Credit Card Defaultee Analysis

ISOM3360 Group 23: Project Idea Report

LAM, Ho Chit
SID: 20607878
hclamao@connect.ust.hk

LEE, Ho Wan Owen
SID: 20604852
hwolee@connect.ust.hk

LEE, Wai Chung
SID: 20702733
wcleeaj@connect.ust.hk

1. Business Problem & Goal

Credit cards have been extremely vital to modern societies, due to its convenience of carrying out trivial to medium-sized transactions with a swipe of the card. However, due to its nature of "crediting" to cardholders, there have been instances where cardholders (defaultees) fail to repay their debt.

While card issuers providing credit services can create liquidity and boost the overall economic welfare of the society, issuers also simultaneously bear enormous credit default risk. To solve this pain point, potential measures may include reducing the loan size for high-risk customers or performing more meticulous due diligence on the client.

Below are the goals of this project:

- Help credit card issuers identify credit card defaultees
- Take extra precautions on people that are risky of delayed credit repayment

2. Data Source

After rigorous selection, adhering to both the assigned criteria as well as an internal guideline to ascertain data quality, our group has decided to adopt the credit card approval/defaultee dataset, retrieved from https://www.kaggle.com/mishra5001/credit-card .

3. Possible Data Features

Our selected dataset consists of 308K examples and 112 columns. At first glance, the following variables could potentially be useful: FLAG_OWN_CAR, FLAG_OWN_REALTY, CNT_CHILDREN, AMT_INCOME_TOTAL, AMT_CREDIT, AMT_GOODS_PRICE, NAME_EDUCATION_TYPE, DAYS_BIRTH and DAYS_REGISTRATION.

4. Project Timetable

The following details a reference project timetable:

- Week 5:
  - Formulate problem
  - Search for possible datasets online and formulate problem
  - Complete project idea report
- Week 6:
  - Preprocess data
  - Evaluate data attributes
  - Drop data columns with low relevance and poor data quality
  - Form and evaluate model
- Week 7:
  - Model checking and improvement
- Week 8:
  - Complete project progress report
- Week 9:
  - Complete Project Final Report