

LENDING CLUB CASE STUDY

Karthik Subramanian

PROBLEM STATEMENT

Lending Club is a marketplace for personal loans that matches borrowers who are seeking a loan with investors looking to lend money and make a return.

The company wants to understand the driving factors (or driver variables) behind loan default, i.e. the variables which are strong indicators of default. The company can utilize this knowledge for its portfolio and risk assessment.

SOLUTION

UNDERSTANDING DATA

Check the data visually to understand how is the data format and check if there is an obvious issues with csv files provided

DATA CLEANING

In this step we will check if there are any missing values, redundant column etc. We will convert the csv data into a usable format before analyzing any further

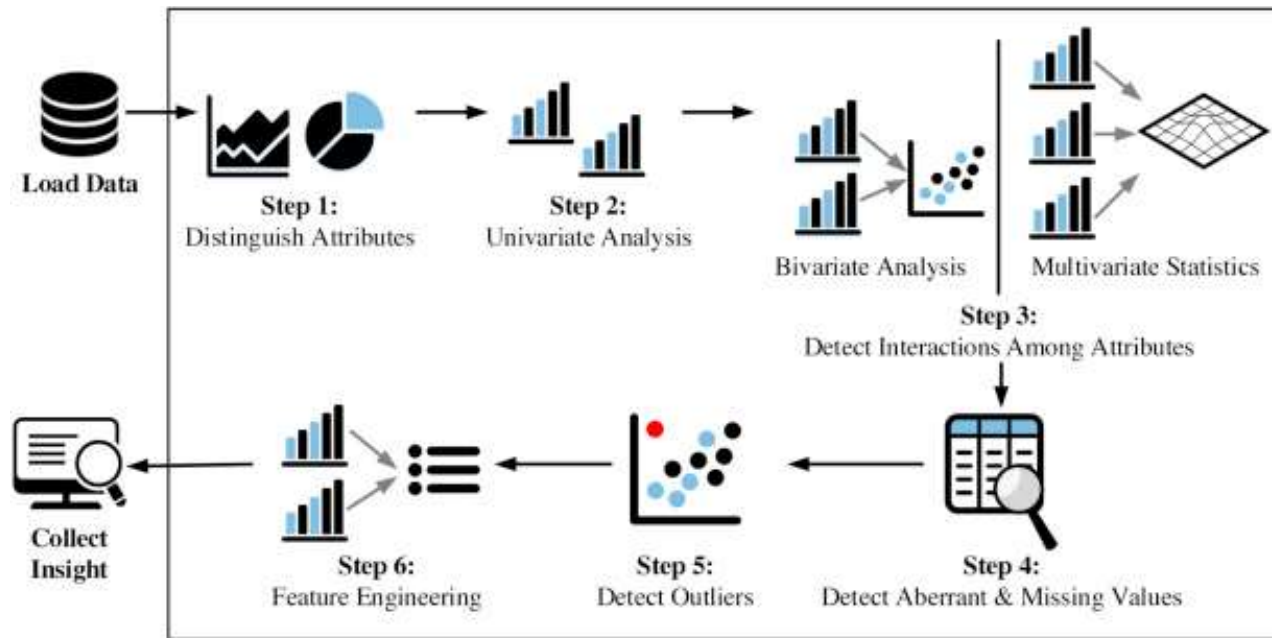
DATA ANALYSIS

This is the key step where data is comprehensively analyzed using Univariate, Segmented Univariate, Bivariate analysis is done

RECOMMENDATIONS

Based on the data analysis, a complete list of observations are recorded and submitted to the investors.

ANALYSIS OF LOAN DATA



OBSERVATIONS

Default occurs mostly when

- Applicants having house_ownership as 'RENT'
- Applicants who use the loan to clear other debts
- Applicants who receive interest at the rate of 13-17%
- Applicants who have an income of range 31201 - 58402
- Term of 36 months
- When the loan status is Not verified
- When the no of enquiries in last 6 months is 0
- When the number of derogatory public records is 0
- When the purpose is 'debt_consolidation'
- Grade is 'B'
- And a total grade of 'B5' level.

OBSERVATIONS...

Default occurs mostly when

- Applicants taking loan for 'home improvement' and have income of 60k -70k
- Applicants whose home ownership is 'MORTGAGE and have income of 60-70k
- Applicants who receive interest at the rate of 21-24% and have an income of 70k-80k
- Applicants who have taken a loan in the range 30k - 35k and are charged interest rate of 15-17.5 %
- Applicants who have taken a loan for small business and the loan amount is greater than 14k
- Applicants whose home ownership is 'MORTGAGE and have loan of 14-16k
- When grade is F and loan amount is between 15k-20k
- When employment length is 10yrs and loan amount is 12k-14k
- When the loan is verified and loan amount is above 16k
- For grade G and interest rate above 20%