1. INTRODUCTION

A monetary loan is when one or more persons, organizations, or other entities lend money to other people, organizations, or entities. The recipient (i.e., the borrower) incurs a debt for which he or she is generally responsible for paying interest until the loan is repaid along with the principal amount borrowed.

Nowadays, sanctioning of loans has become a significant function of the financial institutions/banking sector. Loans are also one of the significant sources of income for banks. Banks apply interests on loans which are then sanctioned to their customers (borrowers). While sanctioning a loan, the lender needs to have an assurance of earning their money back along with interest.

Thus, identifying the creditworthiness of an individual/an organization is highly important before sanctioning the loan. In this project, we focus mainly on monetary loans.The project aims to thoroughly verify the borrower and perform a background check based on several variables like gender, income, employment status, etc., to ensure whether the borrower is creditworthy and can be sanctioned the loan or not.

2. LITERATURE REVIEW

Regina Esi Turkson, Edward Yeallakuor Baagyere, Gideon Evans Wenya in their paper have delved into the various machine learning models that can be deployed in order to predict the loan eligibility of an applicant. They have employed 15 different learning algorithms on the data set in order to determine which algorithms are the best fit for studying bank credit data sets. Neural Networks, Discriminant Analysis, Naive Bayes, K-Nearest Neighbor, Linear Regression, Decision Trees, Ensemble Learning/method, Logistic Regression are some of the algorithms used. The experiment revealed that, apart from the Nearest Centroid and Gaussian Naive Bayes, the rest of the algorithms perform credibly well in terms of their accuracy and other performance evaluation metrics. Each of these algorithms achieved an accuracy rate between 76% to over 80%. Ashlesha Vaidya talks about the technical world shifting rapidly towards complete automation, the significance of automation, and the role of Artificial Intelligence and Machine Learning in it.

One of the most important functions to be considered during this shift to automation is the decision-making ability of machines. The author explains that decision taking can be attained by predictive and probabilistic approaches. These are developed by various Machine Learning algorithms. To further elaborate, the paper emphasizes using Logistic Regression as a Machine Learning model in order to actualize this predictive and probabilistic approach. Using loan eligibility prediction as an example, the author explains how logistic regression can be used to design a Machine Learning model that takes decisions based on several variables such as gender, income, employment status, dependents, etc. to give a final result as to whether the borrower in question is eligible for a loan or not.

Mohammad Ahmad Sheikh, Amit Kumar Goel, Tapas Kumar, through their paper have emphasized how the Logistic Regression Model is an efficient and effective way to predict the credit worthiness of a borrower. The authors use several variables such as business value, assets of the applicant, individual income of the applicant, etc. to be trained and tested in the Logistic Regression Model. They compared these results to the results given by the banks' systems which mainly focus on the account information (which shows the wealth of the applicant). After testing and comparisons, the authors notice that the Logistic Regression Model produced marginally better output due to the Research Article Volume 11 Issue No.07

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