

Lending Club Case Study

Sairam Chennapragada

Background

- The Lending company doesn't want give loans to defaulters or
- doesn't want to lose business by rejecting loans to non-defaulters. So, how to identify the loan defaulters

Problem Statement

- Understand how consumer attributes and loan attributes influence the tendency of default.

Dataset

- The dataset used is the loans dataset containing 111 features including the loan status with 39717 data points

Results from Univariate Analysis

- There is a higher chance of defaulting for 36 months term
- There is a higher chance of defaulting for grades B,C,D. Especially B5,C1,C2,D2 have a high count of Charged off loans
- emp_length with 10+ years are most likely to be Charged Off
- home_ownership is RENT for many Charged Off loans
- Most of the Charged Off loans are not verified
- Most of the loans issued in 2011 are defaulters, especially in the months of november and December
- Most of the Charged Off loans have an int_rate from 9%-13% , 13-17%

Results from Univariate Analysis

- Charged Off loans have an open_acc in the range of 2-10
- Charged Off loans have an revol_util in the range of 60-80 and 80-100
- Charged Off loans have an total_acc in the range of 2-20 and 20-37
- Charged Off loans have an annual_inc in the range of 31k-58k and 58k-85k
- Charged Off loans have an installment in the range of 145-274
- Charged Off loans have an funded_amt_inv in the range of 0k-5k and 5k-10k
- Charged Off loans have an loan_amount in the range of 0k-5k and 5k-10k
- Charged Off loans have an dti in the range of 12-18

Results from Bivariate Analysis

- Charged off loans are for the loans taken for the purpose of home_improvement
- The Charged Off loans in the low income group i.e, 3k-31k are approximately 5k
- The Charged Off loans in the high income group i.e, 112k-140k are approximately 17.5k
- The Charged Off loans amounts to more than 58k in the 60 months term category. similarly amounts to almost 50k in the 36 months category.
- The Charged Off loans are having an installment of around 500 in the high income group i.e., 112k-140k. Similarly the Charged Off loans are having an installment of around 150 for the low income group i.e., 3k-31k
- The Charged Off loans are highest in the Grade G

Results from Bivariate Analysis

- As the annual income is higher and the emp_length is higher there is a higher chance of defaulting
- Charged Off loans have a dti in the range of 12-14 for the low income group i.e., 3k-31k. Similarly the dti is in the range of 12-14 for the high income group i.e., 112k-140k
- The Charged Off Loan amount is in the range of 12k-14k for the borrowers with home_ownership as OTHER.
- The Charged Off Loans are very high for the borrowers with home_ownership as MORTGAGE

Thank you