



Lending Club Case Study

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Business Case Statement

Consumer Finance Company (CFC) specializes in lending various types of loans to urban customers. When the company receives a loan application, the company has to make a decision for loan approval based on the applicant's profile.

Borrowers who default cause the largest amount of loss to the lenders. One has to identify these risky loan applications, then such loans can be reduced by cutting down the credit loss. The company wants to understand the driving factors behind the loan default.

Data Sourcing

Data is sourced from Loan Dataset.csv file –

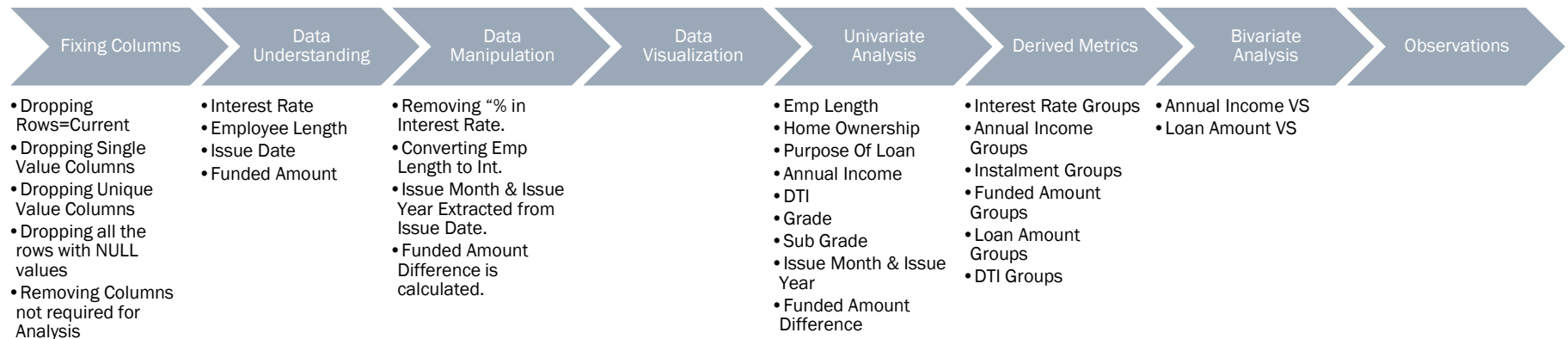
https://github.com/GopalS1208/LendingClubCaseStudy/blob/main/lcc_loan.csv

Data Dictionary –

https://github.com/GopalS1208/LendingClubCaseStudy/blob/main/Data_Dictionary.xlsx

Data Cleaning & Understanding

- Dataset contains applicants past loan information and whether they are “defaulted” or not.
- Currently data set has “Fully Paid” (If Fully Paid)/”Charged Off” (If Defaulted)/”Current” (If existing loan).



Observations - 1

More Probability of default when –

The above analysis with respect to "Charged-OFF" loans for each variable suggests the following. There is a more probability of defaulting when:

- Applicants who are purchasing loans by being in "RENT" house.
- Applicants who are having employment length period of ≥ 10 years (Basically 10+ years, remember that we have imputed all the 10+ years as 10 years).
- Applicants who take loan to consolidate & clear off Other Loans (Debt Consolidation, & then Credit Card).
- Applicants who have an income of range around 31K-51K (56K is 50 percentile).
- Applicants who have dti is between 12-18 (13.58 is 50 percentile).
- Applicants who are in Grade-'B'. And specifically Sub Grade - 'B5' level.
- Applicants whose loan is sanctioned for interest rate - 13-17%.
- Applicants whose Funding amount by Investor is in range of 5K-10K.
- Applicants whose Loan amount by Investor is in range of 5K-10K.
- Applicants whose installments are between 145-274.

Observations - 2

- For all the Interest Rates, Home Ownership categories, the probability of more Loan Amounts getting "Charged Off" is more than "Fully Paid".
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- In Debt Consolidation, Small Business & Credit Card, probability of Loan Amounts getting "Charged Off" is more.
 - For all the Employee Lengths the probability of Loan amounts getting "Charged Off" is less than "Fully Paid".
 - Irrespective of Verification Status, the Loan amount gets "Charged Off" when compared to "Fully Paid".
 - For Grade A & G, "Fully Paid" Loan Amounts are more than "Charged Off" Loan Amounts. For Other Grades (B, C, D, E, F) it is otherwise.
 - In all the months & years, the "Charged Off" Loan Amounts are more than "Fully Paid".