

Case study EDA

Presented by
DG Rani

Business objective

To identify patterns which indicate if a client has difficulty in 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 loan are not rejected.

Steps involved

- Data loading
- Data cleaning
- Data Handling
- Identification of Important features
- Univariate analysis of Data
- Bivariate analysis of Date
- Segmented univariate analysis of Data
- Compare the patterns of defaulter and non defaulter features

Important features

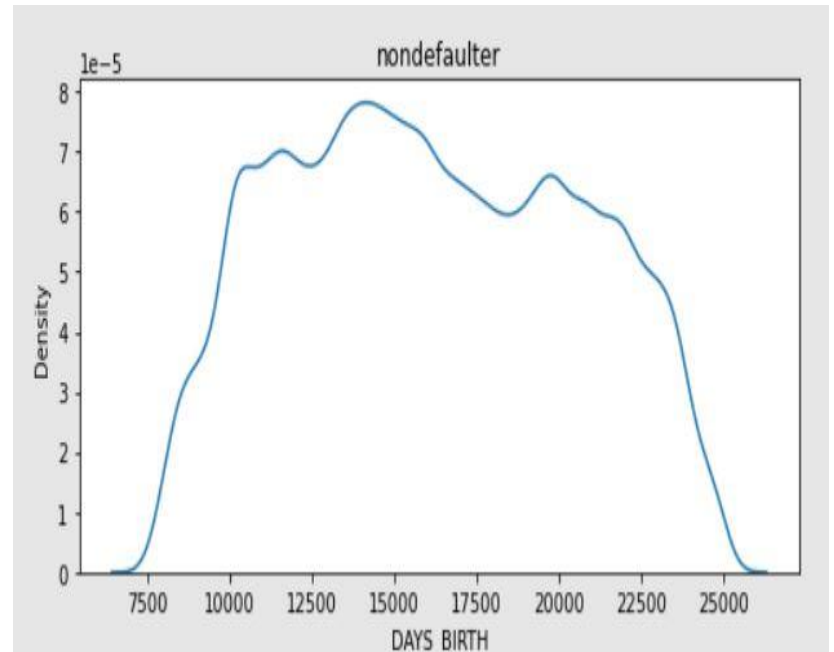
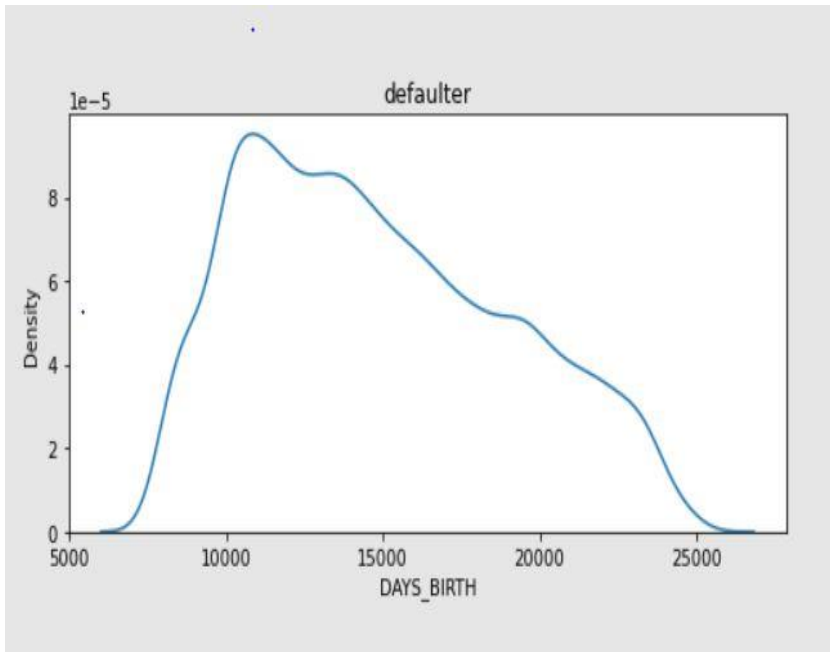
- Age
- Gender
- Occupation
- Education
- Amount of income
- Income type
- Employment experience
- Annuity amount
- Credit amount

Divide the Dataset

Divide the Dataset based on TARGET feature

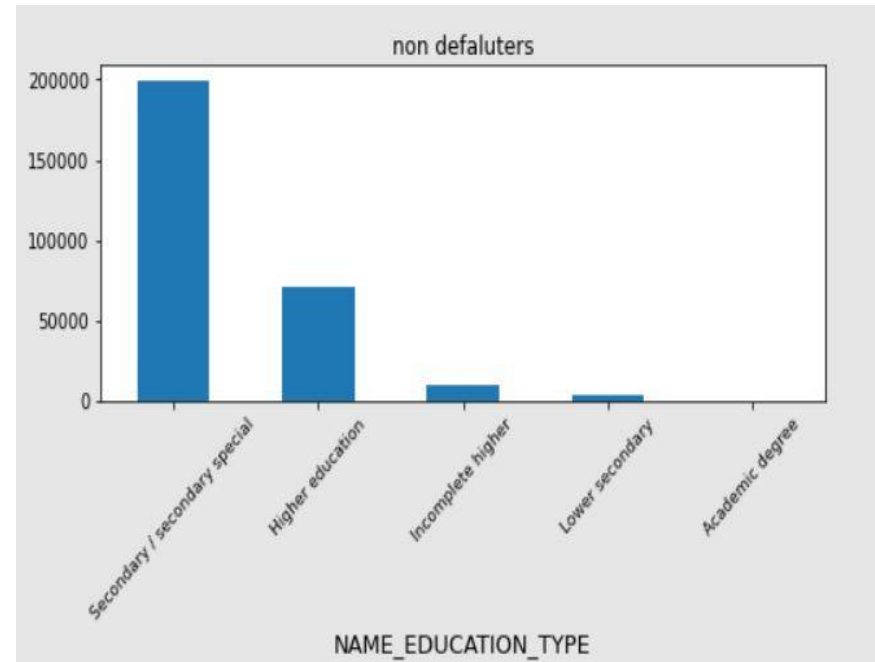
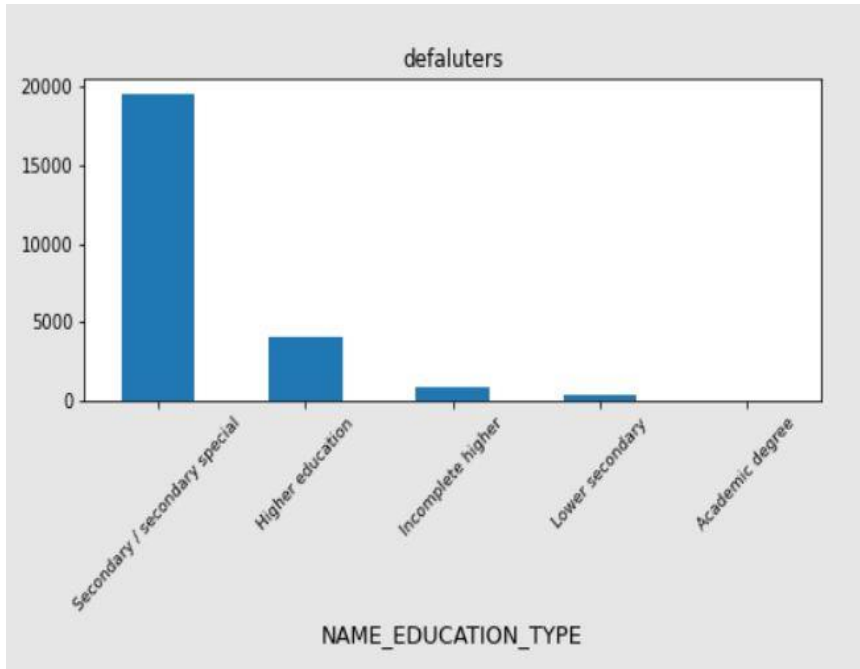
- 1.Defaulters(have loan difficulties)/TARGET=1
- 2.NonDefaulters(capable of repaying loan)/TARGET=0

Age Comparison



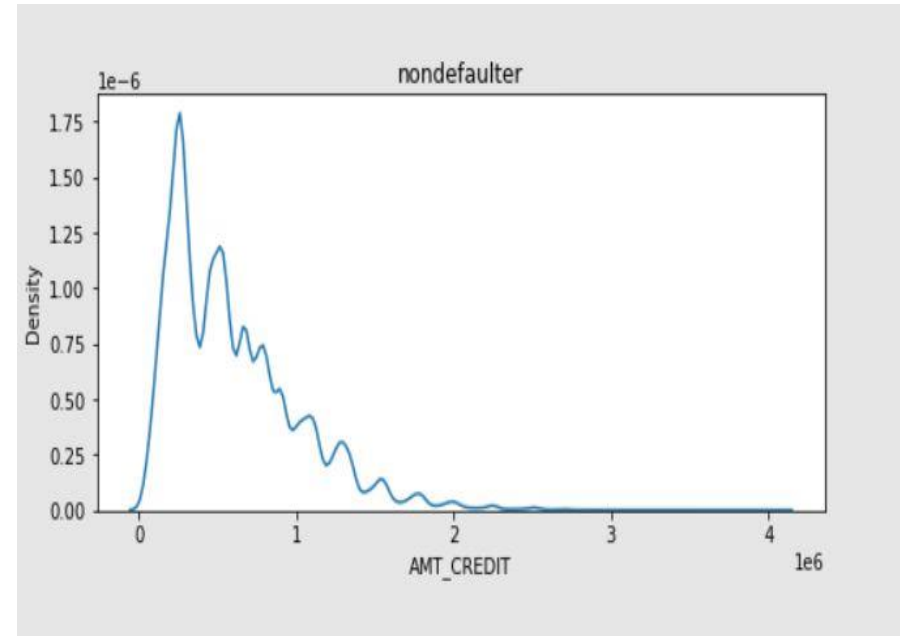
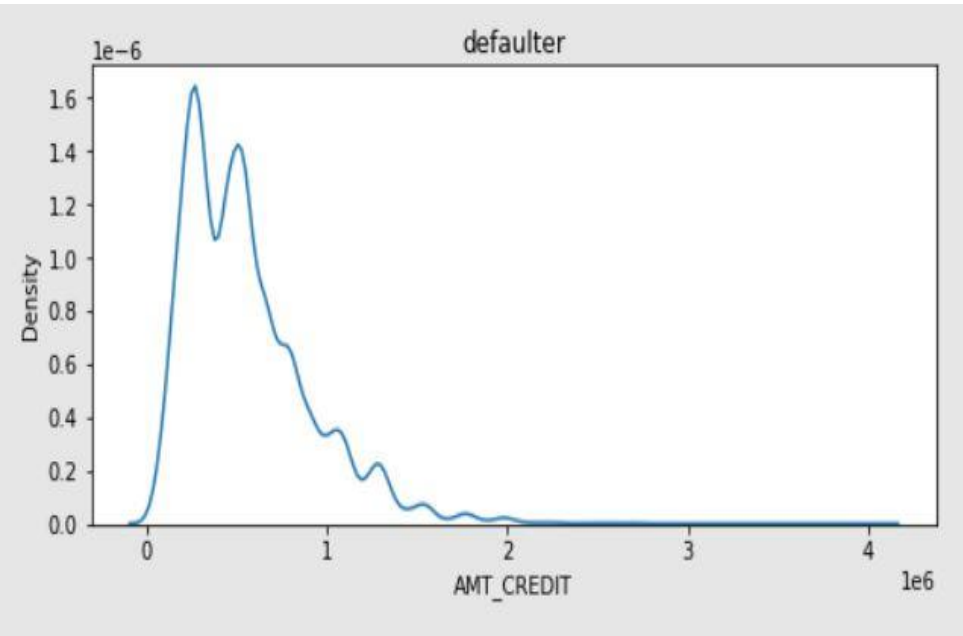
From the plots aged non defaulters is high compared to defaulters

Education comparison



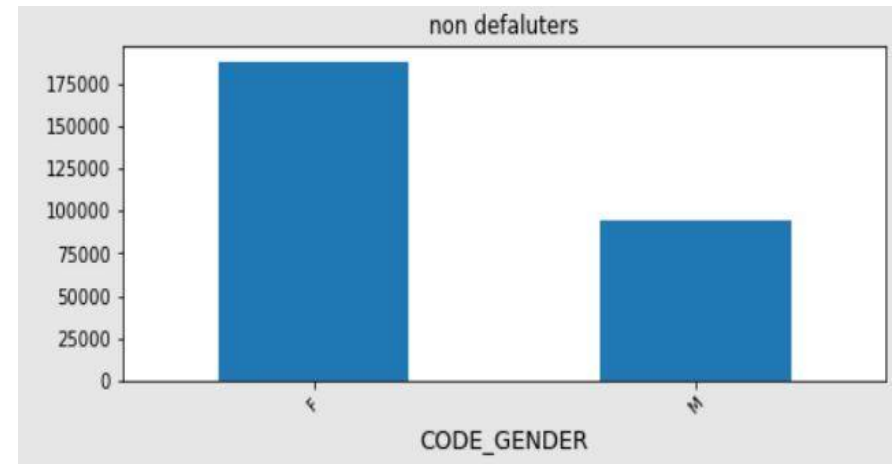
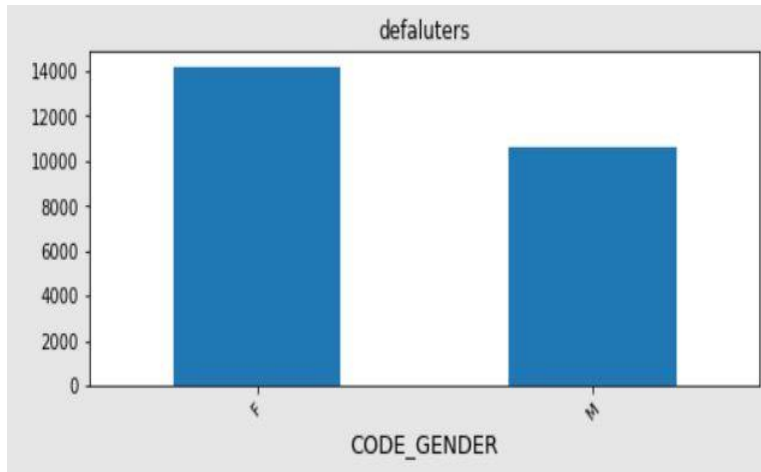
From the plots higher educated nondefaulters are high compared to defaulters

Credit amount comparison



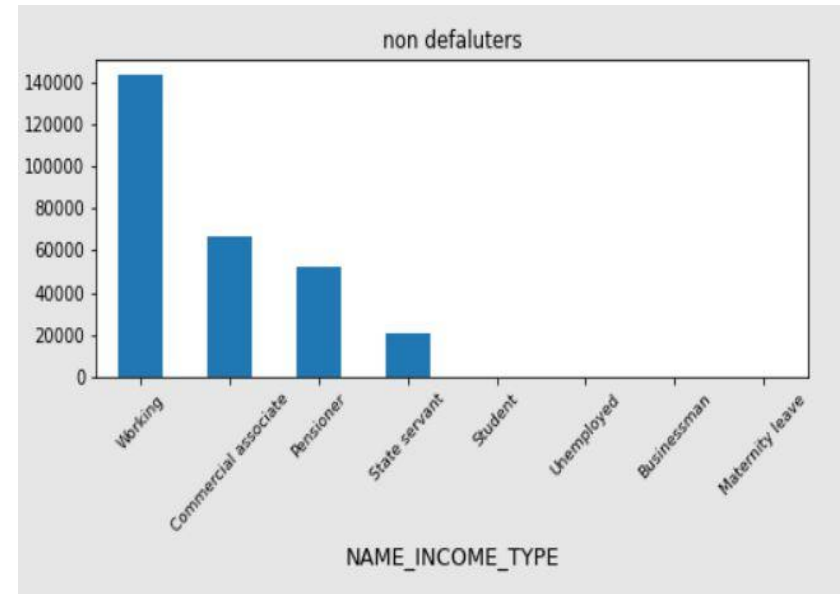
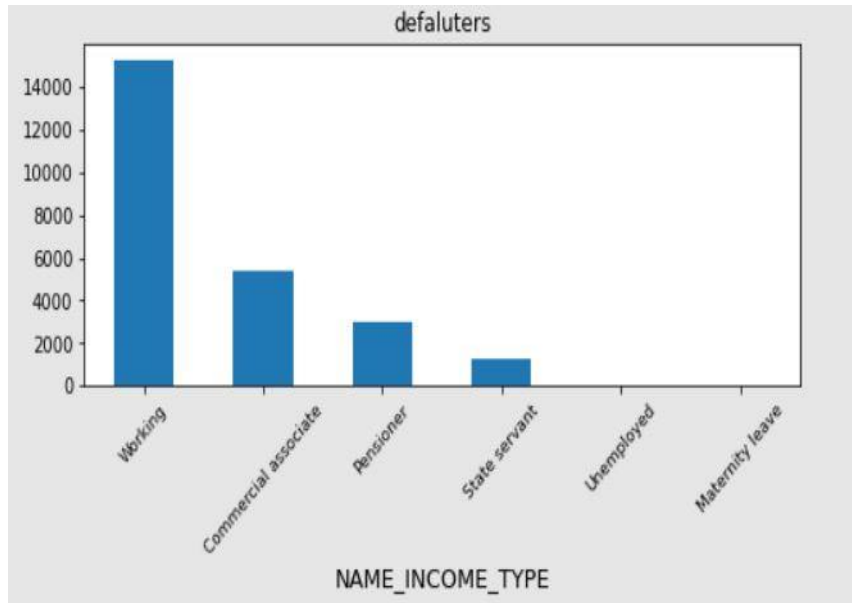
Compared to nondefaulters credit amount is high in defaulters

Gender comparison



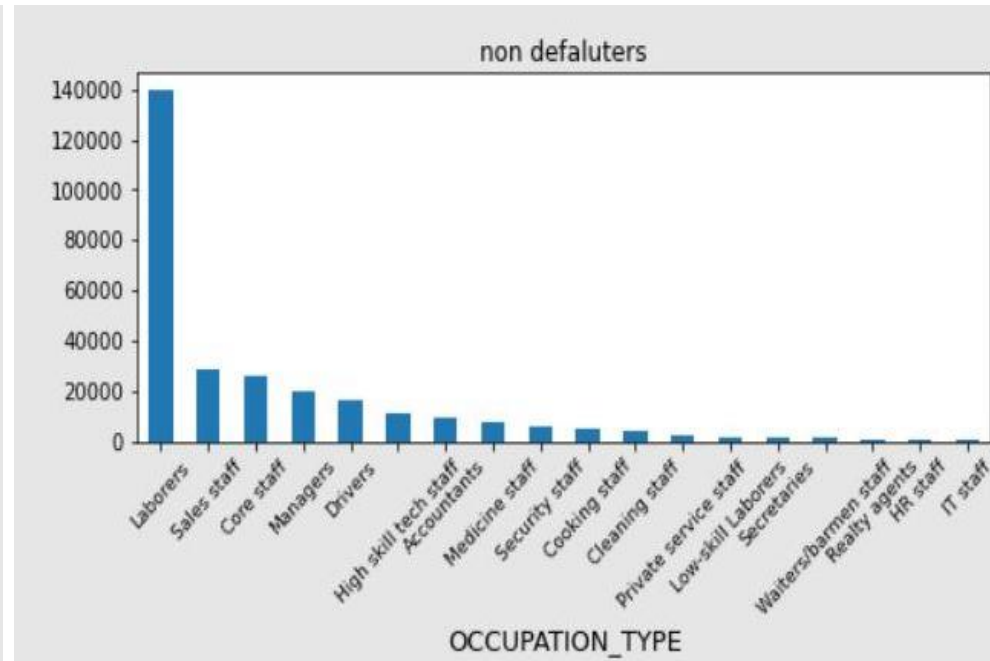
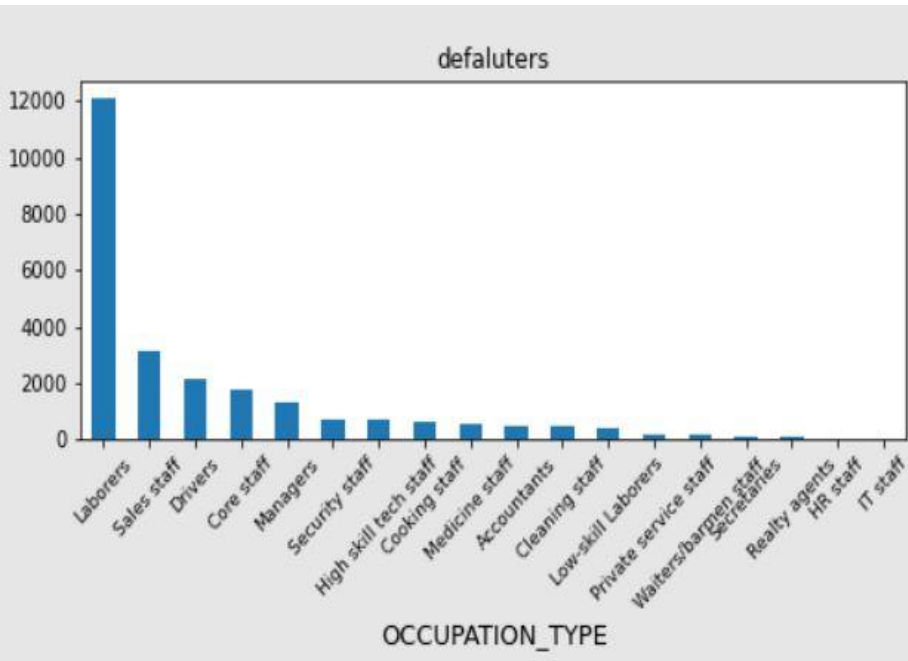
From the comparison female rate is same but male rate is high in defaulters

Type of Income comparison



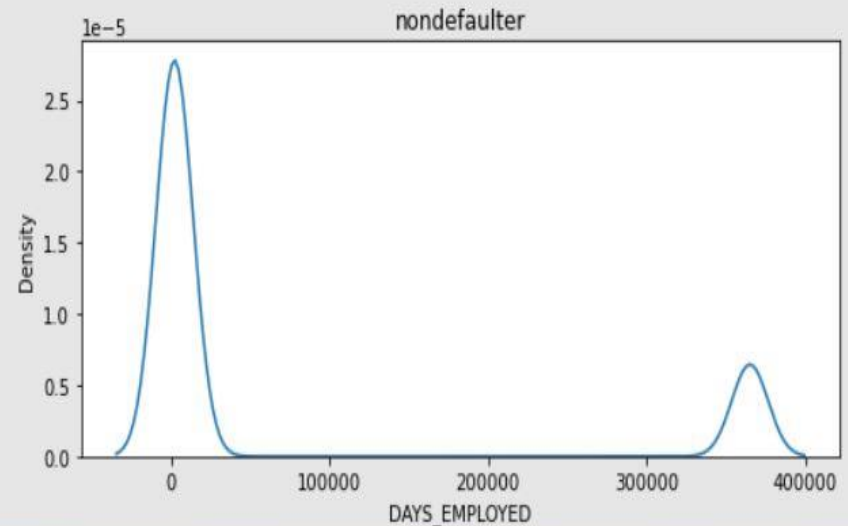
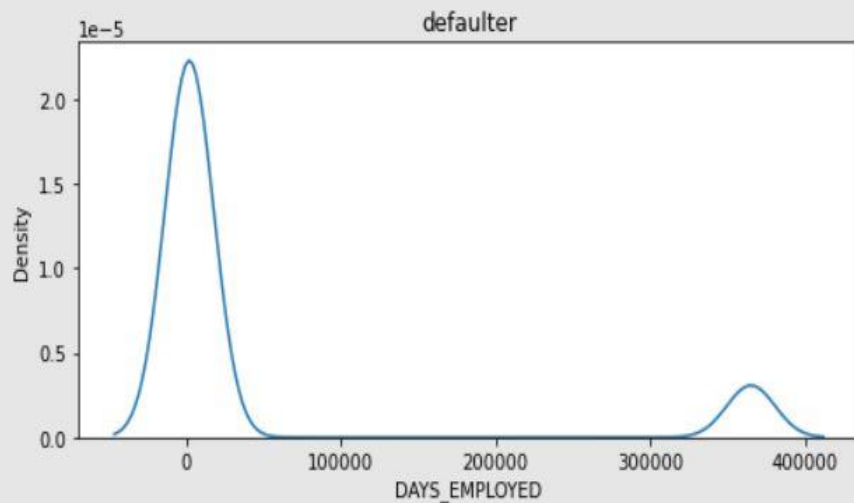
From the plots Pensioners ,state servant's rates are high in non defaulters

Occupation comparison



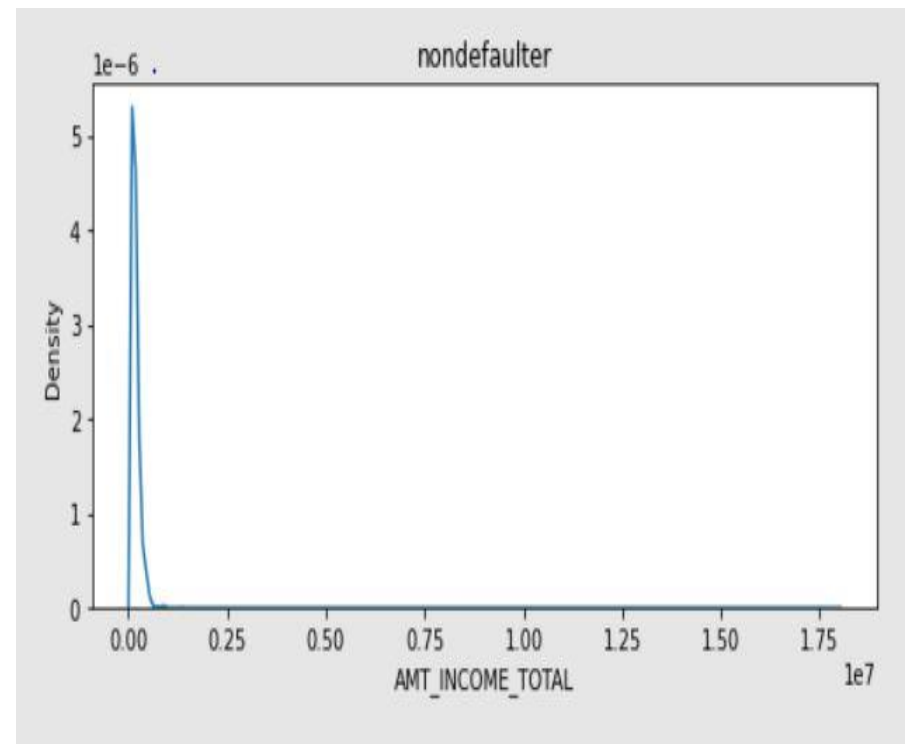
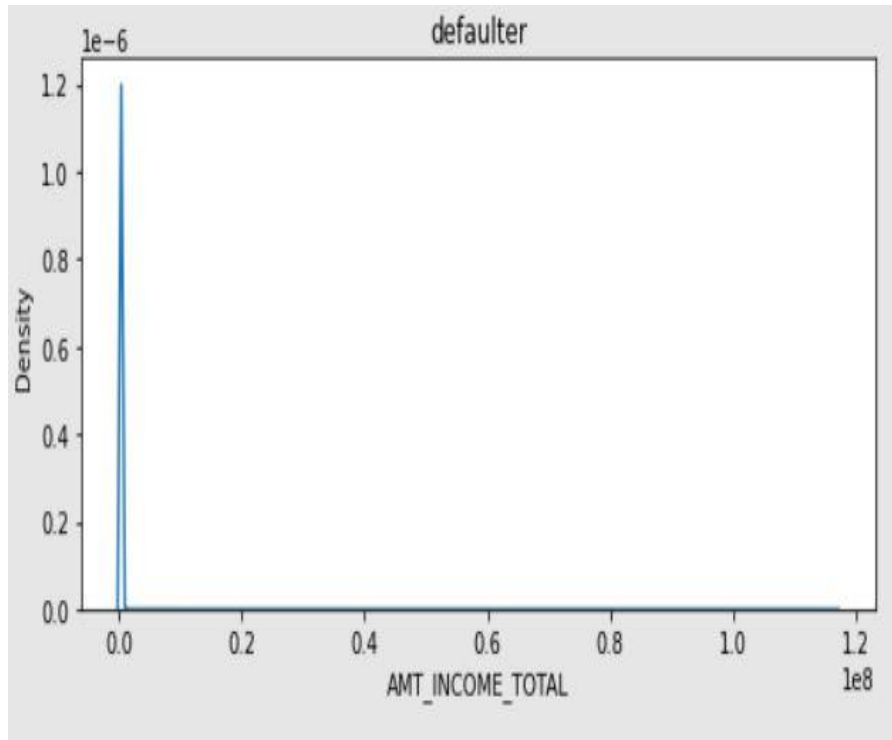
From the results sales staff and divers have high rate in defaulters

Employment experience comparison



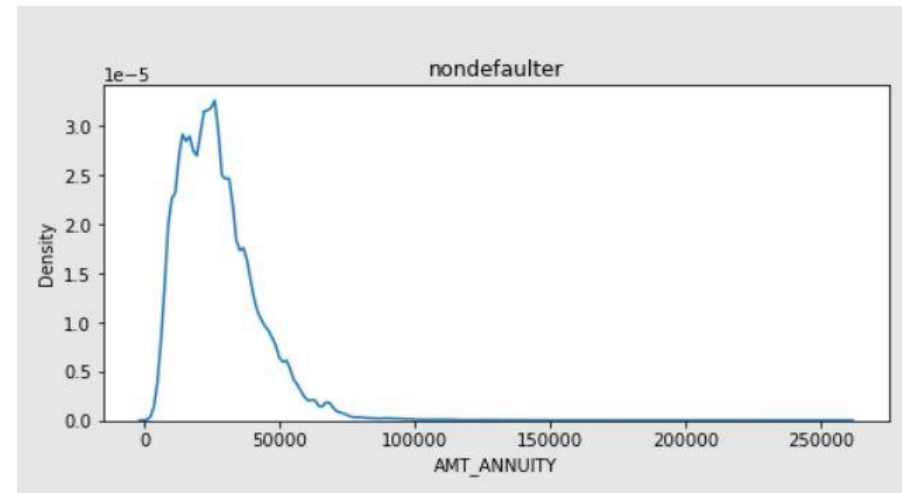
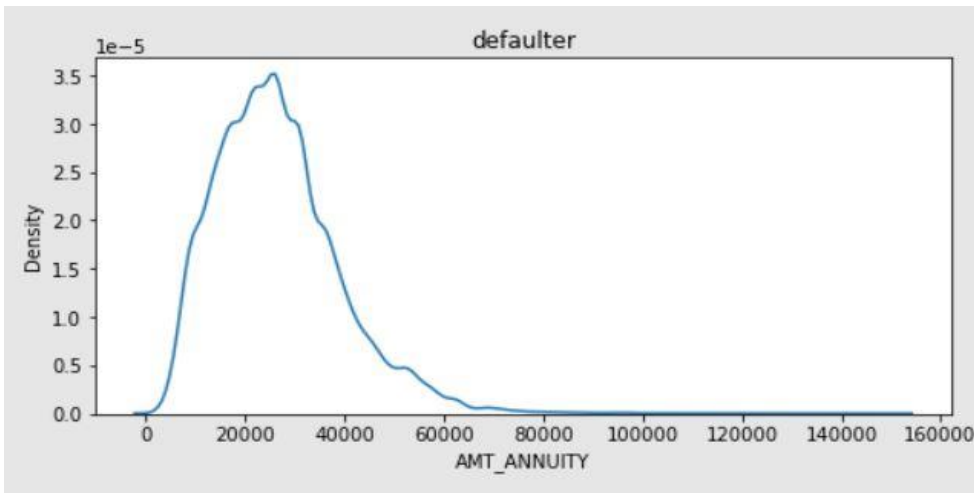
From the plots High Experienced employees are non defaulters

Amount of Income comparison



From the plots High income clients are non defaulters

Annuity Amount comparison



From the results clients with High Annuity amount are defaulters

Summary

Safe zone for loan

- High income clients
- Experienced employees
- Core staff ,managers
- Pensioners ,state servants
- High educated people
- Old age and Middle aged clients

Risk Zone for loan

- Low income clients
- New employees
- Drivers, Sales staff
- Clients with High Annuity amount
- Clients with High Credit Amount
- Gender wise Male

