SMART LENDER - APPLICANT CREDIBILITY PREDICTION FOR LOAN APPROVAL

PROBLEM STATEMENT

R3P Housing Finance company deals in all kinds of home loans. They have a presence across all urban, semi-urban and rural areas. The customer first applies for a home loan and after that, the company validates the customer eligibility for the loan. Company wants to automate the loan eligibility process (real time) based on customer detail provided while filling 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 customers segments, those are eligible for loan amount so that they can specifically target these customers. Here they have provided a partial data set.

ABSTRACT

Today a lot of people/companies are applying for bank loans. The core business part of every bank is the distribution of loans. The main objective of the banking sector is to give their assets in safe hands. But the banks or the financial companies take a very long time for the verification and validation process and even after going through such a regress process there is no surety that whether the applicant chosen is deserving or not. To solve this problem, we have developed a system in which we can predict whether the applicant chosen will be a deserving applicant for approving the loan or not. The system predicts on the basis of the model that has been trained using machine learning algorithms. We have even compared the accuracy of different machine learning algorithms. We got a percentage of accuracy ranging from 75-85% but the best accuracy we got was from Logistic Regression i.e., 88.70% The system includes a user interface web application where the user can enter the details required for the model to predict. The drawback of this model is that it takes into consideration many attributes but in real life sometimes the loan application can also be approved on a single strong attribute, which will not be possible using this system.