



THE ALL ANALYSIS

*For Exploratory Data Analysis - Loan
Defaulter Segmentation.py*

-IMRAT RAM

- Most of the customers have taken cash loan
- Customers who have taken cash loans are less likely to default
- **CODE_GENDER :**
 - most of the loans have been taken by female
 - default rate for females are just ~7% which is safer and lesser than male
- **NAME_TYPE_SUITE:**
 1. Unacompanied people had tanke most of the loans and the default rate is ~8.5% which is still okay
- **NAME_INCOME_TYPE :**
 1. the safest segments are working, commercial associates and pensioners.

- **NAME_EDUCATION_TYPE:**

1. Higher education is the safest segment to give the loan with a default rate of less than 5%

- **NAME_FAMILY_STATUS:**

1. Married people are safe to target, default rate is 8%

- **NAME_HOUSING_TYPE:**

1. People having house/ apartment are safe to give the loan with default rate of ~8%

- **OCCUPATION_TYPE:**

1. Low-Skill Laborers and drivers are highest defaulters
2. Accountants are less defaulters
3. Core staff, Managers and Laborers are safer to target with a default rate of ≤ 7.5 to 10%

- **ORGANIZATION_TYPE:**

1. Transport type 3 highest defaulter
2. Others, Business Entity Type 3, Self Employed are good to go with default rate around 10 %

- **Uni-variate numeric variables analysis:**

1. Most of the loans were given for the goods price ranging between 0 to 1 ml
2. Most of the loans were given for the credit amount of 0 to 1 ml
3. Most of the customers are paying annuity of 0 to 50 K
4. Mostly the customers have income between 0 to 1 ml

- **bivariate analysis:**

1. AMT_CREDIT and AMT_GOODS_PRICE are linearly correlated, if the AMT_CREDIT increases the defaulters are decreasing
2. People having income less than or equals to 1 ml, are more like to take loans out of which who are taking loan of less than 1.5 million, could turn out to be defaulters. we can target income below 1 million and loan amount greater than 1.5 million

1. People having children 1 to less than 5 are safer to give the loan
2. People who can pay the annuity of 100K are more like to get the loan and that's upto less than 2ml (safer segment)

- **Analysis on merged data:**

1. For the repairing purpose customers had applied mostly prev. and the same purpose has most number of cancelations
2. Most of the app. which were prev. either canceled or refused 80-90% of them are repayer in the current data
3. Offers which were unused prev. now have maximum number of defaulters despite of having high income band customers

- **Final Conclusion/Insights**

- **Bank should target the customers**

1. Having low income i.e. below 1 ml
2. Working in Others, Business Entity Type 3, Self Employed org. type
3. Working as Accountants, Core staff, Managers and Laborers
4. Having house/apartment and are married and having children not more than 5
5. Highly educated
6. Preferably female
7. Unacompanied people can be safer - default rate is ~8.5%

- **Amount segment recommended:**

1. The credit amount should not be more than 1 ml
2. annuity can be made of 50K (depending on the eligibility)
3. Income bracket could be below 1 ml
4. 80-90% of the customer who were prev. canceled/refused, are repayers. Bank can do the analysis and can consider to give loan to these segments

Precautions:

1. org. Transport type 3 should be avoided
2. Low-Skill Laboreres and drivers should be avoided
3. offers prev. unused and high income customer should be avoided