Project Design
Phase-I

Team ID	PNT2022TMID00843
Project Name	Smart Lender-Applicant Credibility Prediction for Loan Approval
Maximum Marks	2 Marks

PROPOSED SOLUTION

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	People approach banks to fulfill their needs via bank loans. This practice has been increasing day by day across the globe, especially for business, education, marriage, agriculture, etc. But several people take advantage and misuse the facilities given by the banks, so banks realize that retaining customers and preventing fraud should be a strategic policy for healthy competition. One of the important factors affecting the economic and financial condition of our country is the credit system operated by banks. Bank credit risk evaluation is recognized in banks all over the world. There are various methods used for risk level calculation. As we know, credit risk assessment is very crucial. Every day, many people apply for loans, but not all of these applicants are trustworthy, and not all can be approved. We heard about many cases where people could not repay the loan amount, causing the bank to suffer a huge loss. So, the main source of income of any bank from its customers is their credit line. By using applied data science techniques and machine learning algorithms, we will check the credit score of the person and predict whether the loan is approved or not. This makes the loan approval process very easy.
2.	Idea / Solution description	• Customer property documentation must be submitted, and the customer must accept the bank's terms and conditions. • It will Provide captcha security.

		• Automatic interest rate and repayment schedule determination based on loan amount. • A machine learning algorithm will be utilized to build a reliable and effective • A computer programme that determines whether a person is qualified for a loan based on a variety of factors (including gender, education level, number of dependents, marital status, employment, credit score, loan amount, and others). • In order to increase the accuracy of predictive data and data mining applications, ensemble modeling is a technique that involves running two or more related but distinct models and then merging the results into a single score. • Ensemble approaches in machine learning combine a number of algorithms to improve prediction accuracy. • KNN, Decision tree, Random forest, and Xgboost are some examples of the various ML models that can be employed.. • Various effective machine learning methods can be used to forecast a customer's loan eligibility.
3.	Novelty / Uniqueness	. • Secures data by offering. The customer's information won't be given to a third party. • Instant Loan approval status. • The main benefits of Ensemble models are: Better Forecasting ,More Constant model , Better results ,Reduces error. All these factors make the project unique.
4.	Social Impact / Customer Satisfaction	• Nowadays bank play a vital role in the market economy. The success or failure of an 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.

		● The bank can minimize its Non-Performing Assets by forecasting loan defaulters. ● Secure storage of customer details. ● Easy and fast loan approval process for the customer.
5.	Business Model (Revenue Model)	● The bank can minimize its Non-Performing Assets by forecasting loan defaulters. ● Automation of the loan approval processes opens new financing opportunities for small businesses and individuals. ● They can charge the processing fees and service fees from customers. ● They can generate revenue by referencing.
6.	Scalability of the Solution	● Any type of customer can predict their loan approval without any discrimination. ● This system is easily scalable and efficient. ● It can be provided as software as a service. Both borrower and Lender can use this software.