Ideation Phase

Ideation

Date	**19 September 2022**
Team Id	**PNT2022TMID46202**
Project Name	**Smart Lender-Applicant Credibility Prediction for Loan Approval**
Maximum Marks	**4 Marks**

Ideas for Smart Lender-Applicant Credibility Prediction for Loan Approval

Team Leader:

Problem Statement:

Banks are making major part of profits through loans. Loan approval is a very important process for banking organizations. It is very difficult to predict the possibility of payment of loan by the customers because there is an increasing rate of loan defaults and the banking authorities are finding it more difficult to correctly access loan requests and tackle the risks of people defaulting on loans.Machine Learning has eased today's world by developing these prediction models .

S.no	Ideas
1.	The system predicts the basis of model that has been trained using **Machine learning** Algorithml.We have even compared the accuracy of different Machine Learning Algorithm.Accurecy ranging from **75-85%.**But the best accuracy from Logistic Regression i.e 88.70%.
2.	**Machine Learning** technique is very usefull in predicting outcomes for large amount of data.In this project,four algorithms are used such as **"** Random Forest algorithm **",** **"** Decision Tree algorithm **","** Naive Bayes algorithm **",** **"** Logistic Regression algorithm **"** to pedict the loan approval of customers.This all algorithm useing the same dataset.
3.	In this project,We combine datasets from different source to form a generalized dataset and use four Machine Learning algorithms "**Random Forest algorithm, Decision Tree algorithm,Naive Bayes algorithm,Logistic Regression algorithm**".After that , we deploy the model using **Flask Framework**.
4.	A very importent approach in predictive analytics is used to study the problem of predicting Loan defaulters.The data is collected from the Kaggle for studying and prediction **Logistic Regression** models have been performed and the different measures of performance are computed.

Team Member 1:

Problem Statement:

The Bank Marketing data set at Kaggle is mostly used in predicting if bank clients will subscribe a long-term deposit. We believe that this data set could provide more useful information such as predicting whether a bank client could be approved for a loan. This is a critical choice that has to be made by decision makers at the bankMachine Learning has eased today's world by developing these prediction models..

S.no	Ideas
1.	**Decision Tree** algorithm in **Machine Learning** methods which efficiently performs both Classification and Regression task.It create Decision Tree.Using different data analytics tools loan prediction and there severity can be forecasted.
2.	In **Machine Learning** the Decision Tree algorithm the work proves that the R package is an efficient visualizing tool that applies data mining techniques.Using **R package** customer's data analysis can be done and depends on that bank can sanction or reject the Loan.
3.	A very importent approach in predictive analytics is used to study the problem of predicting Loan defaulters.The data is collected from the Kaggle for studying and prediction **Logistic Regression** models have been performed and the different measures of performance are computed.
4.	The system predicts the basis of model that has been trained using **Machine learning** Algorithml.We have even compared the accuracy of different Machine Learning Algorithm.But the best accuracy from Logistic Regression.

Team Member 2:

Problem Statement:

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 depends to a large extent on loans.Machine Learning has eased today's world by developing these prediction models.

S.no	Ideas
1.	In **Logistic Regression** this is a classification alorithm which uses a **logistic function** to predict binary outcome (True/False,0/1,Yes/No) given an independent variable.The aim of this model is to find a relationship between features and probability of particular outcome.
2.	Machine Learning algorithm we using the **XGBoost,**this algorithm only works with the quantitative variable.It is a gradient boosting algorithm which forms strong rules for the model by boosting weak learners to strong learner.
3.	In this project we will be using the fine techniques of **Machine Learning -Decision Tree** algorithm to build this prediction model for Loan assessment.It gives Accuracy in prediction and it is often used in industry for these models.
4.	In this project the major objective is to derive patterns from the dataset which is used for the Loan sanction process and create a model based on the patterns derived in the model.This model is developed by one of the Machine Learing algorithm.

Team Member 3:

Problem Statement:

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. One mistake can make a massive loss to a bank. Loan distribution is the primary business of almost every bank.Machine Learning has eased today's world by developing these prediction models.

S.no	Ideas
1.	In this project,We combine datasets from different source to form a generalized dataset and use four Machine Learning algorithms "**Random Forest algorithm, Decision Tree algorithm,Naive Bayes algorithm,Logistic Regression algorithm**".After that , we deploy the model using **Flask Framework**.
2.	In this project the major objective is to derive patterns from the dataset which is used for the Loan sanction process and create a model based on the patterns derived in the model.This model is developed by one of the **Machine Learing** algorithm.
3.	Machine Learning algorithm we using the XGBoost,this algorithm only works with the quantitative variable.It is a gradient boosting algorithm which forms strong rules for the model by boosting weak learners to strong learner.
4.	**Decision Tree** algorithm in **Machine Learning** methods which efficiently performs both Classification and Regression task.It create Decision Tree.Using different data analytics tools loan prediction and there severity can be forecasted.