Lending Club Case Study

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Business Understanding

Our **finance company** specialises 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. Two **types of risks** are associated with the bank's decision:

- If the applicant is **likely to repay the loan**, then not approving the loan results in a **loss of business** to the company
- If the applicant is **not likely to repay the loan,** i.e. he/she is likely to default, then approving the loan may lead to a **financial loss** for the company

Strategy to solve the problem

1. Load Dataset using panda library
2. Data Exploration
3. Univariate Analysis
4. Bivariate Analysis
5. Outlier Analysis
6. MultiVariate Analysis
7. Conclusion

Analysis

Load Data using panda library:-

- We will load the loan.csv file in our python project by using panda library.

Data Exploration:-

- Looking at the data and finding useful variables.
- Removing all the columns with empty value.
- Removing data of customers whose loan is in current status.
- Removing the columns who has less impact on our analysis
- Changing data types of variables.
- Look for missing value in dataset
- Fill in missing values.

Analysis

Univariate Analysis:-

- Categorical variables
- Discrete Number variables
- Continuous Number variables

Analysis

Bivariate Analysis:-

- Analysis with respect to loan_status and other columns
- Analysis with respect to home_ownership and other columns
- Analysis with respect to verification_statusand other columns

Outlier Analysis:-

- Applied outlier analysis and its removal

Analysis

MultiVariate Analysis:-

- Checking correlation between all the selected columns
- Finding required variables based on there correlation in MultiVariate Analysis.

Conclusion

Following are the columns that can help our predictive model to identify the loans that may become default.

- annual_inc
- loan_amnt
- int_rate
- funded_amnt_inv
- term
- grade
- purpose
- loan_status

Thank You