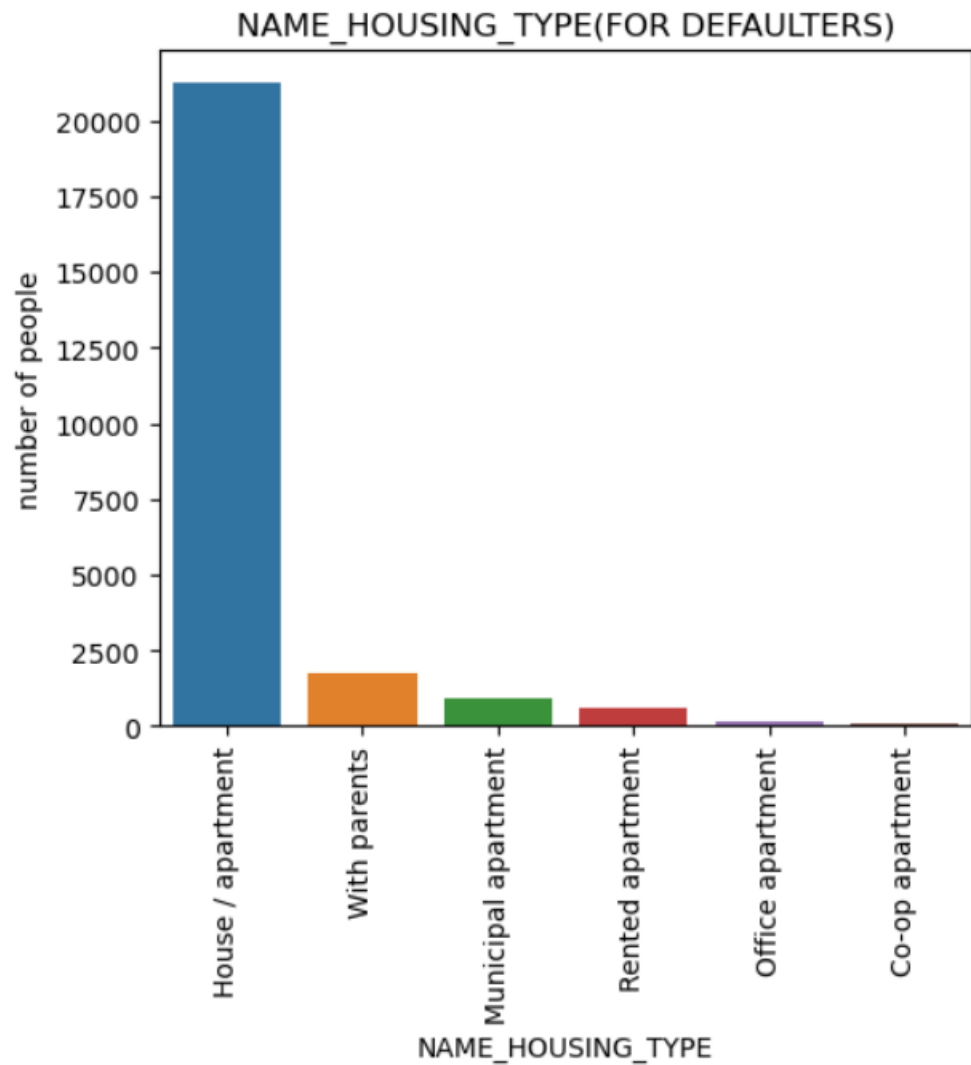
DISTRIBUTION OF DEFAULTERS AND NON DEFAULTERS ACROSS DIFFERENT HOUSING TYPES
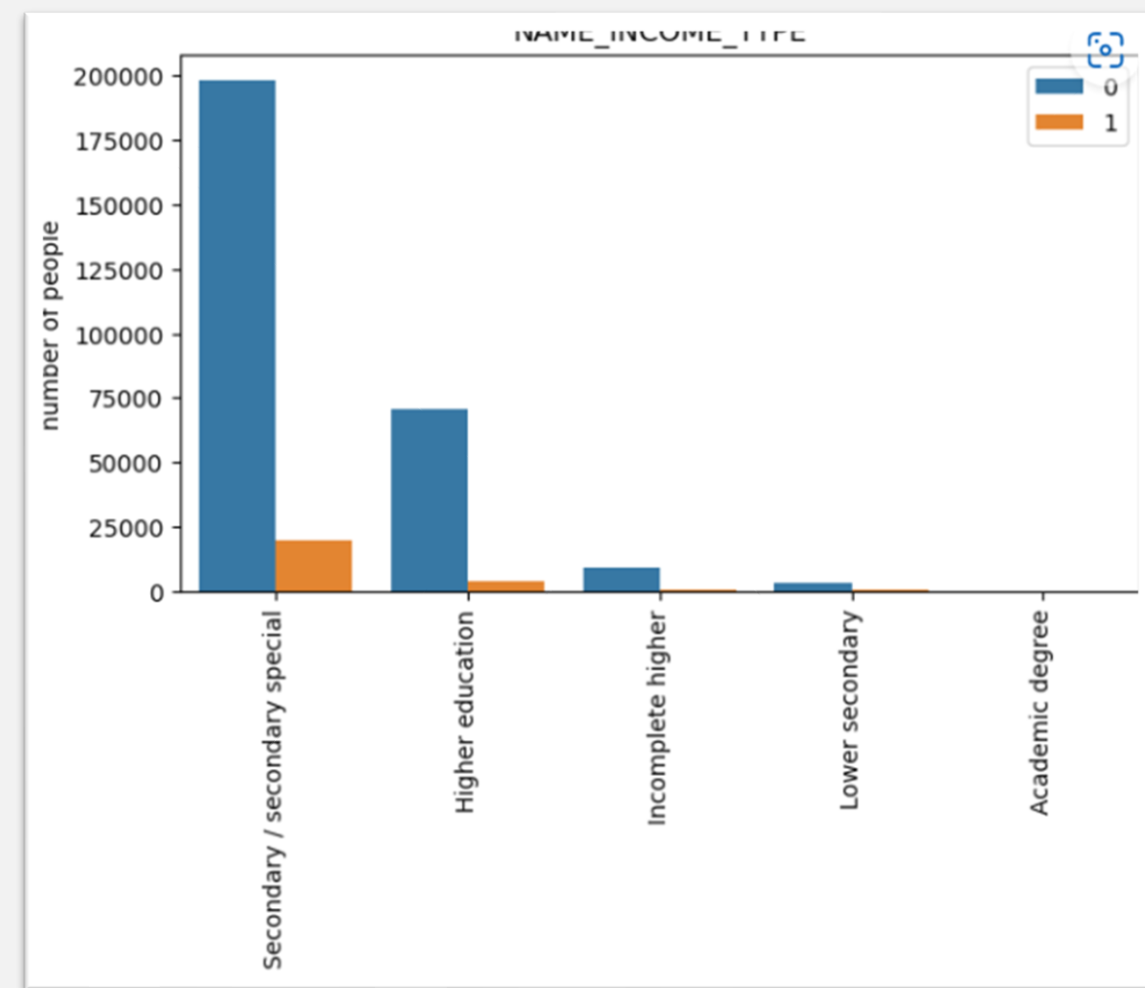
COMMENTS ON THE PREVIOUS SLIDE

1. Majority of applicants live in house/apartment.
2. The number of defaulters living in house/apartment is around 20000
3. The number of non-defaulters living in house/apartment is around 250000
4. So they have better on-time payments than others
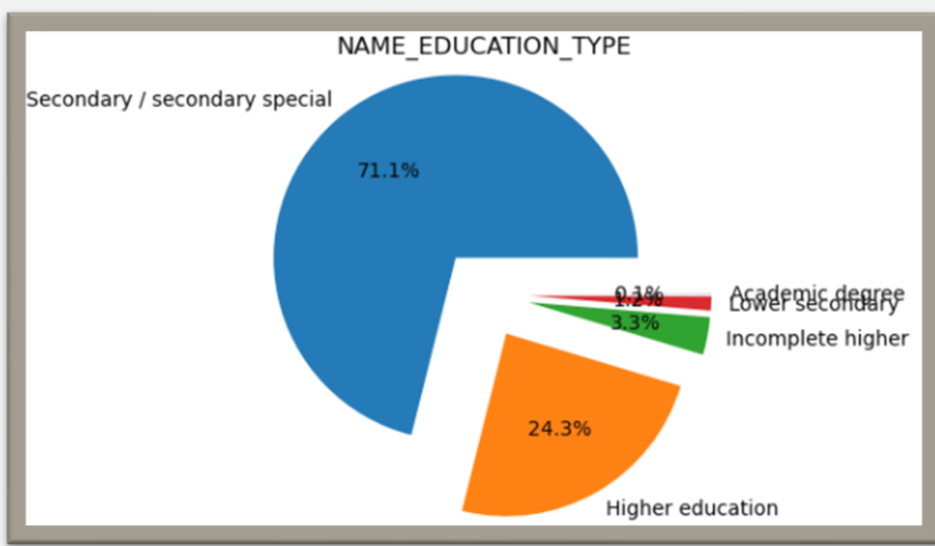
PERCENTAGE OF APPLICANTS HAVING
DIFFERENT EDUCATION DEGREES

THE DISTRIBUTION OF DEFAULTERS AND NON
DEFAULTERS WITH DIFFERENT EDUCATION TYPE

1. Majority of the applicants have a secondary/secondary special degree (71.1%).
2. 24% applicants have a higher education.
3. Less than 5% constitute for the rest of the applicants.
4. The ration of non-defaulters to defaulters with a secondary / secondary special is 10.17

THE PICTURE ON THE LEFT SHOWS DEFAULTERS AND NON-EFAULTERS BELONGING TO DIIFFERENT INCOME TYPES
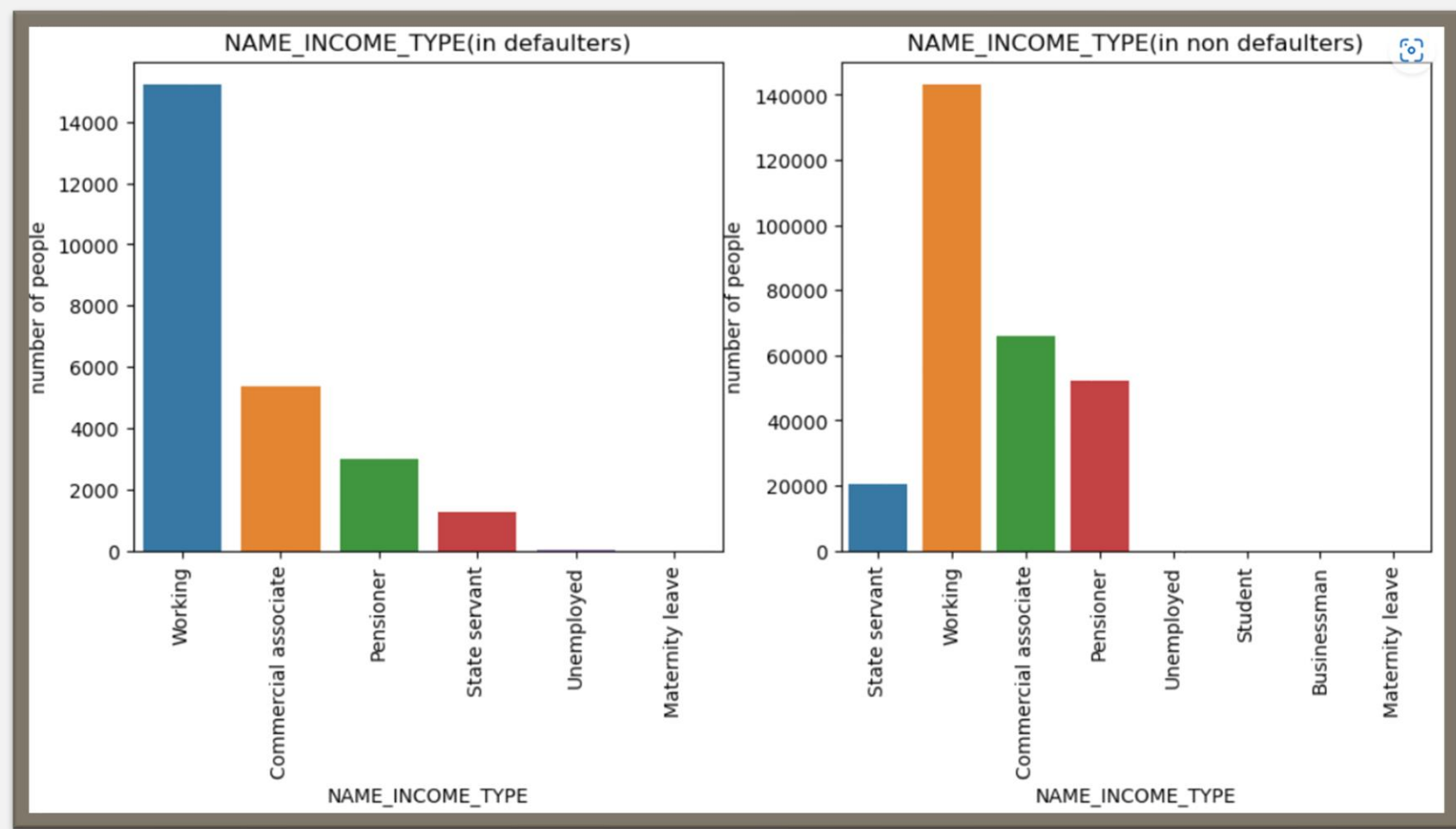
1. Majority of the defaulters are working people, followed by people from commercial associates
2. There are very less number of people who are defaulters in Maternity leave or are unemployed
3. There are very few number of people who are non-defaulters in Maternity leave or are unemployed or student or businessman
4. All the applicants who are Businessman or Student have replayed the loan successfully
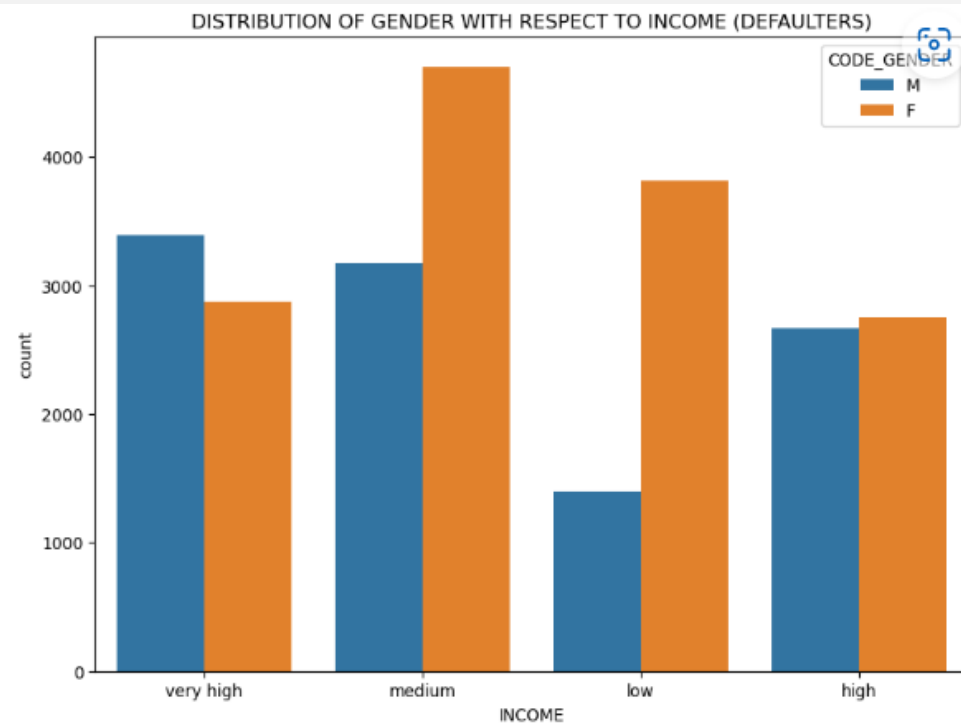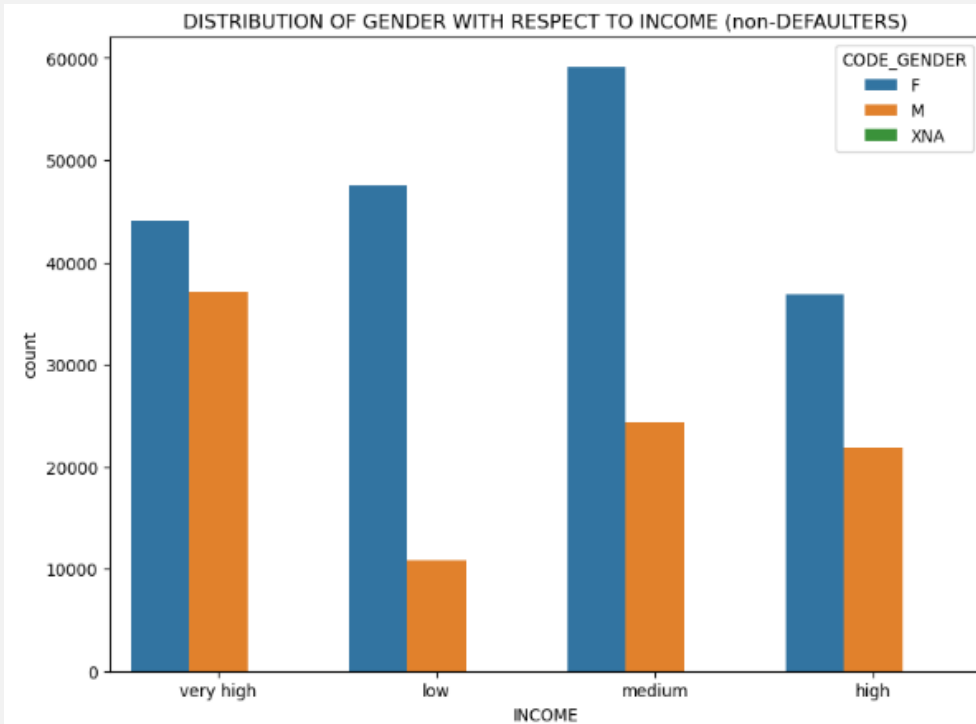
LOW: **LESS THAN 1 LAKH**
MEDIUM: **1 LAKH-1.5 LAKH**
HIGH: 1.**5LAKH -2 LAKH**
VERY HIGH: **GREATER 2 LAKHS**

## THE PLOTS SHOWS THE GENDER DISTRIBUTION ACROSS VARIOUS INCOME RANGES IN DEFAULTERS AND NON DEFAULTERS

1. *There number of male and female whose income fall very high are almost same for both defaulters and non defaulters*
2. *For people whose income range falls under low, we see the number of female are much higher than those of male for both defaulters and non defaulters.*
3. *The number of male and female defaulters in high income range is almost equal.*
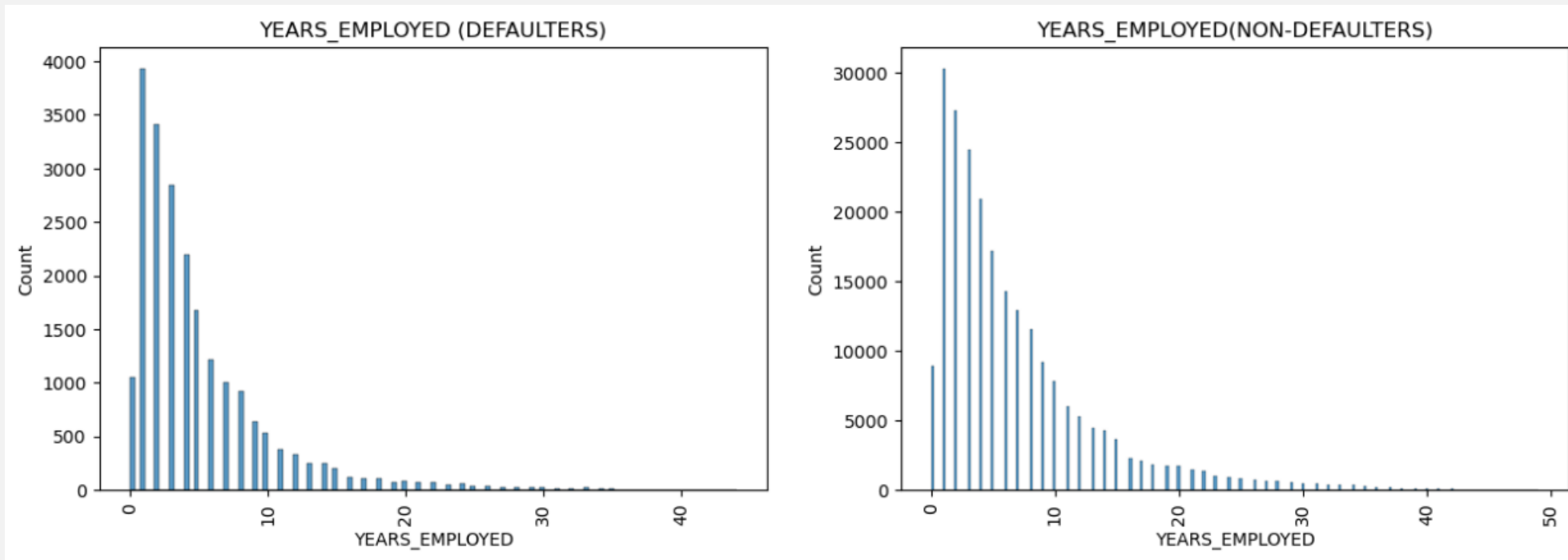
DISTRIBUTION OF DEFAULTERS AND NON DEFAULTERS WITH RESPECT TO NUMBER OF YEARS THEY WERE EMPLOYED

1. We see that that the number of defaulters decreases as the years of employment increases
2. We see the number of defaulters are higher with less than 5 years of employment.
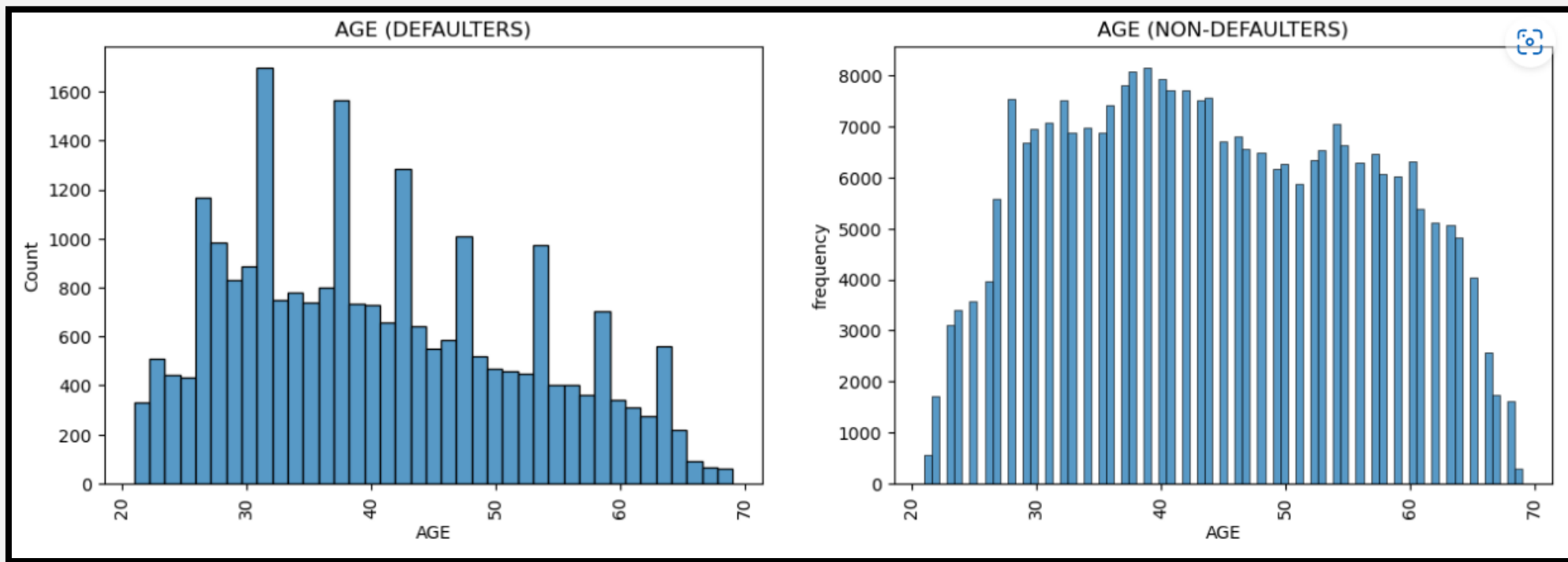
**AGE DISTRIBUTION OF PEOPLE WHO ARE DEFAULTERS AND NON- DEFAULTERS**

1. Most of the people who have applied for loan are in the age group of 30 to 60
2. There are lesser applicants in the age between 20 to 25.
3. Also there are fewer applicants above the age of 65
4. We see a decline in the number of applicants who are defaulters with increase in age.
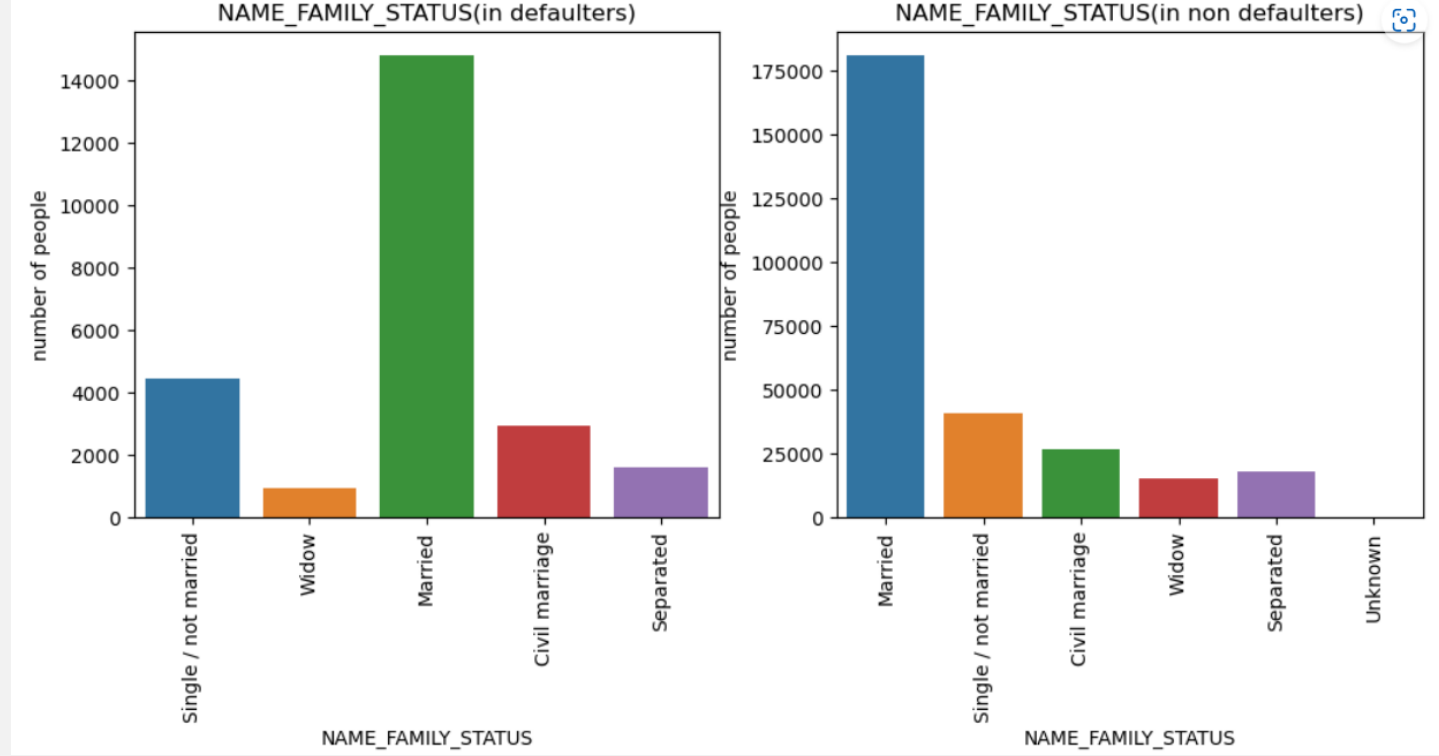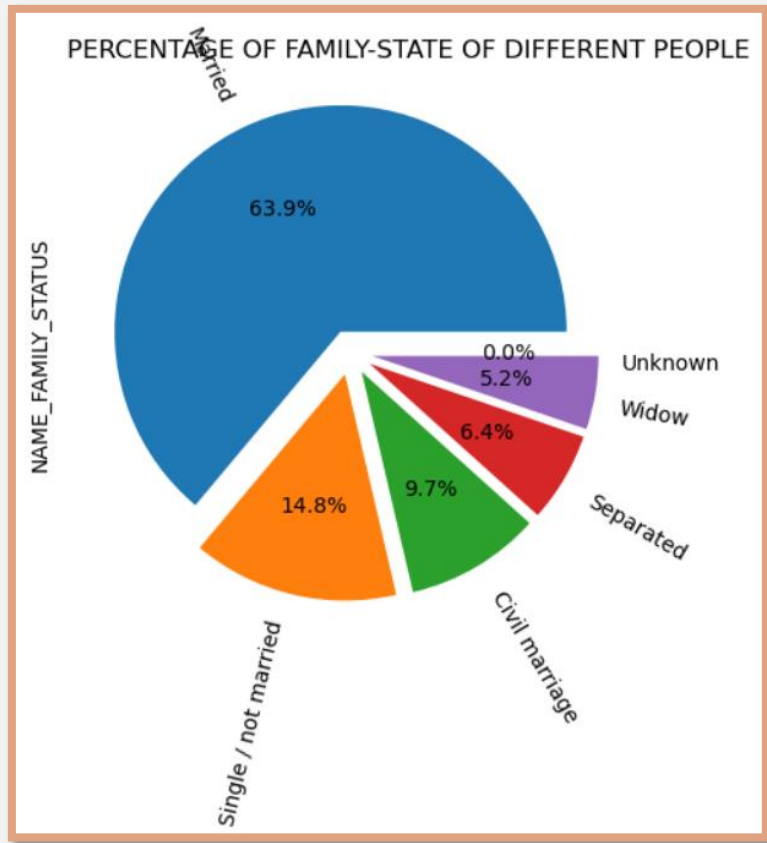
PICTURE OF A PIE PLOT REPRESENTING THE PERCENTAGE OF PEOPLE IN DIFFERENT FAMILY STATUS

1. The pie plot shows that a large chunk of the applicants are married(63.9%)
2. Almost 1,80,000 married people are non-defaulters and almost 14000 married people are defaulters .
3. The applicants who are widow hold the least percentage.

LEFT SIDE IS A PICTURE OF TWO PLOTS SHOWING THE NUMBER OF DEFAULTERS AND NON-DEFAULTERS IN DIFFERENT HOUSING TYPE .
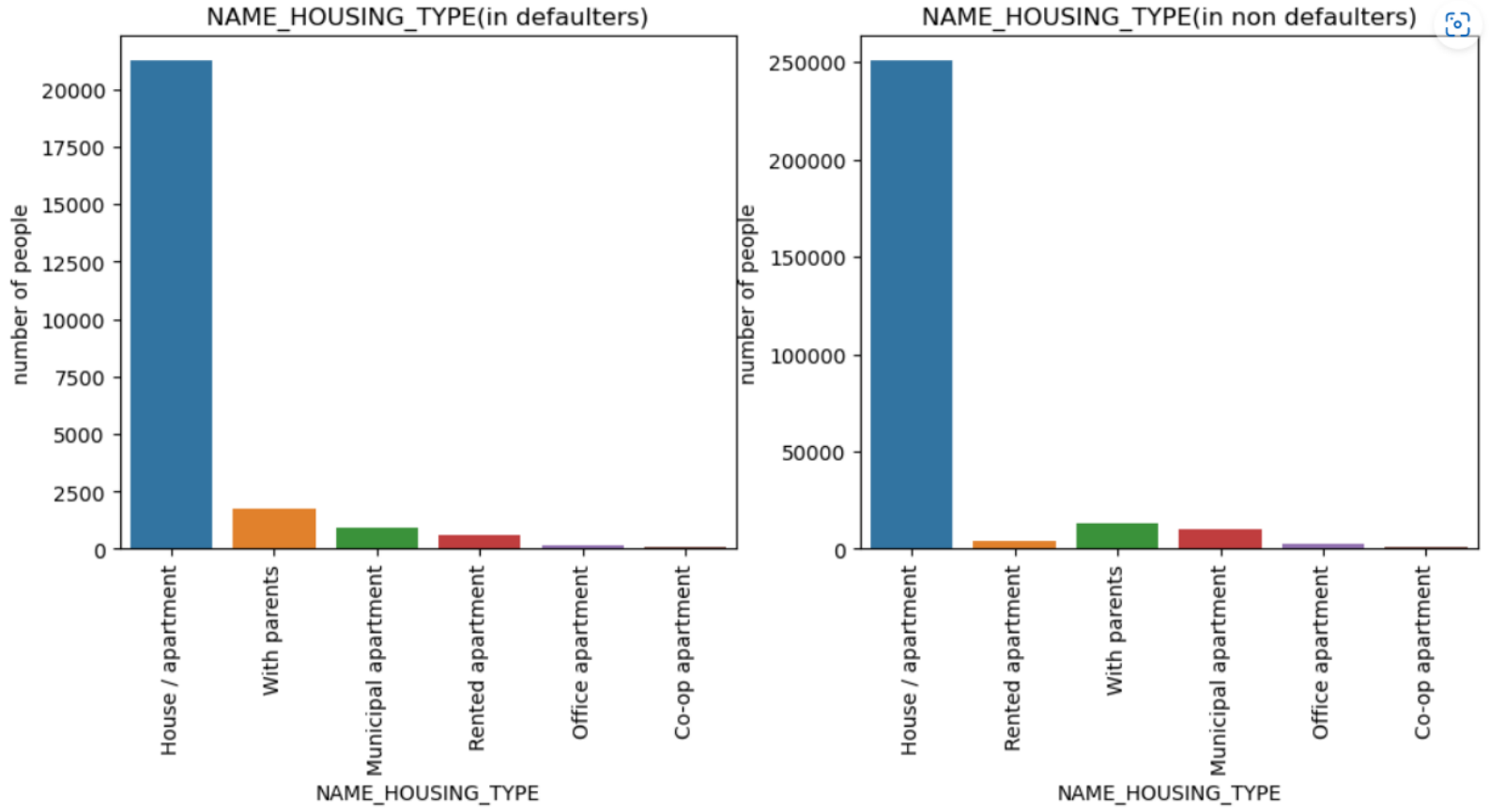
1. From the above plots we see, majority of the applicants live in house/appartments.
2. Very few applicants live in co-op apartments.

CONCLUSIONS

- Bank should focus of the people who have more than 5 years employed.

- Bank should focus less on income type 'working' people as they have more number of unsuccessful payments.

- Bank should focus more on Businessman and students, as they have better on time payments

- Banks should focus on people who live in house / appartments have better on time payments
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