

SMART LENDER - APPLICANT CREDIBILITY PREDICTION FOR LOAN APPROVAL

PROBLEM STATEMENT :

Dream Housing Finance company deals in all home loans. They have a presence across all urban, semi-urban and rural areas. Customers first apply for a home loan after that company validates the customer's eligibility for a loan. The company wants to automate the loan eligibility process (real-time) based on customer detail provided while filling out the online application form. These details are Gender, Marital Status, Education, Number of Dependents, Income, Loan Amount, Credit History, and others. To automate this process, they have given a problem to identify the customer segments, that are eligible for loan amounts so that they can specifically target these customers

One of the most important factors which affect our country's economy and financial condition is the credit system governed by the banks. The process of bank credit risk evaluation is recognized at banks across the globe. "As we know credit risk evaluation is very crucial, there is a variety of techniques are used for risk level calculation. In addition, credit risk is one of the main functions of the banking community.

The prediction of credit defaulters is one of the difficult tasks for any bank. But by forecasting the loan defaulters, the banks definitely may reduce their loss by reducing their non-profit assets, so that recovery of approved loans can take place without any loss and it can play as the contributing parameter of the bank statement. This makes the study of this loan approval prediction important. Machine Learning techniques are very crucial and useful in the prediction of these types of data.

It is a classification problem where we have to predict whether a loan would be approved or not. In these kinds of problems, we have to predict discrete values based on a given set of independent variables (s). Classification can be of two types:

- **Binary Classification:-** In this, we have to predict either of the two given classes. For example: classifying the “gender” as male or female, predicting the “result” as to win or loss, etc.
- **MultiClass Classification:-** Here we have to classify the data into three or more classes. For example: classifying a “movie’s genre” as comedy, action, or romantic, classifying “fruits” like oranges, apples, pears, etc.

Loan prediction is a very common real-life problem that each retail bank faces at least once in its lifetime. If done correctly, it can save a lot of man-hours at the end of a retail bank.

Although this course is specifically built to give you a walkthrough of the Loan Prediction problem, you can always refer to the content to get a comprehensive overview to solve a classification problem.

Who does the problem affect?	Applicants who apply loan in bank
What are the boundaries of the problem?	Applicants who apply loan in bank they faces eligibility related issues.
What is the issue?	Applicants don’t know what are eligibility criteria to a particular loan.
When does the issue occur?	While applicants trying to apply for loan with required eligibility

Where does the issue occur?	This issue occurs among applicant who don't have any idea "What are the eligibility criteria to apply loan"
Why is it important that we fix the problem?	So that applicants and also bank don't waste their time in applying a particular loan which they are not eligible.
What solution to solve this issue?	A web application to predict whether he/she is eligible for the loan by checking the details of the applicants with eligibility criteria.
What methodology use to solve this issue?	Machine Learning algorithms are used to predict the eligibility with the help of past data's and say whether he/she is eligible or not.

