VISHWKARMA INSTITUTE OF INFORMATION TECHNOLOGY, PUNE
DEPARTMENT OF COMPUTER ENGINEERING

PROJECT SYNOPSIS

1 Group Id

SY B-TECH (COMP) -2018-19
Division - C
Batch - C-1

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2 Project Title

Loan Prediction using Machine Learning.

3 Project Option

In-House

4 Internal Guide

Prof. Mrs. Disha Wankhede

5 Sponsorship and External Guide

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6 Technical Keywords (As per ACM Keywords)

1) Machine Learning
2) Python
3) Statistical Analysis
4) Scikit Learn

7 Problem Statement

<u>Loan Prediction using Machine Learning.</u>

Company wants to automate the loan eligibility process (real time) based on customer detail provided while filling online application form. These details are Gender, Marital Status, Education, Number of Dependents, Income, Loan Amount, Credit History and others. To automate this process, they have given a problem to identify the customers segments, those are eligible for loan amount so that they can specifically target these customers. Here they have provided a partial data set.
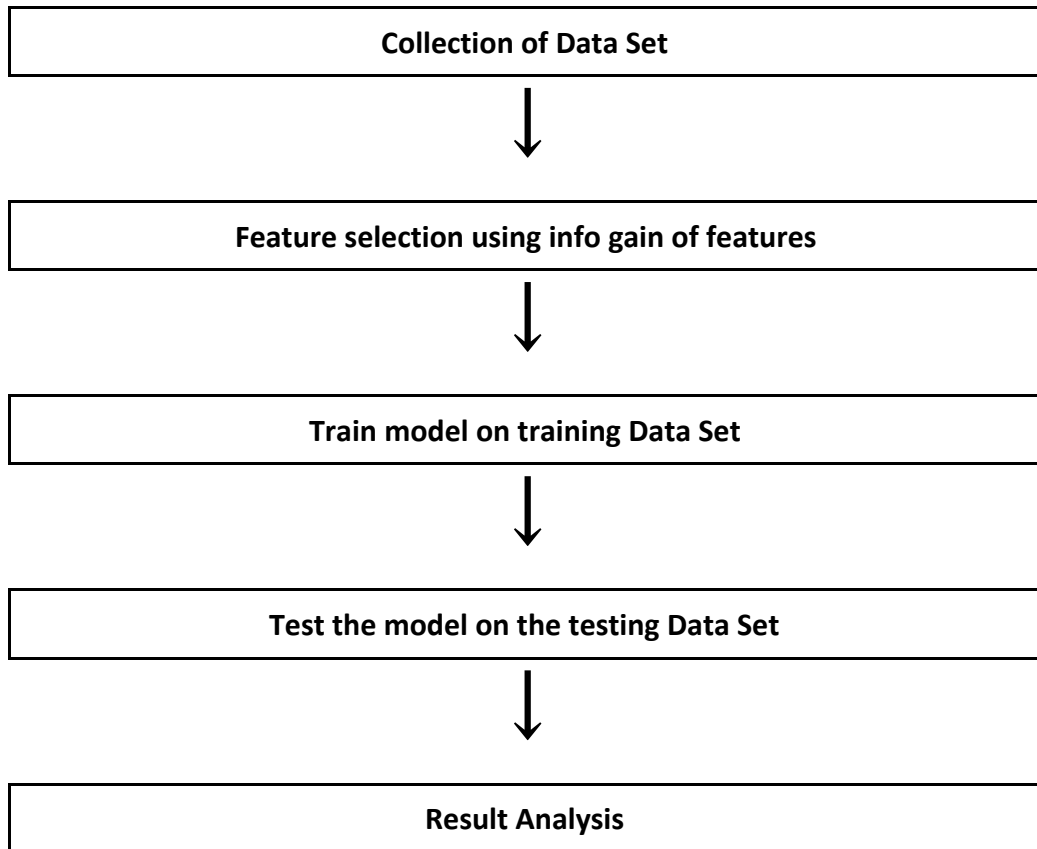
8 Abstract

The prime objective in banking environment is to invest their assets in safe hands. In the era of Loan Defaulters and Fraudsters like Vijay Mallya, Nirav Modi and many more there needs a proper identification of people who can repay their loan with interest. Today many banks/financial companies approves loan after a regress process of verification and validation but still there is no surety whether the chosen applicant is the deserving right applicant out of all applicants. Using data of people who paid or were defaulters in repaying the loan of a Bank we programmed a Machine Learning model which tells whether the person should be eligible for the loan or not.

9 Goals and Objectives

- Loan Prediction is very helpful for employee of banks as well as for the applicant also.
- The aim of this model is to provide quick, immediate and easy way to choose the deserving applicants. It can provide special advantages to the bank.
- The Loan Prediction System can automatically calculate the weight of each features taking part in loan processing and on new test data same features are processed with respect to their associated weight.
- Result against particular Loan Id can be send to various department of banks so that they can take appropriate action on application. This helps all others department to carried out other formalities.

10 Relevant mathematics associated with the Project

Loan Prediction Methodology :

Collection of Data Set

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Feature selection using info gain of features

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Train model on training Data Set

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Test the model on the testing Data Set

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Result Analysis

Machine Learning Methodologies :

We have used the Random Forest Classifier to predict whether a person is eligible to be sanctioned for loan or not. The accuracy of this Machine Learning model is approximately 78%.