

# EDA Case Study

Presented by:  
Pramila Balan  
Sandesh Kumar Jadhav

# Business Ask

- Analyse the patterns present in the data.
- Find consumer attributes and loan attributes that influence the tendency of default.
- Ensure that the applicants are capable of repaying the loan are not rejected.

# Business Solution

Finding patterns on the following

consumer attributes:

- Gender
- Age
- Education
- Organization Type
- Car ownership
- Income
- Employment experience

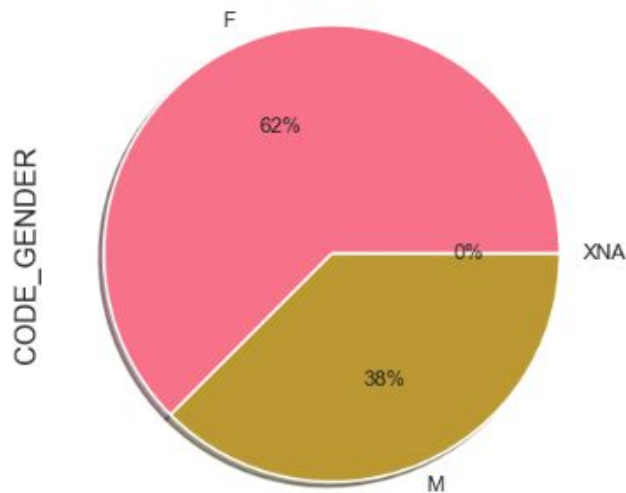
Finding patterns on the following

loan attributes:

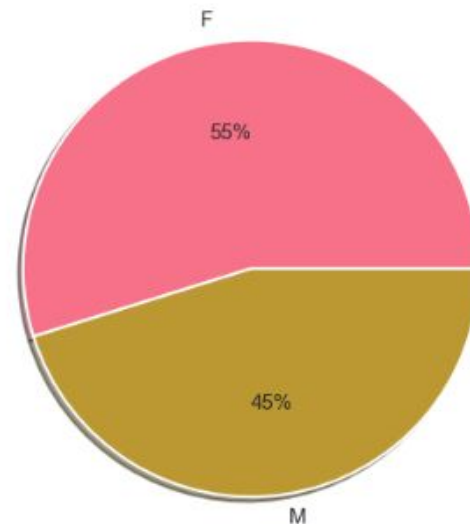
- Loan purpose
- Credit amount
- Annuity amount
- Application amount
- Goods price

# Gender comparison

Distribution of Gender on Non-defaulters



Distribution of Gender on Defaulters

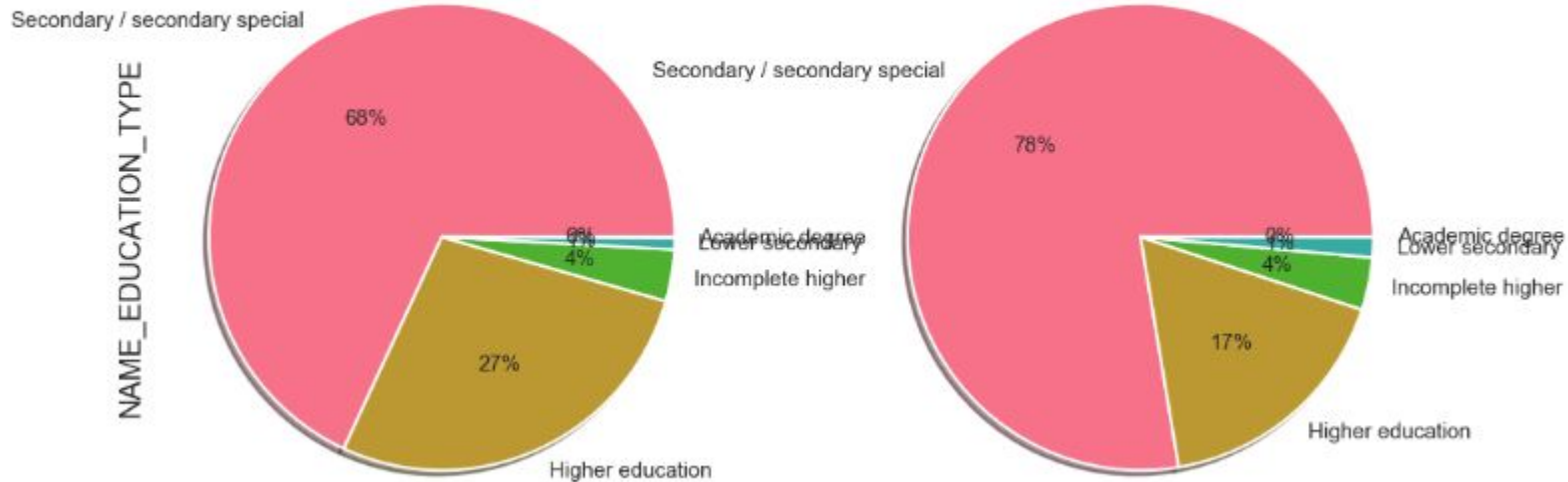


**Observation:** Males seem to have higher rate of default. Need to watch out for the same.

# Education Type

Distribution of Education type for Non-defaulters

Distribution of Education type for Defaulters

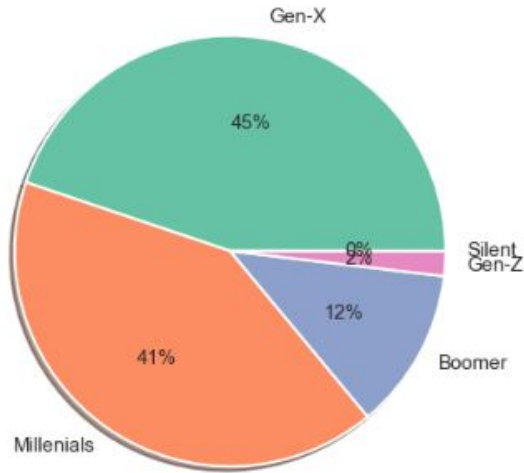


**Observation:** There is a negative correlation between default and level of education when we compare the data for 'Secondary' and 'Higher' education against default.

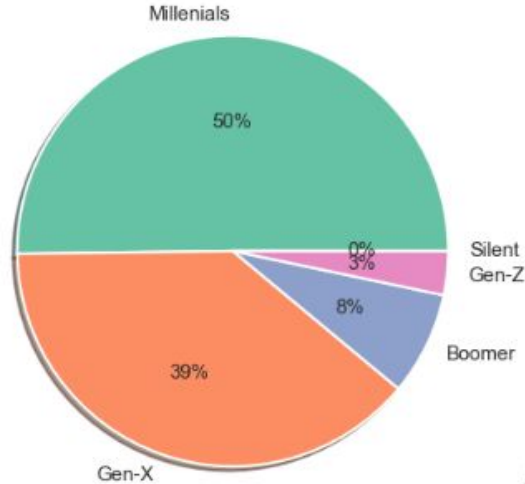
Need to watch out before lending to 'Secondary' Education

# Payers Age

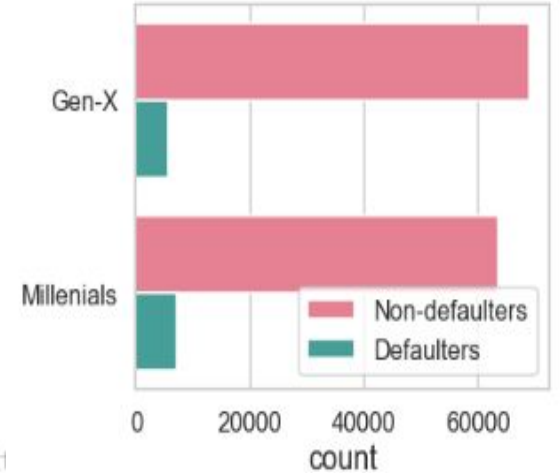
Distribution of AGE for Repayer



Distribution of AGE type for Defaulters



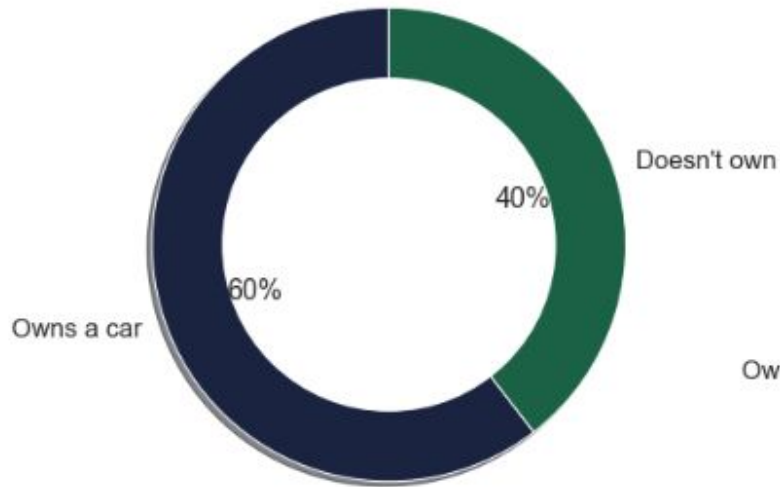
Distribution of payers by age group



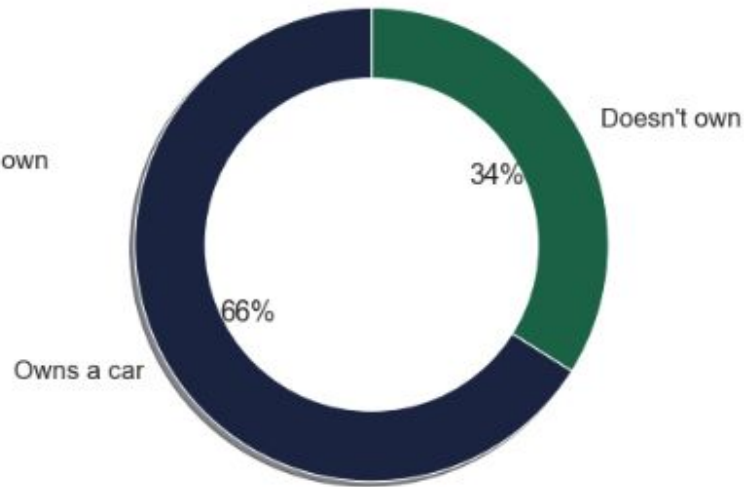
**Observation:** Millennials, is one group that we need to be very careful while lending. Followed by Gen-X in some distance

# Car ownership

Non Defaulters



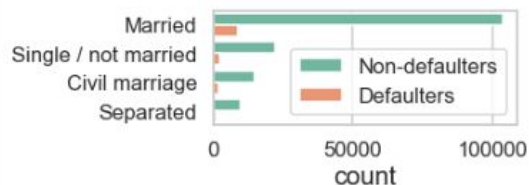
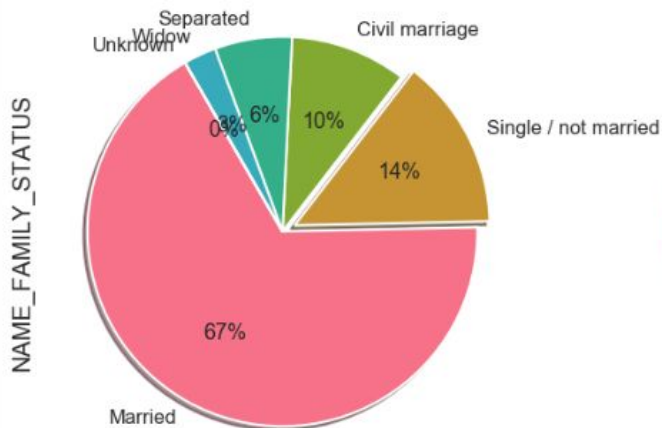
Defaulters



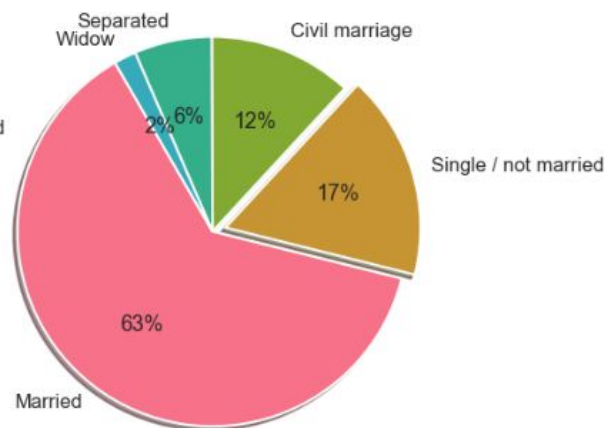
**Observation:** There is a higher possibility of default if the person owns a car.

# Family Status

Distribution of Family status for Repayers



Distribution of Family status for Defaulters

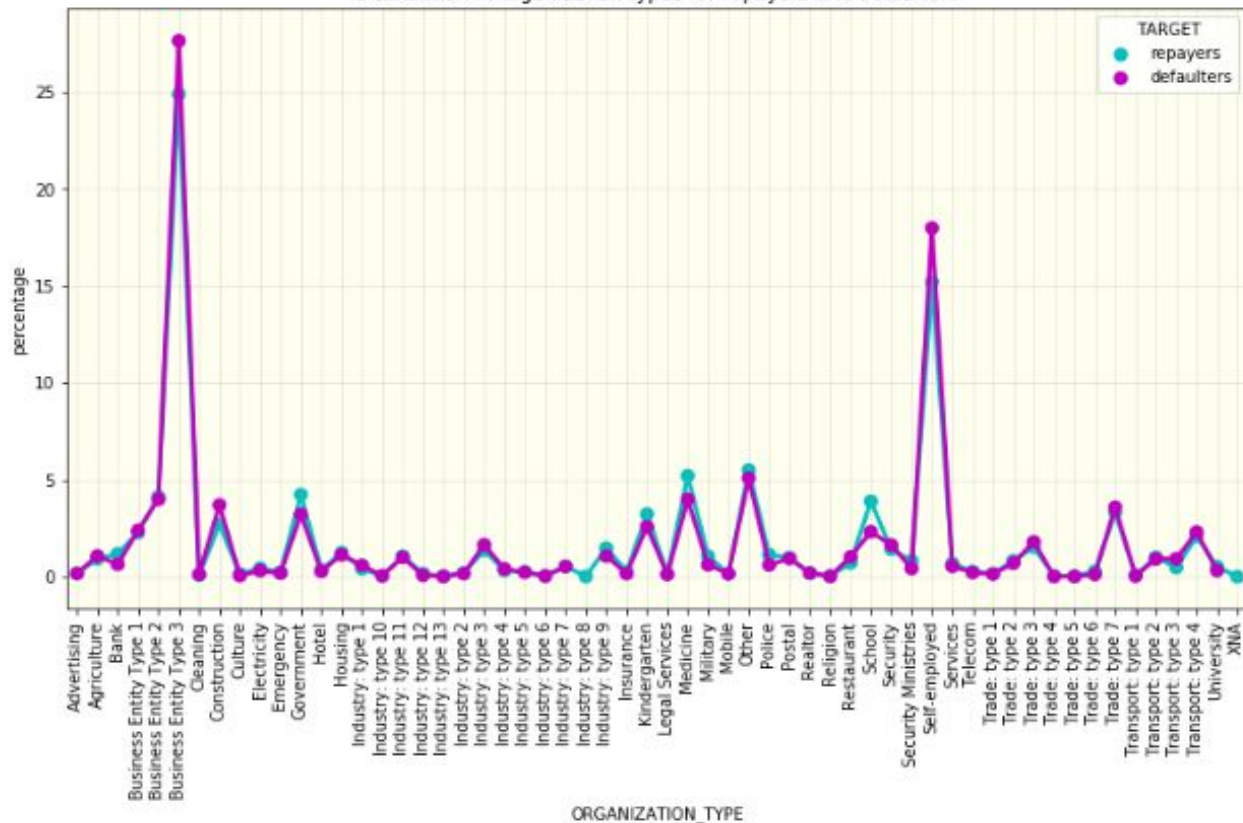


**Observation:** 'Married' individual has a lower Probability of default when compared with 'Single / not married'.



# Organization Type

Distribution in organization types for repayers and defaulters



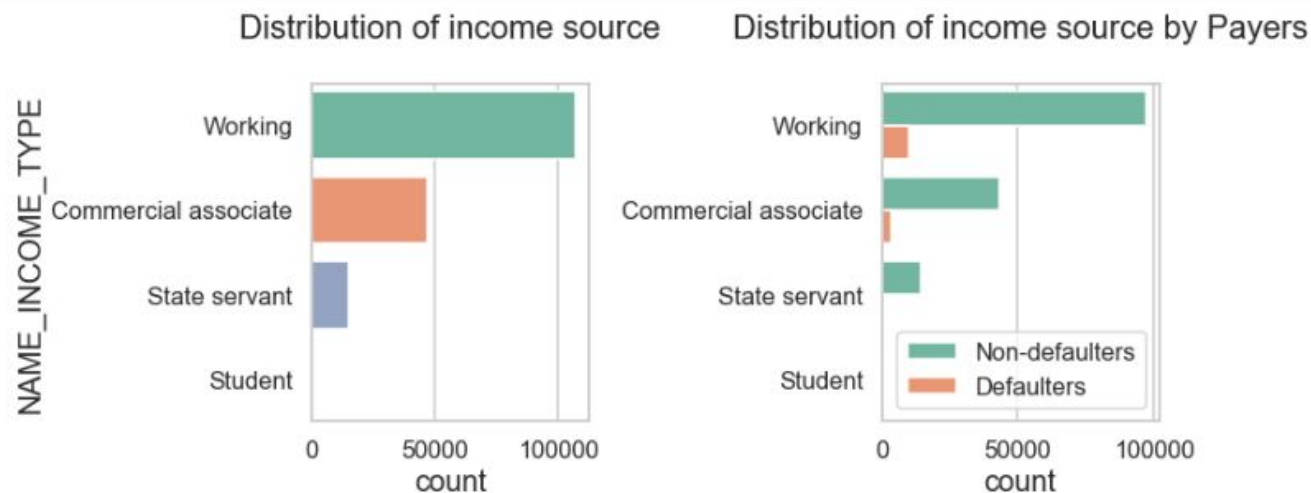
## Observation:

Organizations such as

- ❖ Business Entity Type 3,
- ❖ Construction,
- ❖ Self-employed

have higher percentage of defaulters.

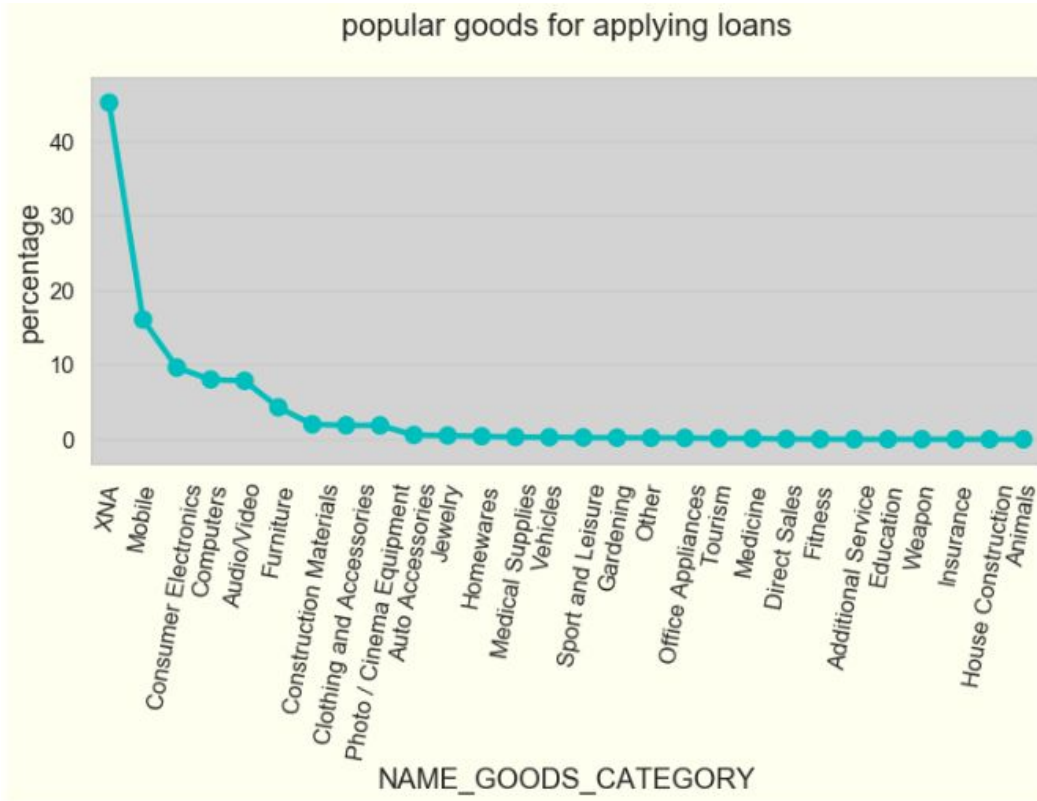
# Income Source



## Observation:

Working professional default more than the students or a commercial associate/state servant

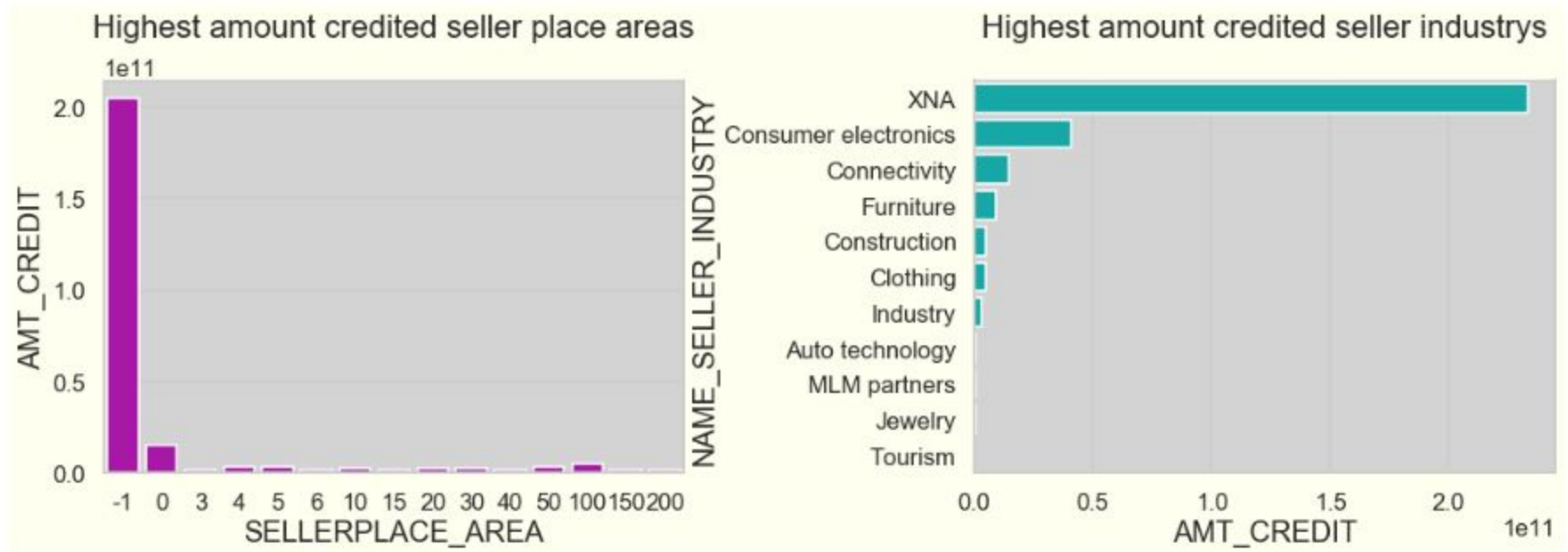
# Goods Price



## Observation:

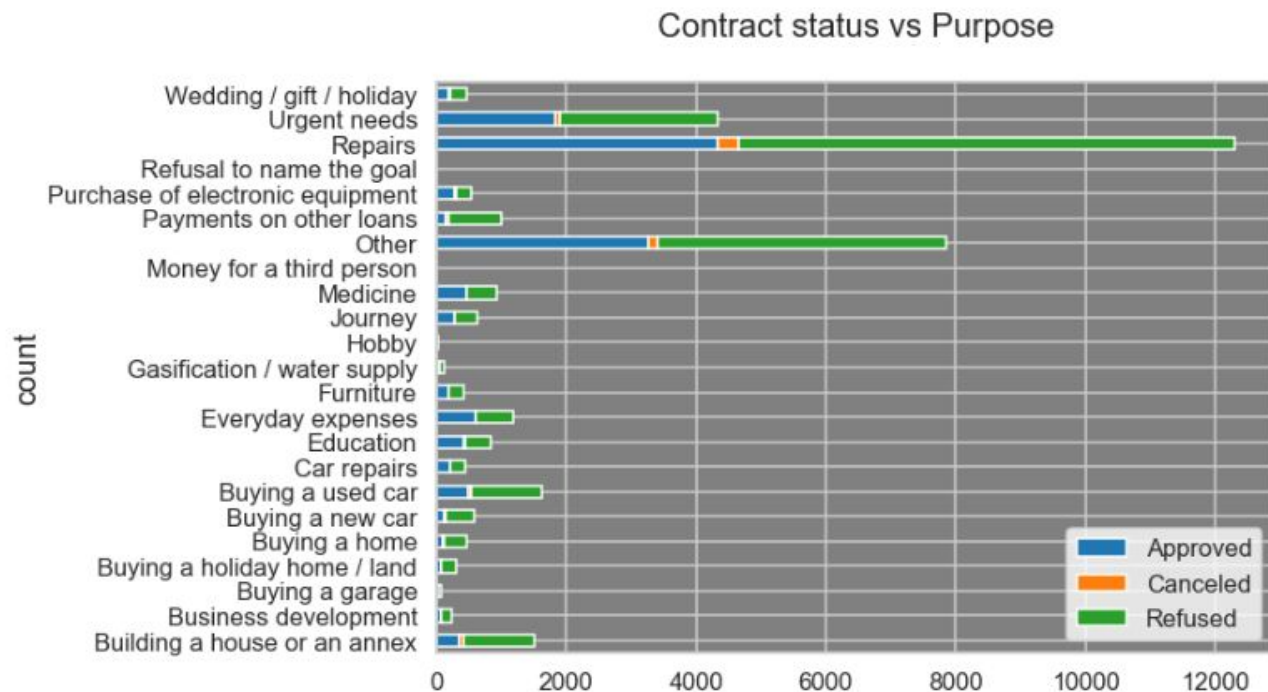
People tend to take more loans for  
Mobiles and electronics.

# Credit Amount



More loan is rolled out for electronics industry

# Loan purpose



Repairs has the highest number of approvals and refusals followed by other category

# Summary

Safest loan bet:

1. Gen-Z
2. Pursued higher education
3. Belonging from government, school, or medicine industry
4. State servant
5. Separated

Worst loan bet:

1. Millennials
2. Pursued just secondary education
3. Belonging to Business Entity Type 3, construction, or self-employed