LITERATURE SURVEY:

1.

TITLE:

Improving Information Quality in Loan Approval Processes for Fair Lending and Fair Pricing

AUTHOR:

M. Cary Collins

YEAR:

2013

ALGORITHM:

Decision Tree, Neural Network, Logistic Regression algorithm.

DESCRIPTION:

Bank data management on loan approval processes has great room for improvements of information quality and data problems prevention especially with regards to fair lending and fair pricing practices. They first reviewed briefly typical data collection protocols deployed at many financial institutions for loan approval and loan pricing. Federal regulations mandate portions of these data protocols. While discussing the data capture and analysis for fair lending, they illustrated some initial key steps currently needed for improving information quality to all parties involved.

CONS:

The disbenefit of retaining this information, the cost of disk storage, has diminished in importance in recent years

2.

TITLE:

Loan Credibility Prediction System Based on Decision Tree Algorithm

AUTHOR:

Sivasree M S, Rekha Sunny T

YEAR:

2015

ALGORITHM:

Decision tree algorithm.

DESCRIPTION:

Data mining techniques are becoming very popular nowadays because of the wide availability of huge quantity of data and the need for transforming such data into knowledge. Data mining techniques are implemented in various domains such as retail industry, biological data analysis, intrusion detection, telecommunication industry and other scientific applications. Techniques of data mining are also be used in the banking industry which help them compete in the market well equipped. In this paper, they introduced a prediction model for the bankers that will help them predict the credible customers who have applied for a loan. Decision Tree Algorithm is being applied to predict the attributes relevant for credibility. A prototype of the model has been described in this paper which can be used by the organizations for making the right decisions to approve or reject the loan request from the customers.

CONS:

The proposed model focuses on predicting the credibility of customers for loan repayment by analyzing their behavior. The input to the model is the customer behavior collected. The important factors like CIBIL score, customer debt-income ratio is not considered.

3.

TITLE:

Loan Approval Prediction based on Machine Learning Approach

AUTHOR:

Kumar Arun, Garg Ishan, Kaur Sanmeet

YEAR:

2016

ALGORITHMS USED:

Decision Trees (C5.0), Random Forest, Support Vector Machine, Linear Models, Neural Network (Nnet), Adaboost (ADB).

DESCRIPTION:

With the enhancement in the banking sector, lots of people apply for bank loans but the bank has its limited assets which it grants to only limited people, so finding out to whom the loan can be granted is a typical process for the banks. So, in this paper, they tried to reduce this risk by selecting the safe person so as to save lots of bank efforts and assets. It was done by mining the previous records of the people to whom the loan was granted before and on the basis of these records the machine was trained using the machine learning model which gave the most accurate result. The main goal of this paper is to predict if loan assignment to a specific person will be safe or not. This paper has into four sections (i) Collection of data (ii) Comparing the machine learning models on collected data (iii) Training the system on most promising model (iv) Testing the system.

CONS:

The main disadvantage of this model is that it emphasizes different weights to each factor but in real life sometime loan can be approved on the basis of single strong factor only, which is not possible through this system.

4.

TITLE:

Prediction of Modernized Loan Approval System Based on Machine Learning Approach

AUTHOR:

Vishal Singh, Ayushman Yadav, Rajat Awasthi

YEAR:

2021

ALGORITHMS USED:

XGBoost,
Random Forest,
Decision Tree.

DESCRIPTION:

The main objective of this paper is to predict whether a new applicant granted the loan or not using machine learning models trained on the historical data set. This model will characterize the behavior of customers on the basis of their record. These records are taken from the customers, and a data set is created. With the help of these data sets and training machine learning model, the customer's loan credibility is checked.

CONS:

In some situations, like client going through some disaster, here the algorithm cannot predict the appropriate result. This research paper can find out if the client is potential and will repay the loan.