PREDICTING PERSONAL LOAN APPROVAL USING MACHINE LEARNING

MILESTONE

Milestone 1: Define Problem / Problem Understanding

Activity 1: Specify the business problem

In our banking system, banks have many products to sell but main source of income of any banks is on its credit line. So they can earn from interest of those loans which they credits. A bank's profit or a loss dependsto a large extent on loansi.e. whether the customers are paying back the loan or defaulting. By predicting the loan defaulters, the bank can reduce its Non-performing Assets. This makes the study of this phenomenon very important. Previous research in this era has shown that there are so many methods to study the problem of controlling loan default. But as the right predictions are very important for the maximization of profits, it is essential to study the nature of the different methods and their comparison

Activity 2: Business requirements

The business requirements for a machine learning model to predict personal loan approval include the ability to accurately predict loan approval based on applicant information, Minimise the number of false positives (approved loans that default) and false negatives (rejected loans that would havebeen successful).Provide an explanation for the model's decision, to comply with regulations and improve transparency.

Activity 3: Literature Survey

As the data is increasing daily due to digitization in the banking sector, people want to apply for loans through the internet. Machine Learning (ML), as a typical method for information investigation, has gotten more consideration increasingly. Individuals of various businesses are utilising ML calculations to take care of the issues dependent on their industry information. Banks are facing a significant problem in the approval of the loan. Daily there are so many applications that are challenging to manage by the bank employees, and also the chances of some mistakes are high.Most banks earn profit from the loan, but it is risky to choose deserving customers from the number of applications.There are various algorithms that have been used with varying levels of success. Logistic regression, decision tree, random forest, and neural networks have all been used and have been able to accurately predict loan defaults. Commonly used features in these studies include credit score, income, and employment history, sometimes also other features like age, occupation, and education level.

Activity 4: Social or Business Impact.

Social Impact:- Personal loans can stimulate economic growth by providing individuals with the funds they need to make major purchases, start businesses, or invest in their education.

Business Model/Impact:- Personal loan providers may charge fees for services such as loan origination, processing, and late payments.Advertising the brand awareness and marketing to reach out to potential borrowers to generate revenue.