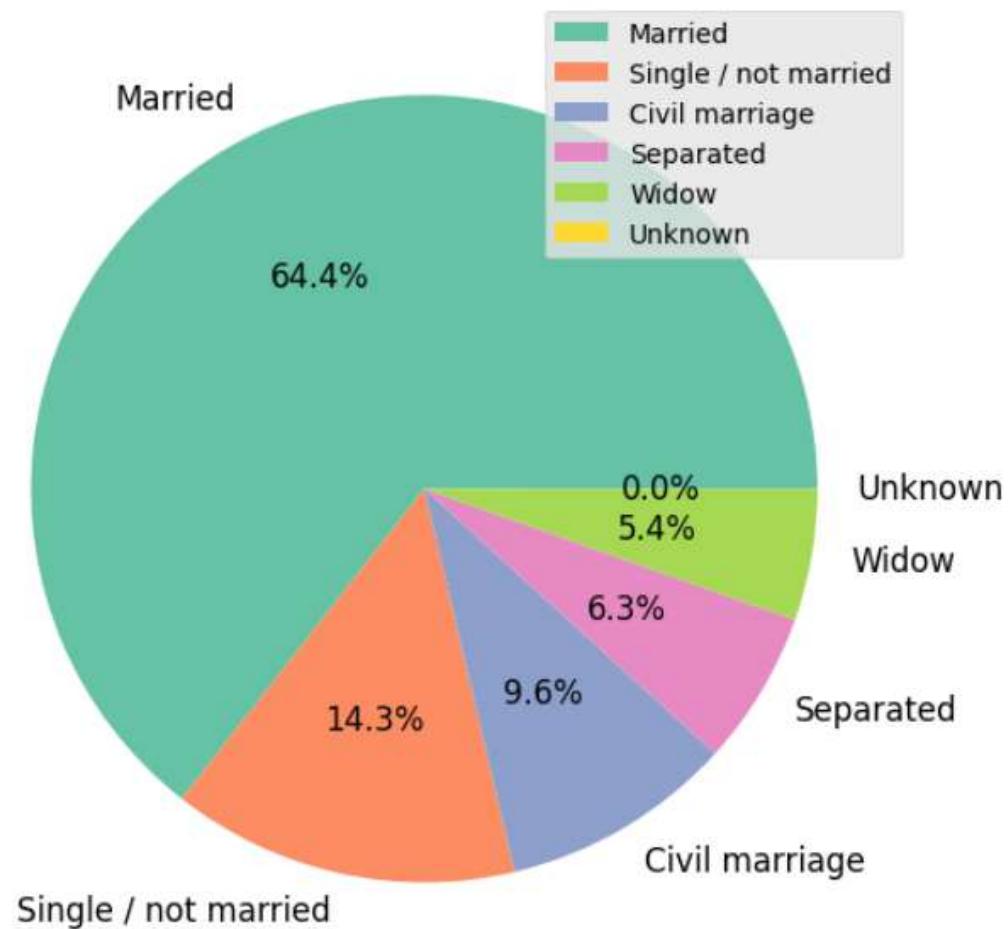
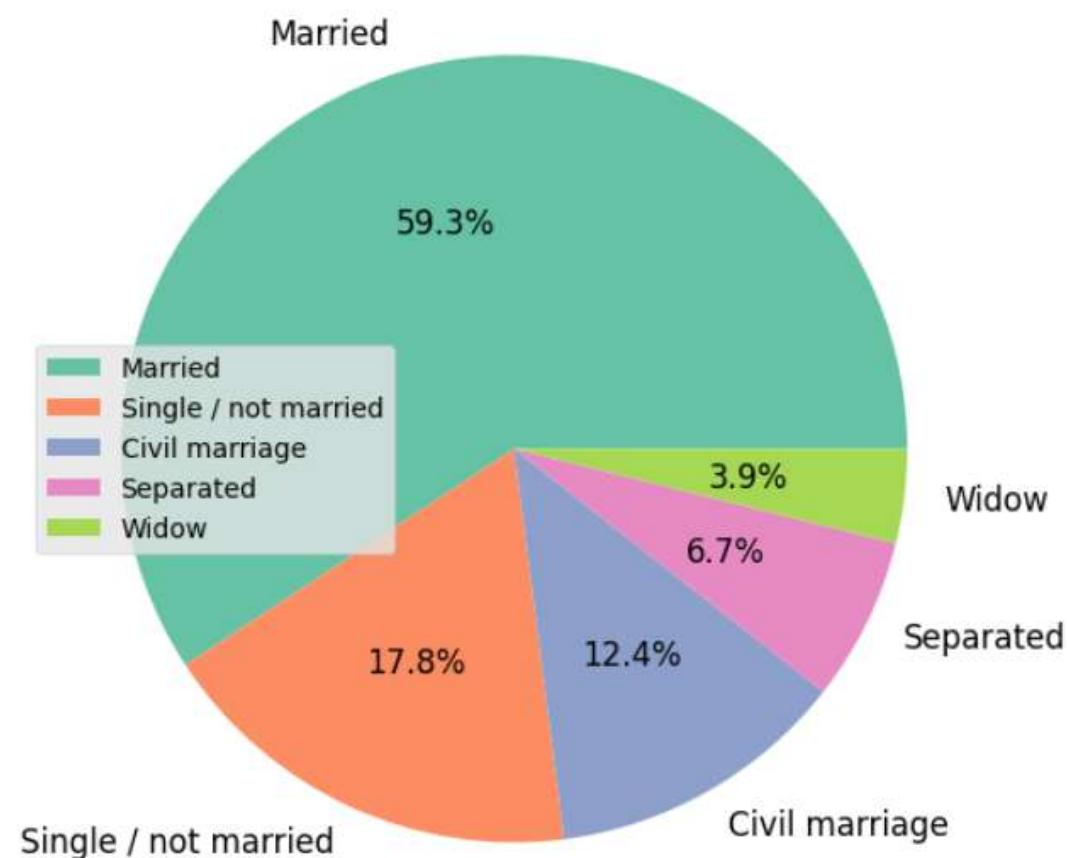


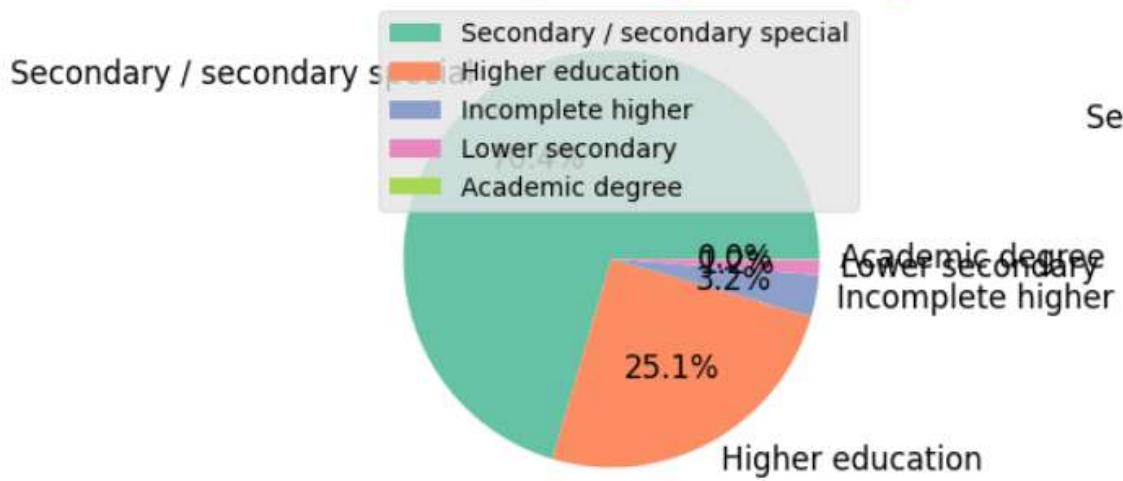
Non-Defaulters by NAME\_FAMILY\_STATUS



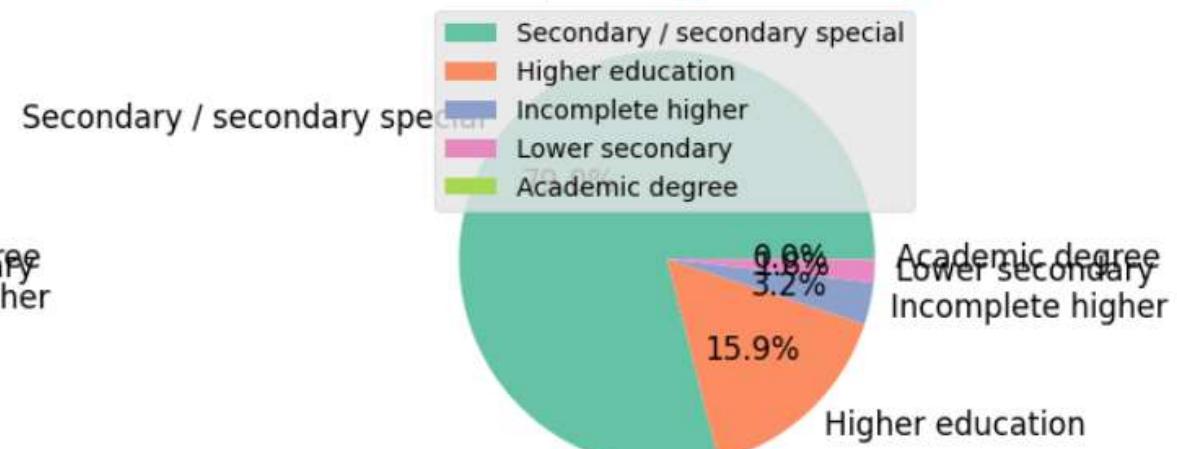
Defaulters by NAME\_FAMILY\_STATUS



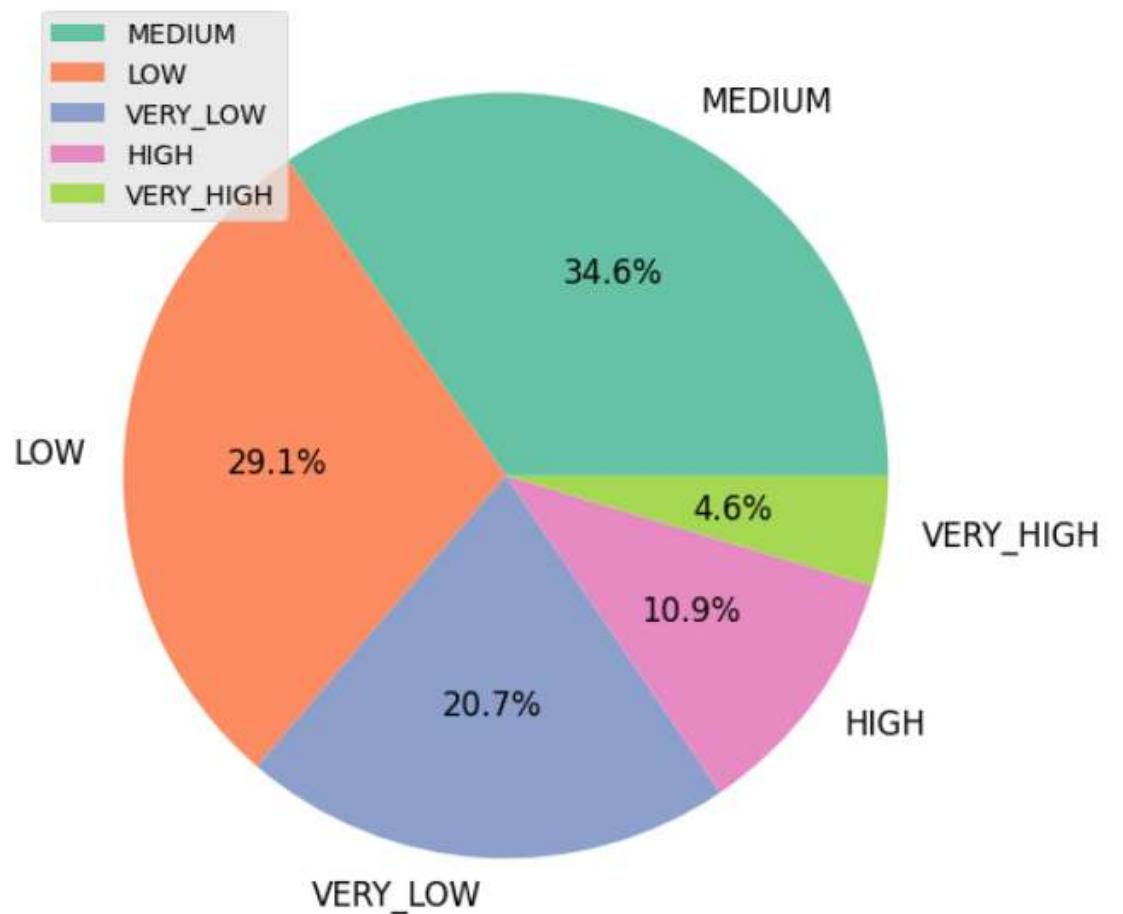
Non-Defaulters by NAME\_EDUCATION\_TYPE



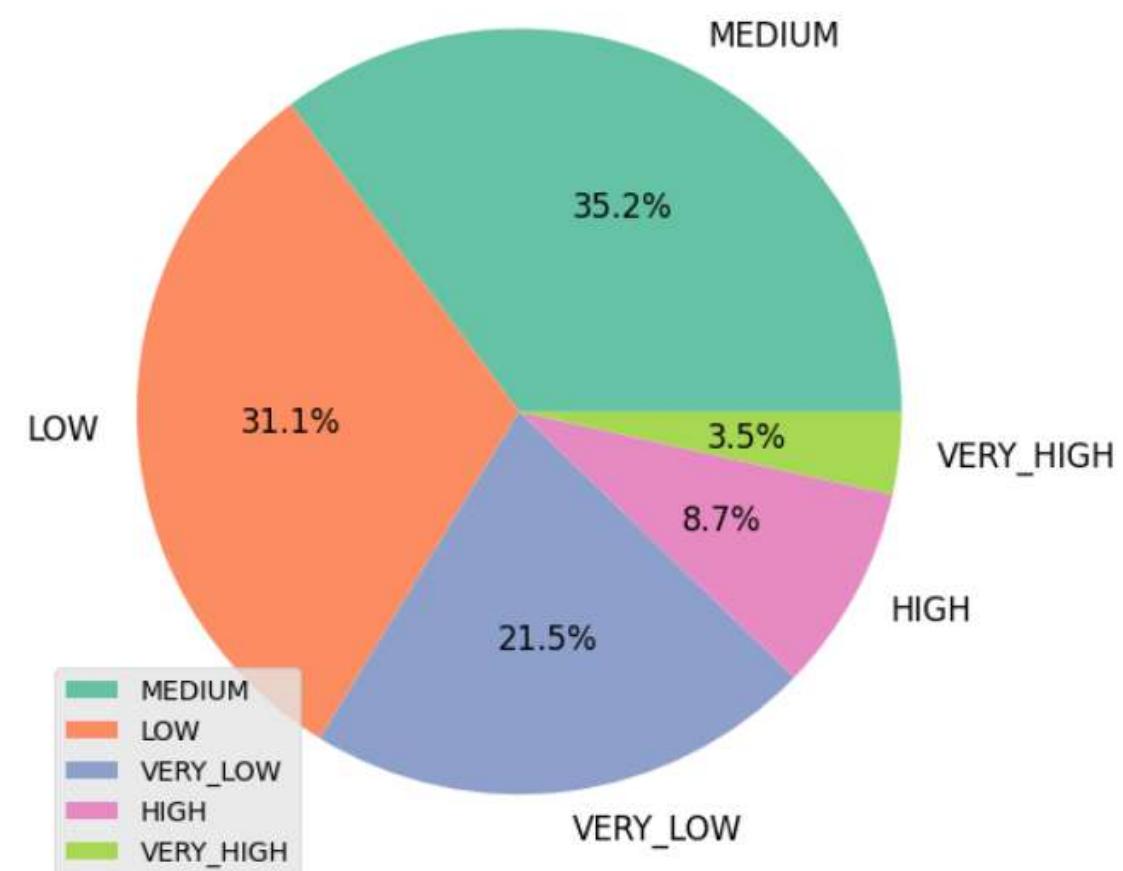
Defaulters by NAME\_EDUCATION\_TYPE



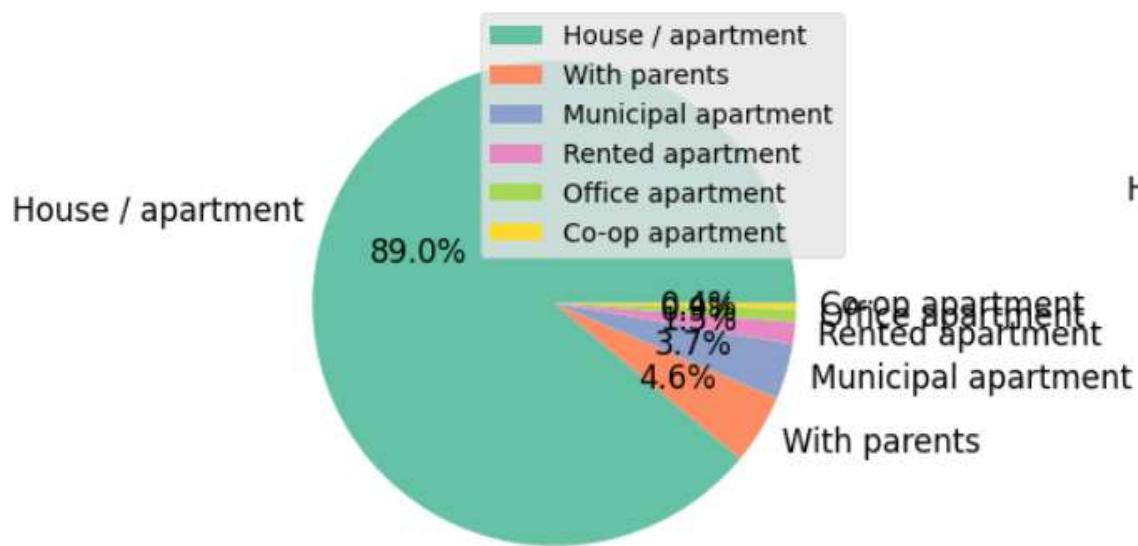
Non-Defaulters by AMT\_INCOME\_RANGE



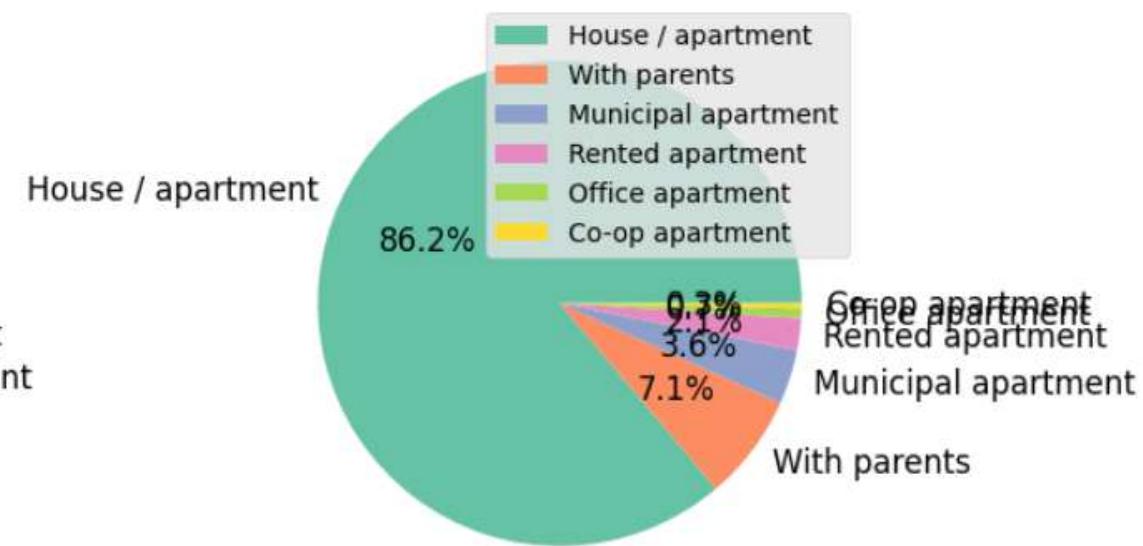
Defaulters by AMT\_INCOME\_RANGE



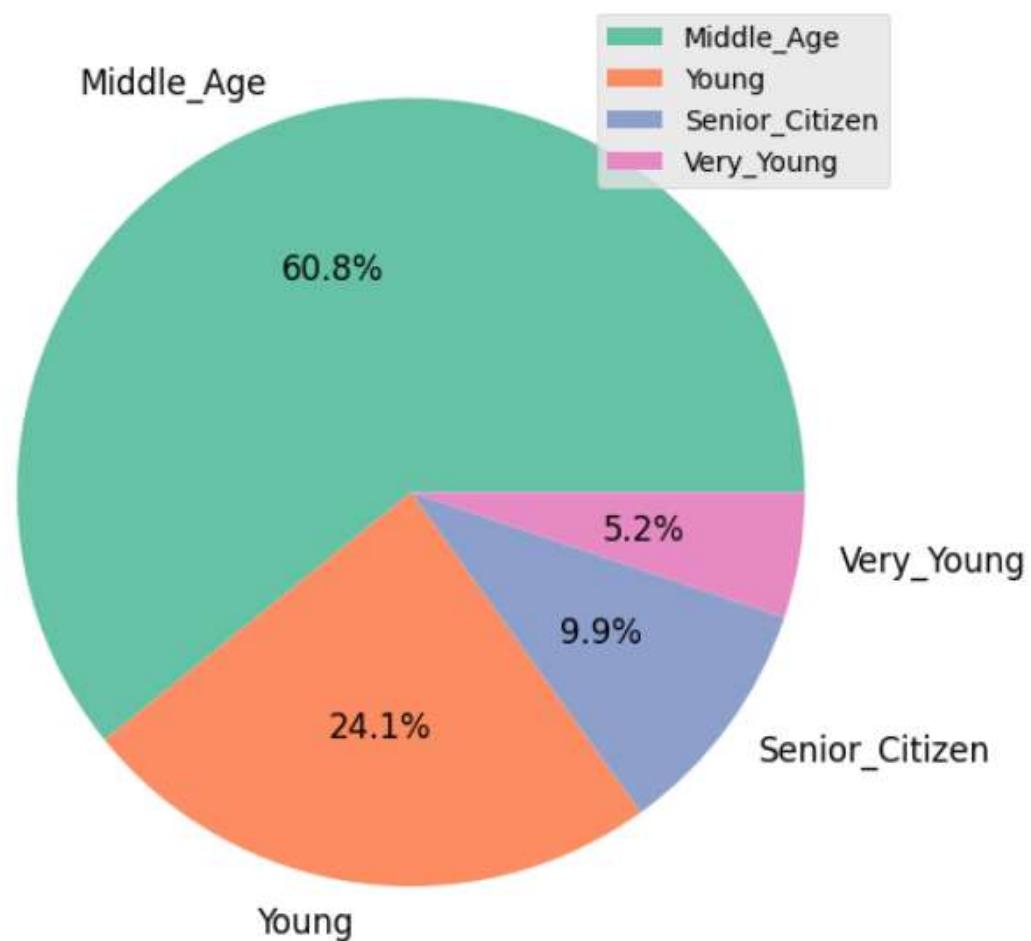
Non-Defaulters by NAME\_HOUSING\_TYPE



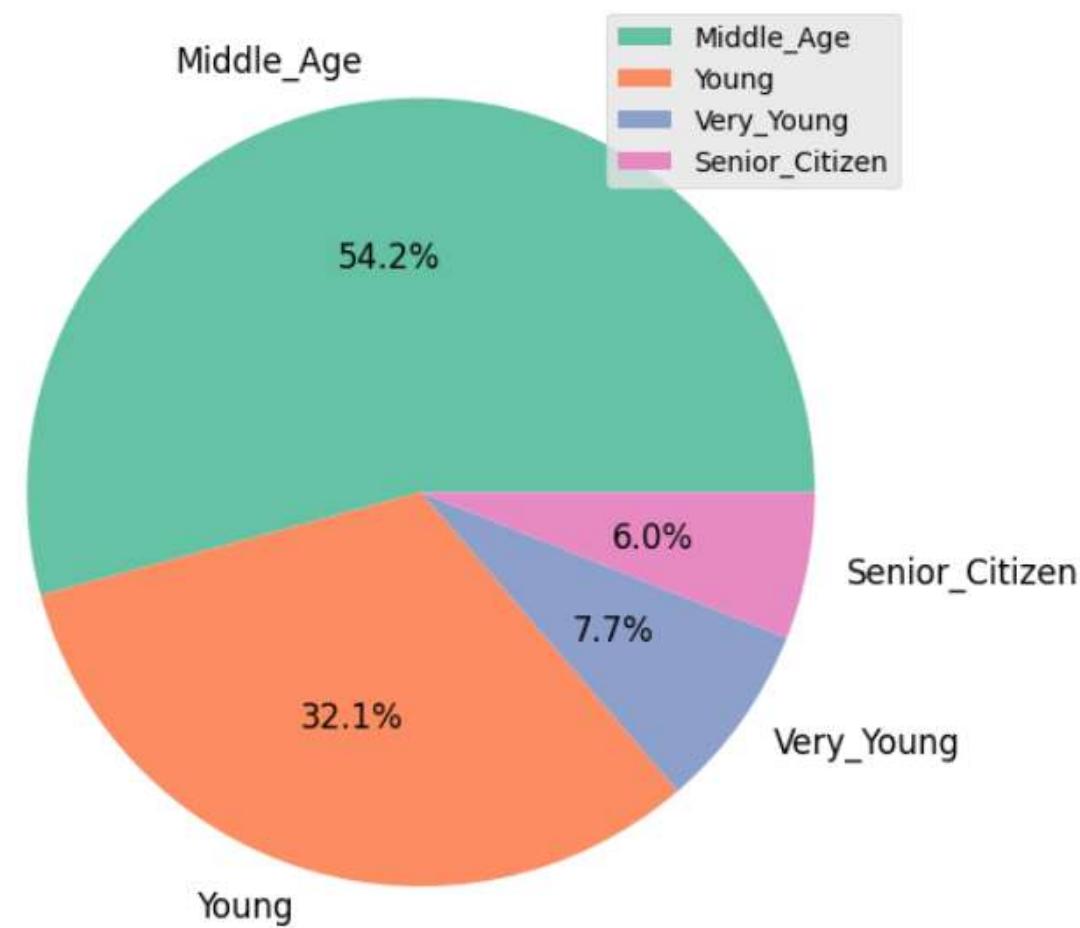
Defaulters by NAME\_HOUSING\_TYPE



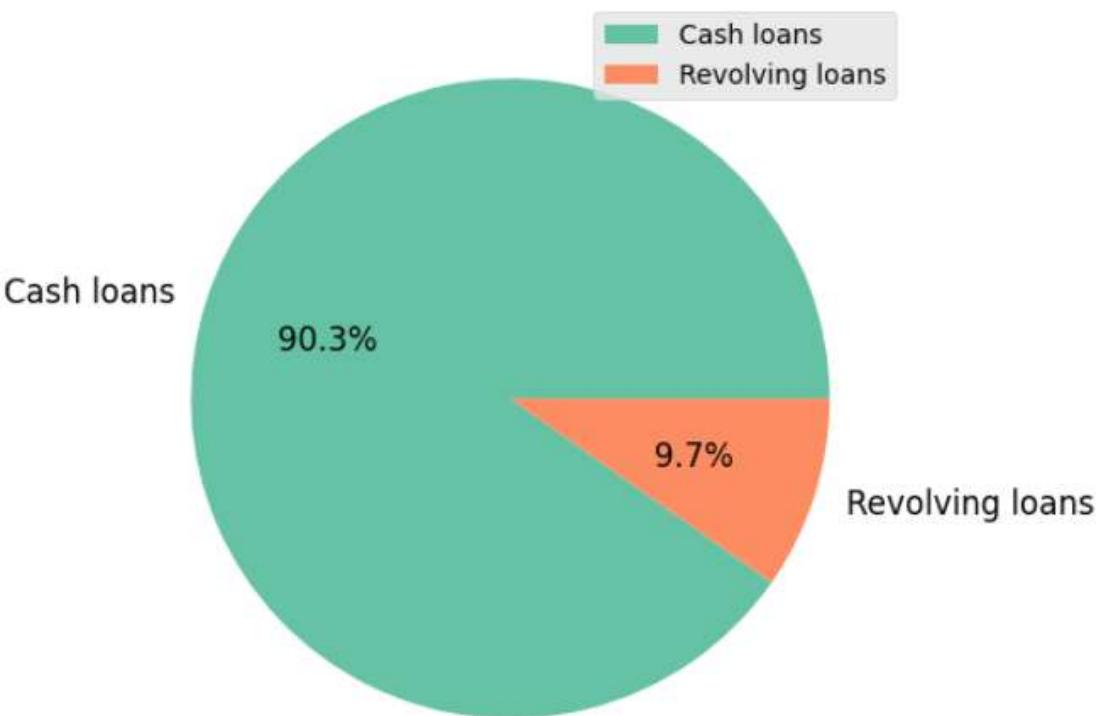
Non-Defaulters by DAYS\_BIRTH\_BINS



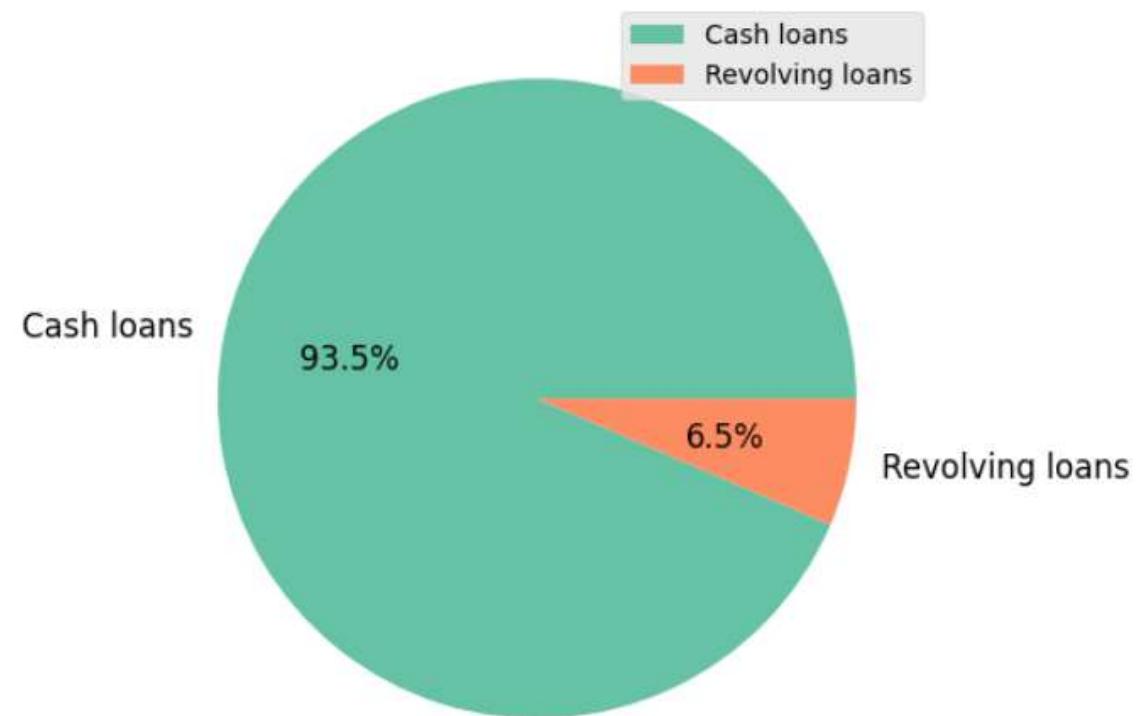
Defaulters by DAYS\_BIRTH\_BINS



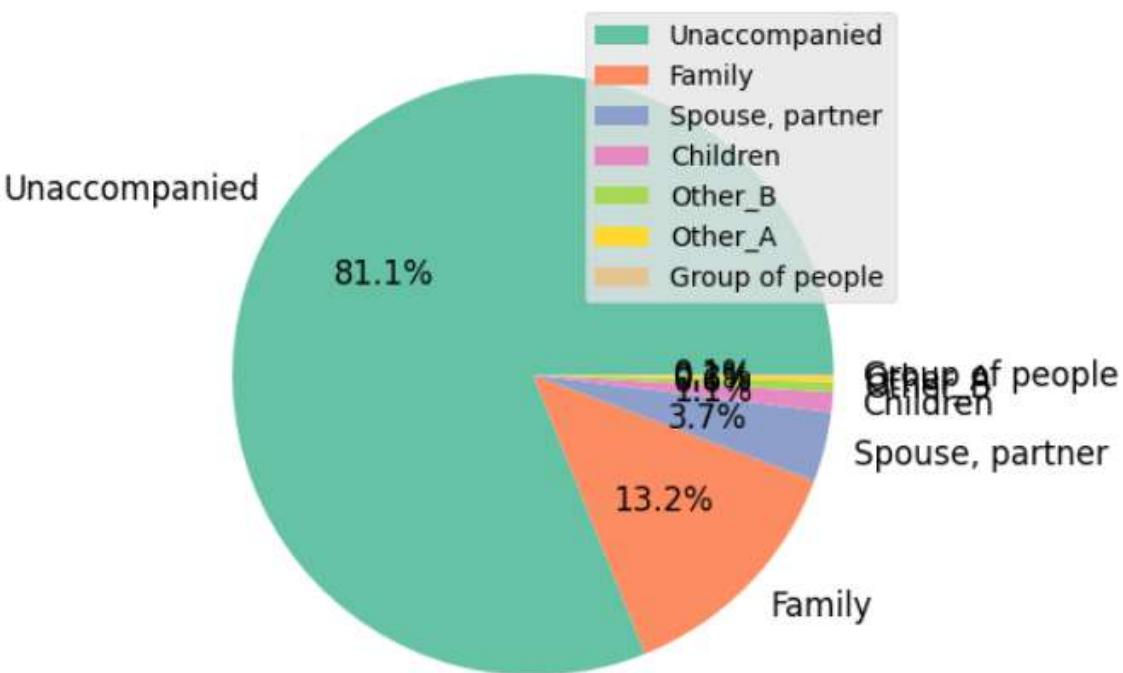
Non-Defaulters by NAME\_CONTRACT\_TYPE



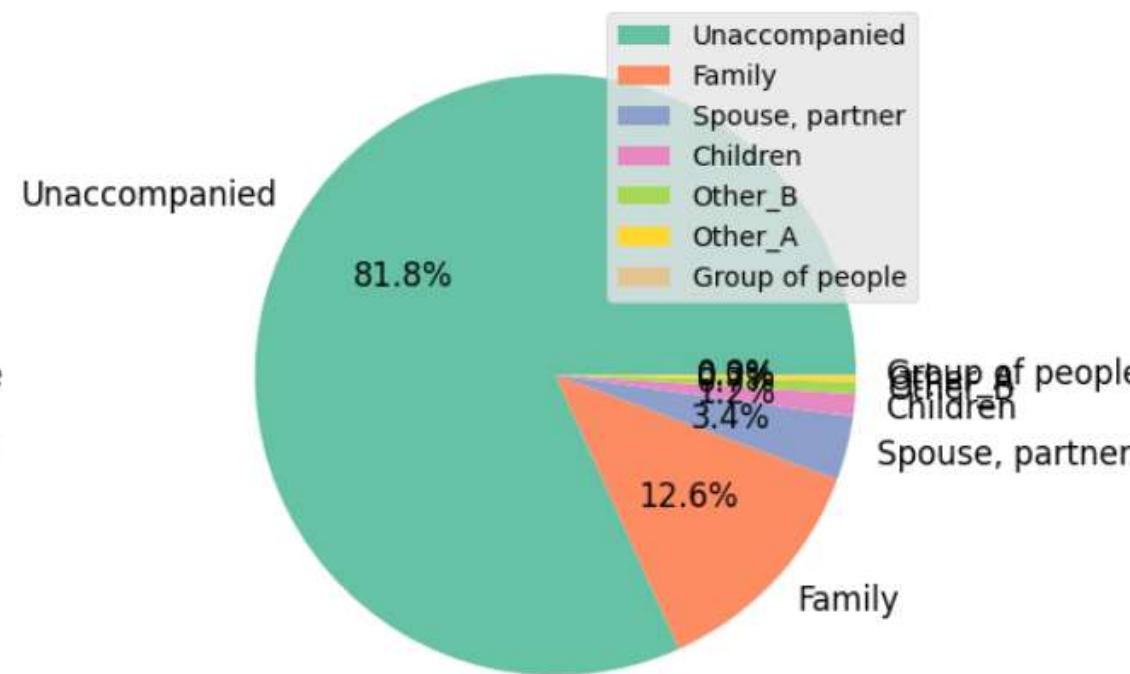
Defaulters by NAME\_CONTRACT\_TYPE

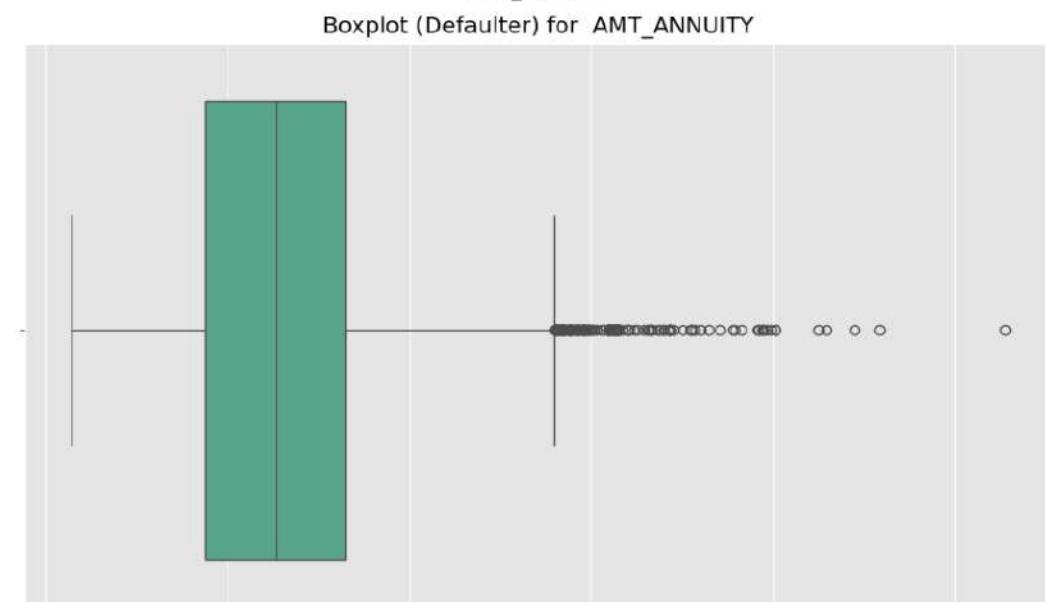
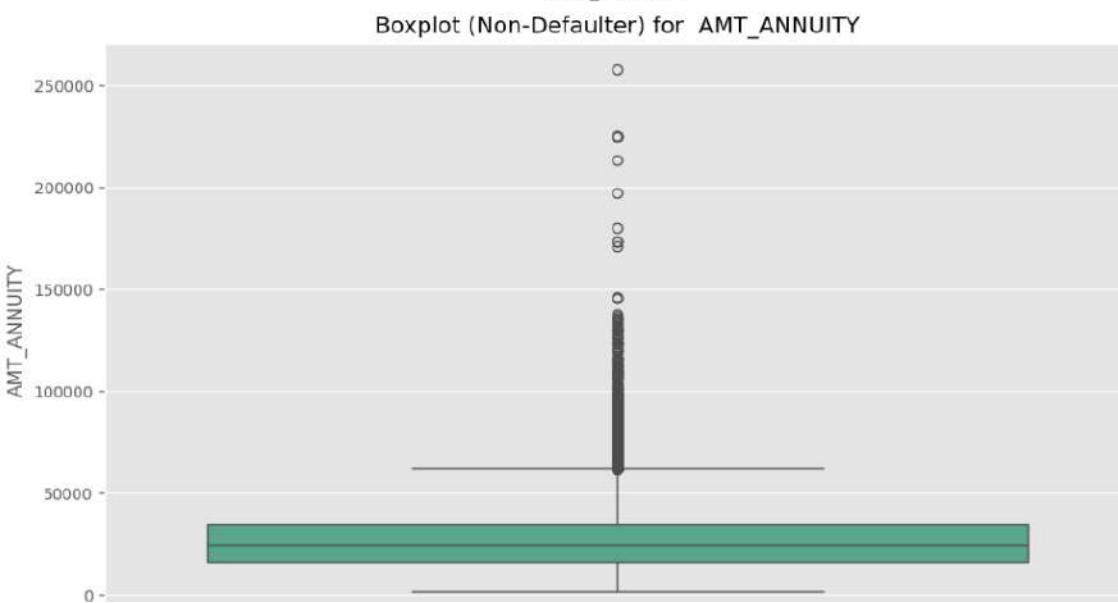
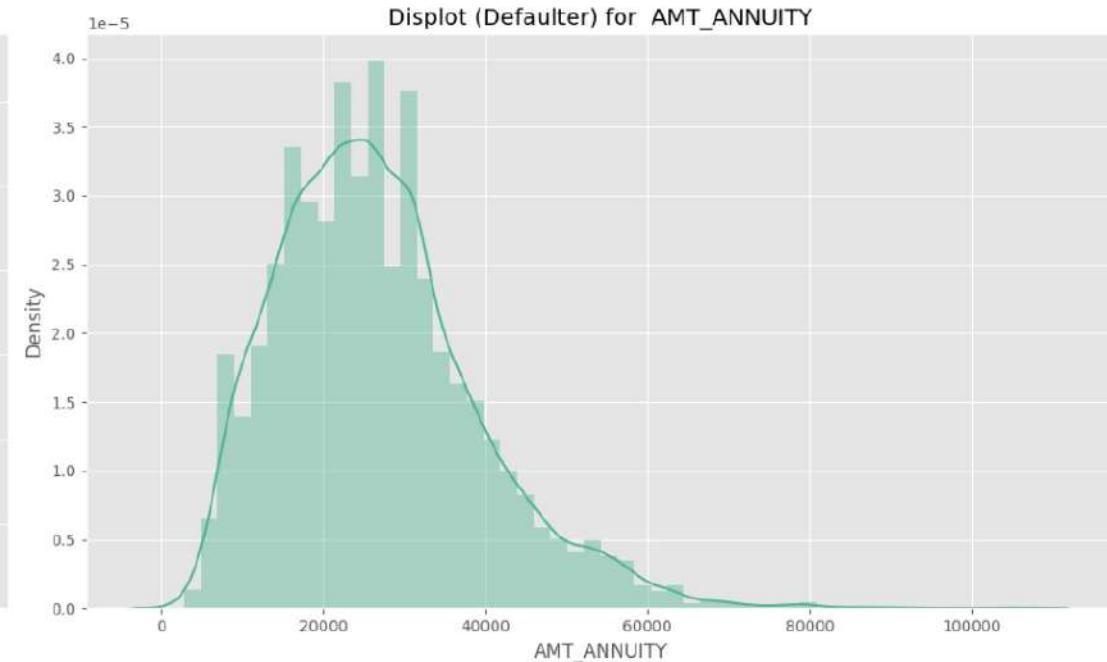
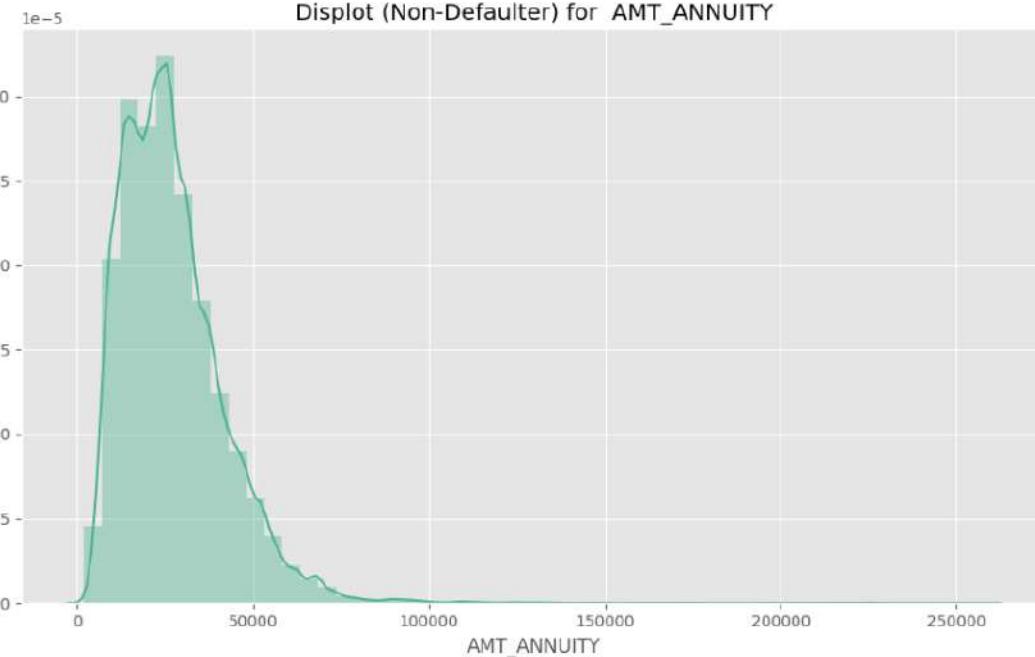


Non-Defaulters by NAME\_TYPE\_SUITE

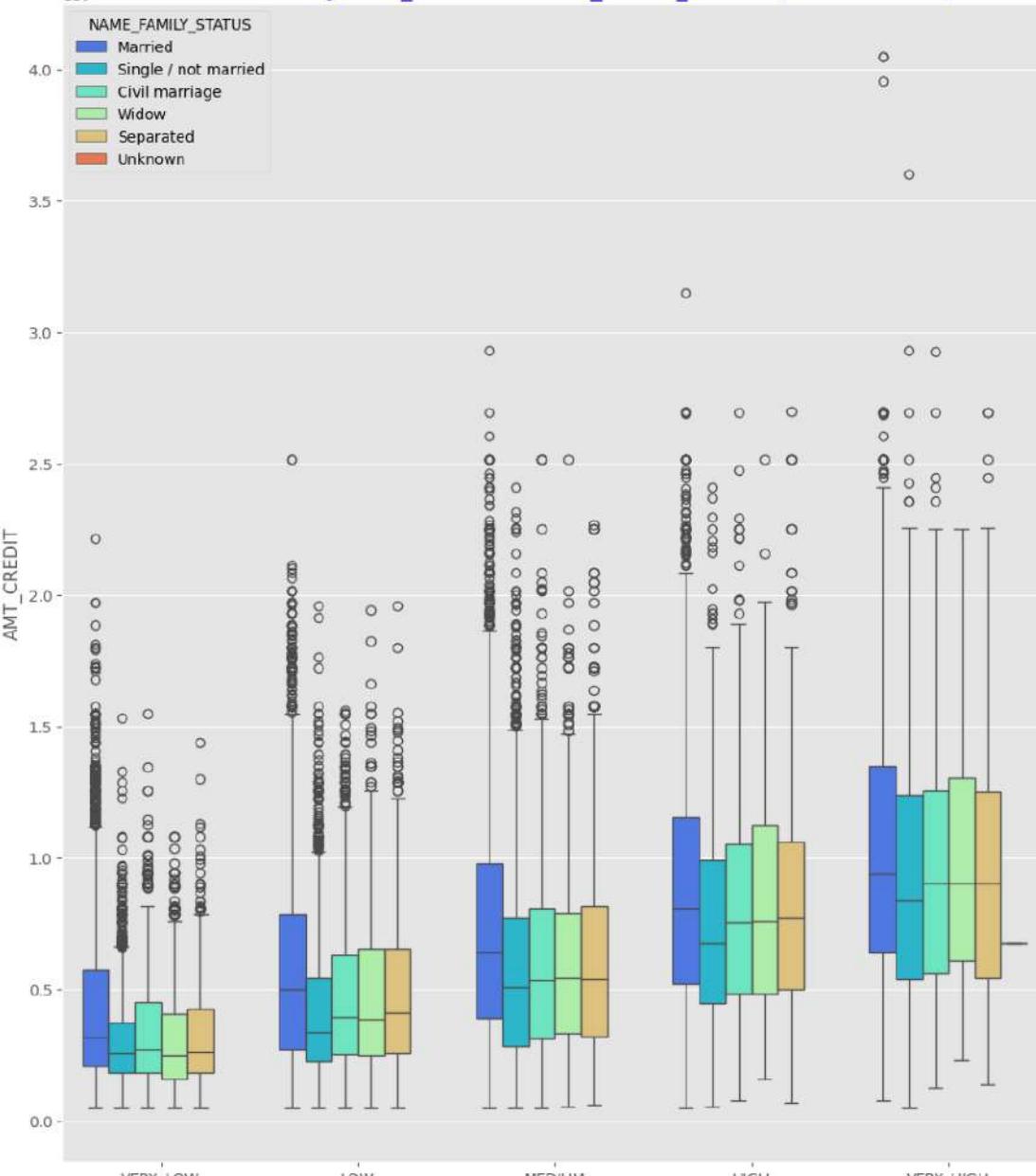


Defaulters by NAME\_TYPE\_SUITE

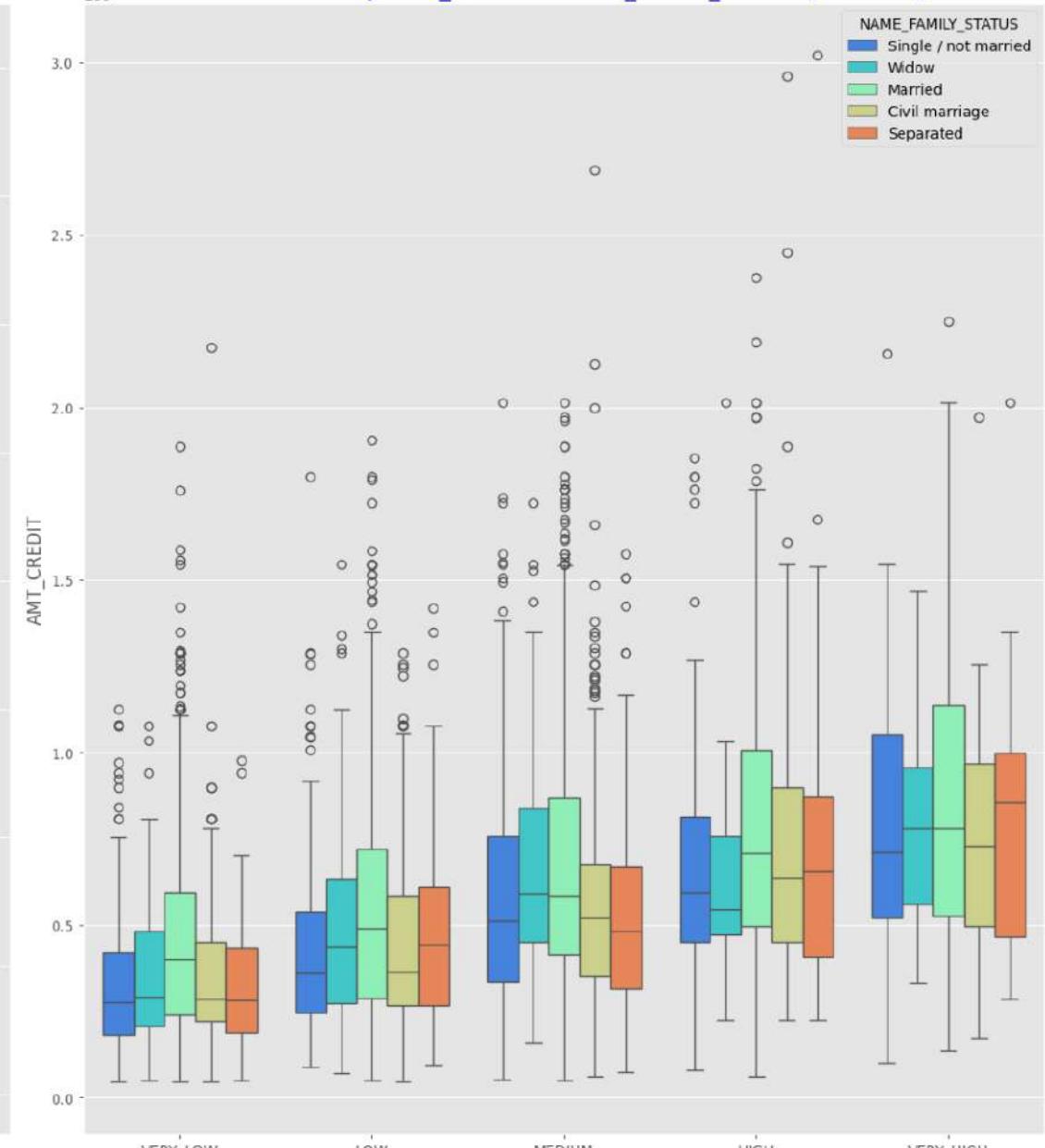




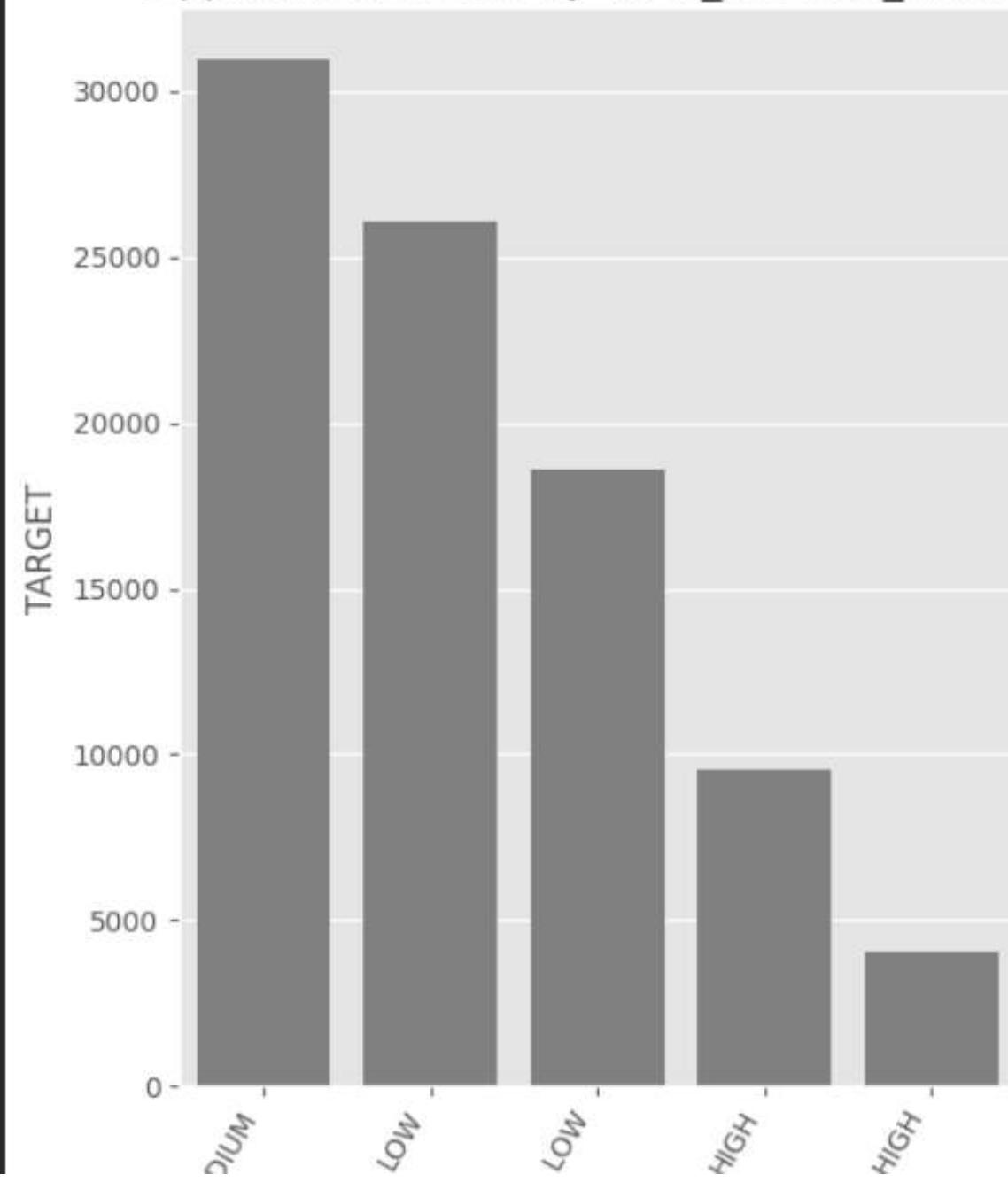
1e6 Loan Amount by AMT\_CREDIT & NAME\_FAMILY\_STATUS (Non-Defaulter)



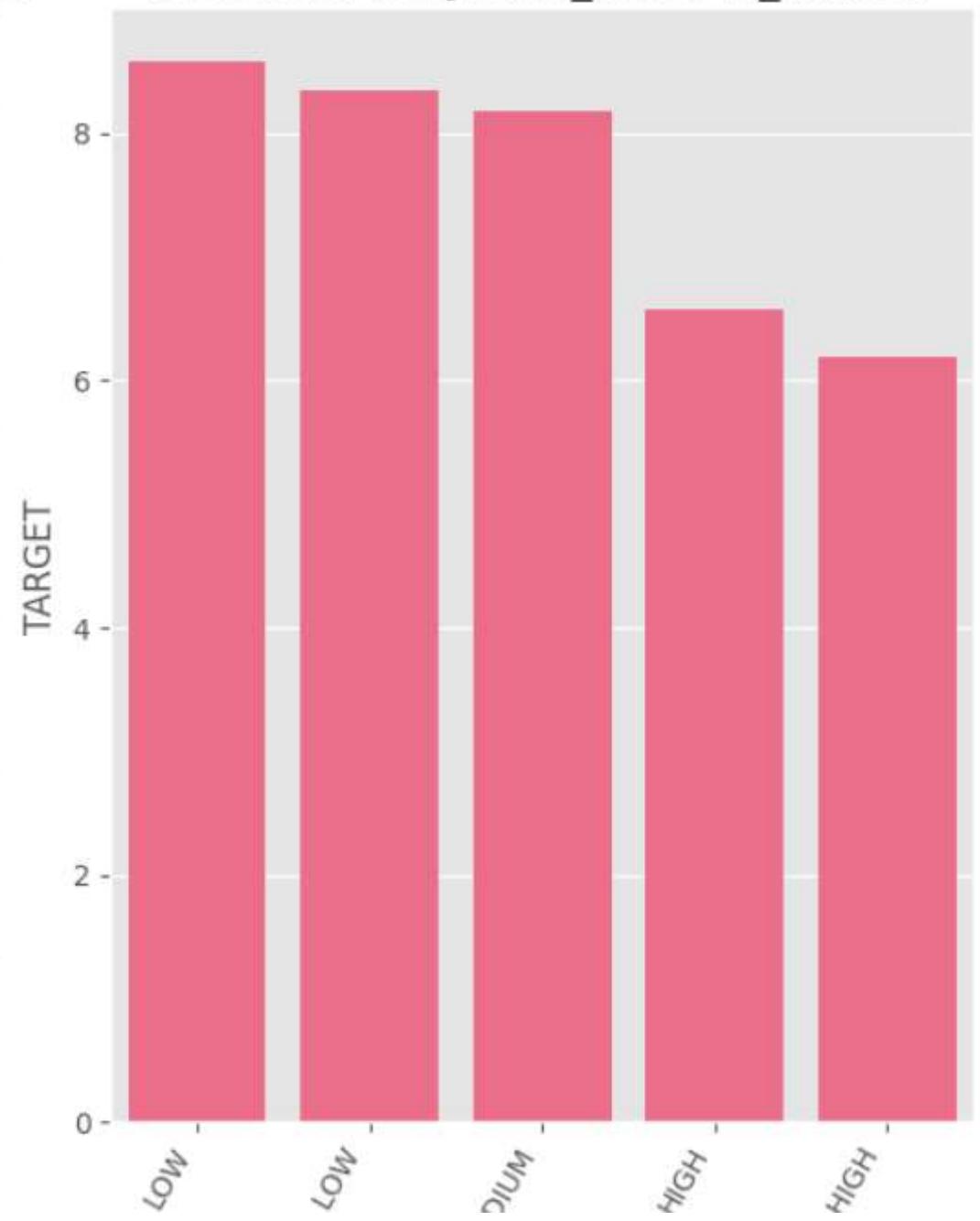
1e6 Loan Amount by AMT\_CREDIT & NAME\_FAMILY\_STATUS (Defaulter)



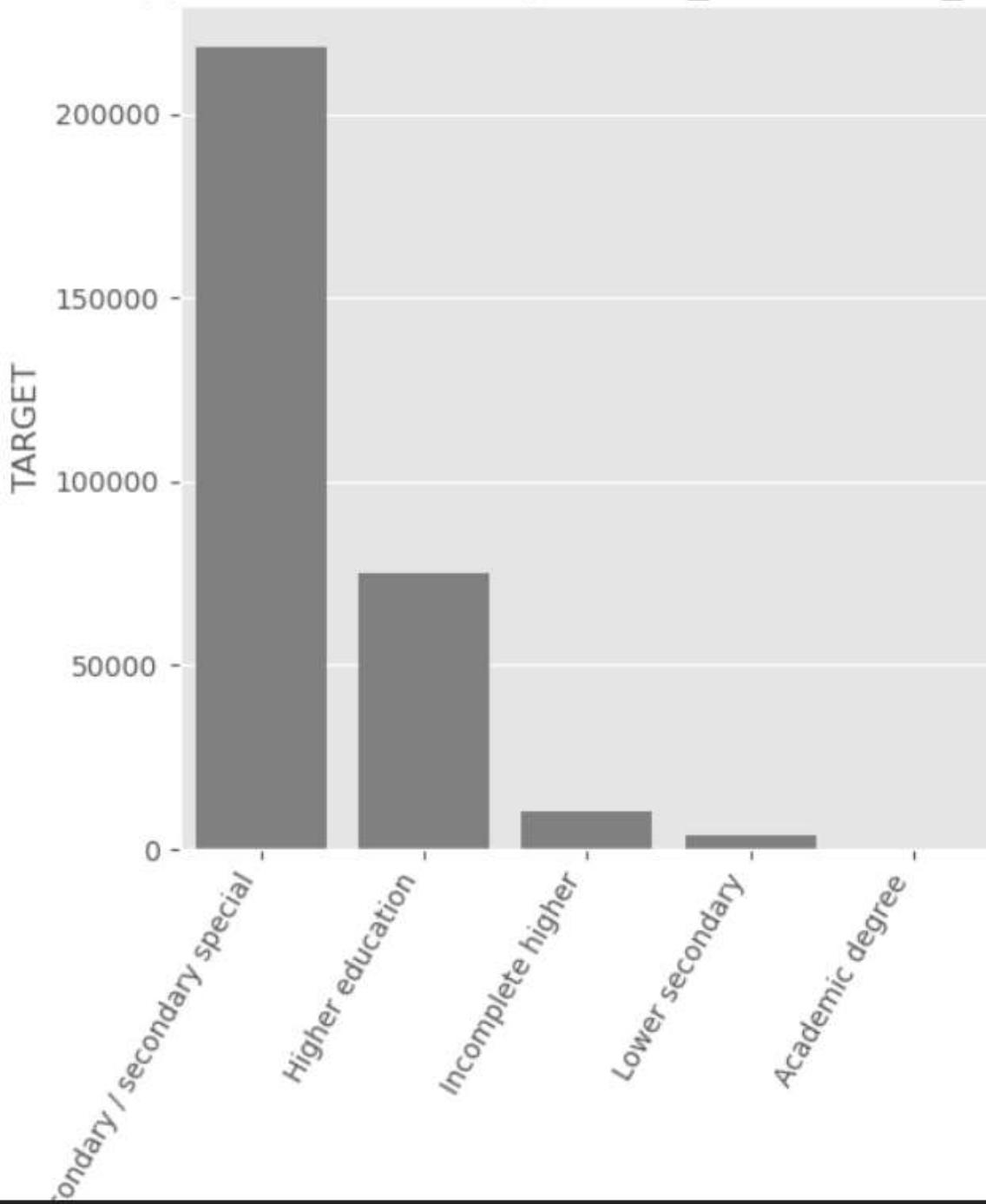
Application Counts by AMT\_INCOME\_RANGE



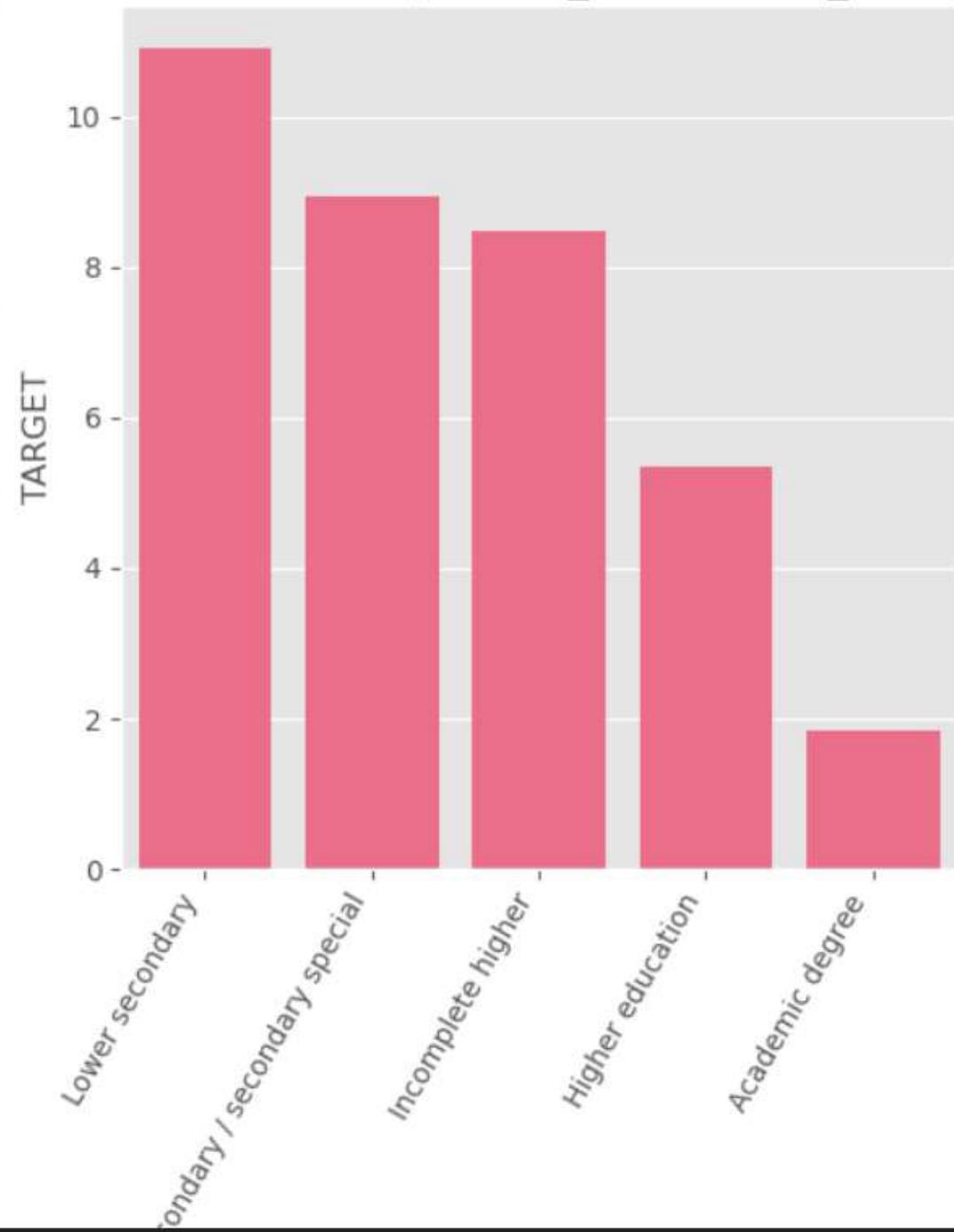
Defaulter % by AMT\_INCOME\_RANGE



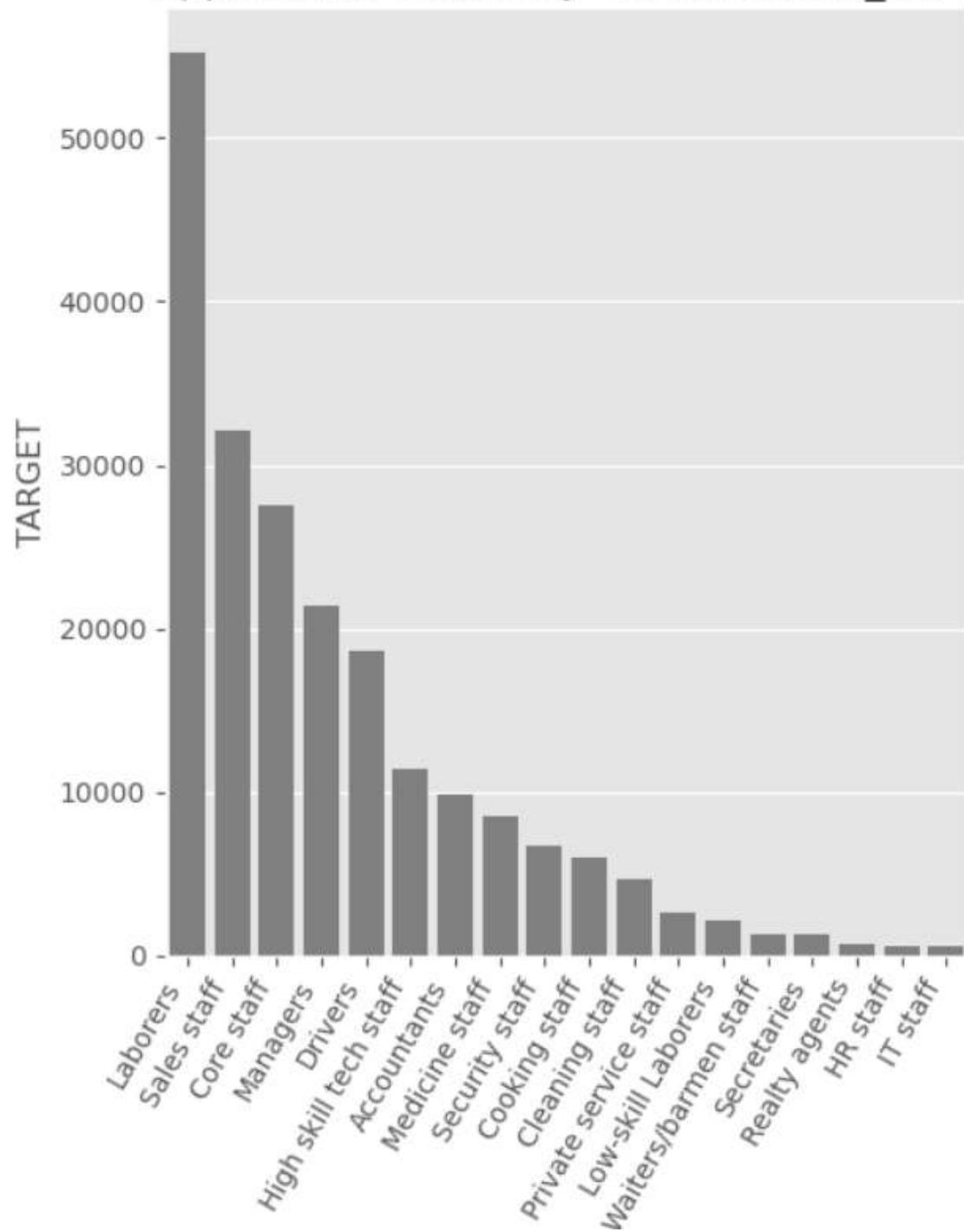
Application Counts by NAME\_EDUCATION\_TYPE



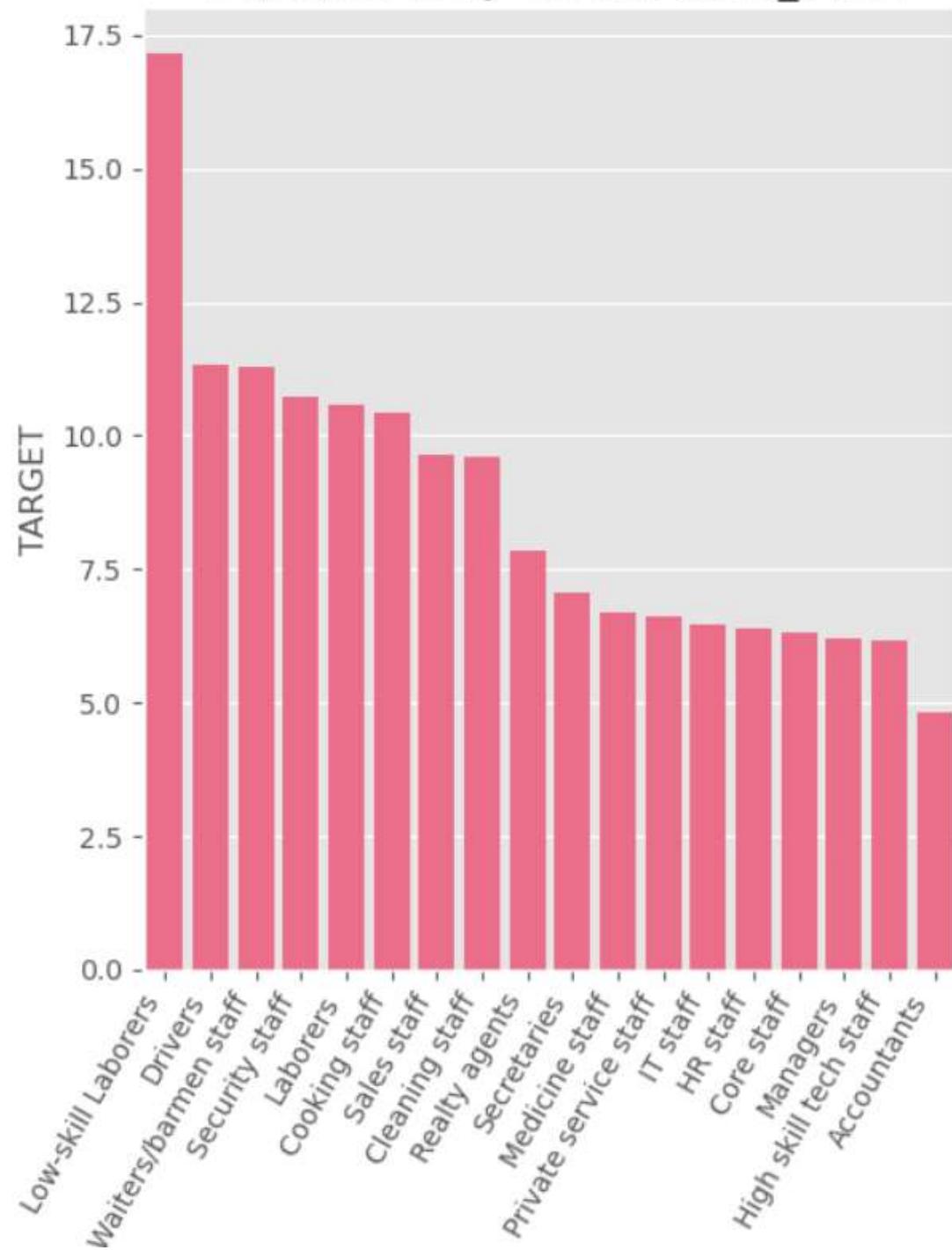
Defaulter % by NAME\_EDUCATION\_TYPE

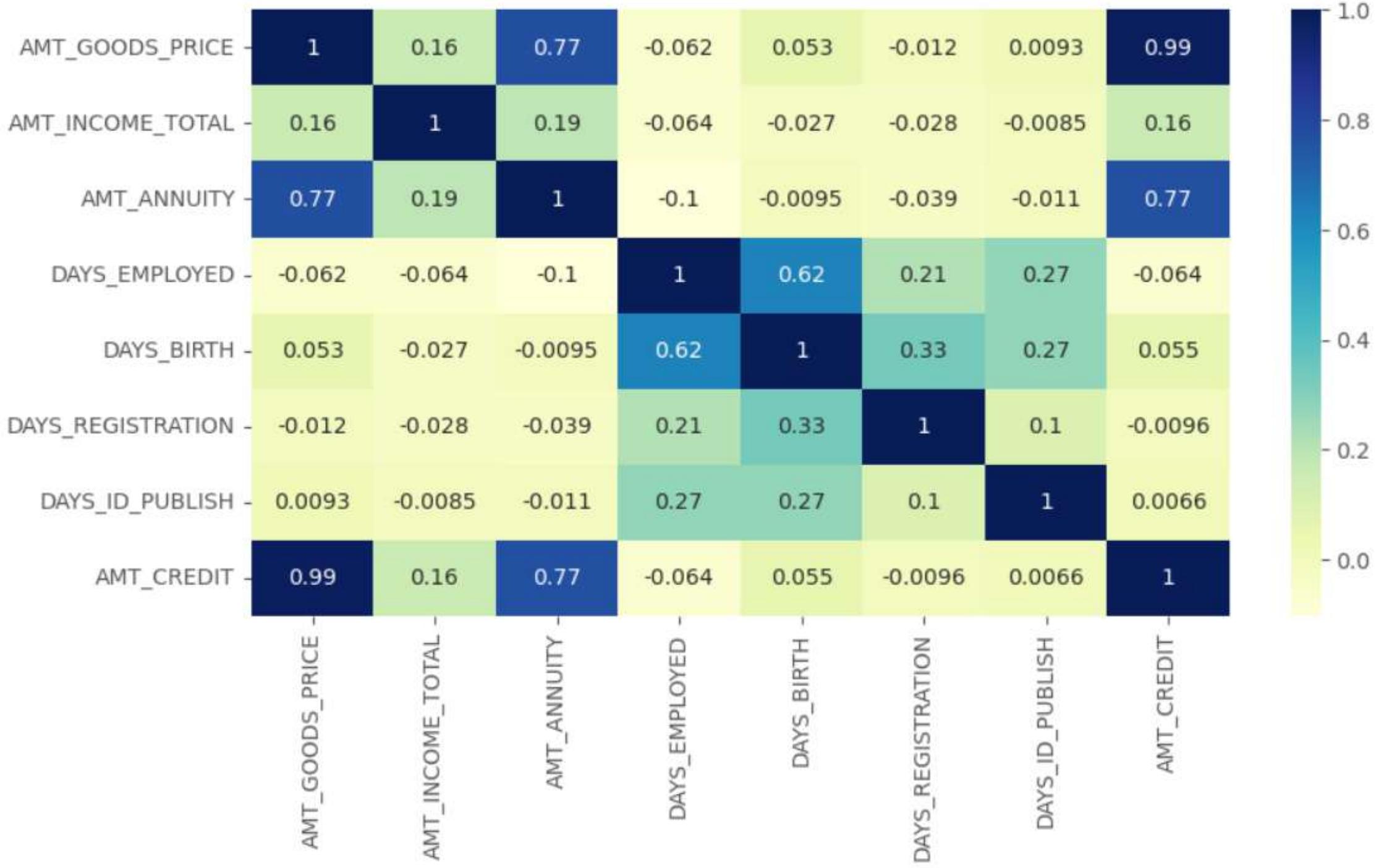


### Application Counts by OCCUPATION\_TYPE



### Defaulter % by OCCUPATION\_TYPE







# Final Insights: Loan Default EDA Project

## 1. Gender and Default

- Men are more likely to **default** compared to women.
- Although fewer in the overall applicant pool, their default percentage is **disproportionately higher**.

## 2. Income and Default

- Applicants with **low income** are more likely to default.
- **Higher income groups** show lower default percentages, indicating income stability reduces risk.

## 3. Education and Default

- **Higher education** is associated with **fewer defaults**.
- Applicants with **lower educational levels** tend to have higher default rates.

## 4. Employment and Default

- **Unemployed and lower-tenure employees** have a higher chance of default.
- People with **stable, long-term jobs** tend to repay loans better.

## 5. Loan & Credit Correlation

- **AMT\_CREDIT, AMT\_ANNUITY, and AMT\_GOODS\_PRICE** are strongly correlated.
- Higher loan amounts are associated with higher annuities and more expensive goods.

## 6. Age and Default

- **Younger individuals** are more likely to default.
- Older applicants are generally more financially responsible or cautious.

## 7. Family Status & Income

- **Married applicants** and those in **civil marriages** generally show better repayment behavior.
- Family stability and dual-income households may contribute to this.

## 8. Drilldown Analysis

- Specific segments (e.g., **low-income + low education**) show **very high default %**.
- Can help design targeted lending rules and risk-mitigation strategies.

## Conclusion

Demographic, financial, and behavioral features like **gender, age, income, education, and employment status** play a critical role in determining **loan default risk**. These insights can guide:

- **Risk-based loan approvals**
- **Targeted credit policies**
- **Financial education initiatives**  
to reduce future defaults and build a healthier loan portfolio.