PROJECT DESIGN PHASE-1

Proposed Solution

Problem Statement:

To predict the credit defaulters and to reduce the credit risk level for the Banking community.

Idea:

A Machine Learning algorithm is to be used in order to construct a robust and efficient software algorithm that classifies individuals based on different characteristics (Gender, Education, Number of Dependents, Marital Status, Employment, Credit Score, Loan Amount, and others) whether they would be eligible for a loan or not. Ensemble learning using multiple ML models is the solution that is going to be used. Ensemble modeling is the method of running two or more associated but different models and then combines the results into a single score to improve the accuracy of predictive data and data mining applications. In machine learning, ensemble methods use several algorithms to get better predictive performance. The different ML models that can be used are KNN, Decision tree, Random forest, Xgboost.

Novelty:

Ensemble modeling combine multiple facts to form a better result. This method of prediction has been shown to enhance forecasts when compared to a single model- based approach. The main benefits of Ensemble models are: Better Forecasting ,More Constant model , Better results , Reduces error. All these factors make the project unique.

Social Impact/Customer Satisfaction:

Now a day's bank plays a vital role in market economy. The success or failure of organization largely depends on the industry's ability to evaluate credit risk. Banks have many products to sell in our banking system, but their main source of income is their credit lines. As a result, they are likely to profit from the interest on the loans they make. Loans, or whether customers repay or default on their loans, affect a bank's profit or loss. The bank can minimize its Non-Performing Assets by forecasting loan defaulters. Because precise predictions are crucial for maximising earnings, it's essential to look at the different methodologies and compare them.

Business Model(Financial Benefit):

The bank can minimize its Non-Performing Assets by forecasting loan defaulter.Furthermore, automation of the loan approval processes opens new financing opportunities for small businesses and individuals. These previously suffered from limited access to credit, due to the high cost of human involvement in the process. Ultimately, automation of this process carries the potential to reduce human bias and corruption, making access to credit fairer for all.