

**Project Design Phase-I**  
**Proposed Solution**

Date	19 October 2022
Team ID	<b>PNT2022TMID21248</b>
Project Name	<b>Smart Lender - Applicant Credibility Prediction For Loan Approval</b>
Maximum Marks	2 Marks

**Proposed Solution Template:**

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	<p>A bank is a financial institution licensed to receive deposits and make loans needs a way to verify and trust the customer details and their documents for getting loan because they need a trustable customer with proper assets ,cash flow, documents and background who can repay the loan amount and interest on time.To reduce the manual work in the banking sector a model is designed to analyse whether an individual is fit enough to avail the loan or not. The main objective is to predict whether a new applicant granted the loan or not using machine learning models trained on the historical data set. The application approved or not approved depends upon the historical data of the candidate by the system. The historical data of candidates was used to build a machine learning model using different classification algorithms.</p>
2.	Idea / Solution description	<p>A Machine learning model must be developed to predict the credit defaulters. This model must be trained on previous Loan approval data and their manual credibility checked data. This can be then used to predict the applicant's credibility automatically.</p> <p>The customer only need to enter the details,the loan approval status is then predicted automatically and quickly.</p> <p>The property documents of the customer need to be submitted and the customer should agree to the terms and conditions of the bank.</p>

		<p>The loan approval will also depend on the CIBIL score of the customer.</p> <p>Automatic calculation of interest rate and repayment date based on loan amount.</p>
3.	Novelty / Uniqueness	<p>In this model, the previous manually checked credibility is taken as training data. Once trained it will take Data on Loan history, Financial status and stability, Family status and Co-applicant Credibility as inputs and will provide a Boolean value output for credibility.</p> <p>Provide customer ratings and reviews for understanding the customer.</p> <p>Adding digital signature of the customer on agreement of the terms and conditions.</p> <p>Provides data security &amp; the customer details will not be shared to the third party.</p> <p>Instant Loan approval status</p>
4.	Social Impact / Customer Satisfaction	<p>This model mostly predicts the credibility of a loan applicant accurately, automatically in less time compared to conventional manual checking. This socially helps banks to identify credible loan applicants thus also reduces the loss factor of the Lender (usually Bank). It also speeds up the loan sanctioning process, thus helping the applicants too.</p>

5.	Business Model (Revenue Model)	<p>Credit risk modelling is a method used by lenders to determine the risk involved in providing loan to a particular applicant by analyzing various attributes such as applicant income, co-applicant income, education status, credit history and employment status. Credit risk is the measure of creditworthiness of a borrower. By the help of past data trends for loans provided for the applicants, we can use machine learning algorithms to predict whether a particular applicant might be provided with a loan or not</p>
6.	Scalability of the Solution	<ul style="list-style-type: none"> <li>• It can be provided as software as a service. (webpage)</li> <li>• Both borrower and Lender can use this software.</li> <li>• Any type of customer can predict their loan approval without any discrimination.</li> <li>• Can use this software anytime and anywhere.</li> <li>• This system is easily scalable and efficient.</li> <li>• Easy and user friendly software for all.</li> </ul>