LITERATURE SURVEY

SMART LENDER APPLICANT CREADIBILIY PREDICTION FOR LOAN APPROVAL

INTRODUCTION:

A prediction is a statement about what someone thinks will happen in the future. People make predictions all the time. Some are very serious and are based on scientific calculations, but many are just guesses. Prediction helps us in many ways to guess what will happen after some time or after a year or after ten years. Predictive analytics is a branch of advanced analytics that uses many techniques from data mining, statistics, modeling, machine learning, and artificial intelligence to analyze current data to make predictions.

Data Science's main advantage is its ability to analyse a set of data in order to draw out valuable information. Volume, Velocity, and Variety are the attributes used to describe the data collected by various organisations and businesses. Sometimes, the precision and accuracy of the data depend not only on how accurate the data is but also on when it is delivered. Data Science has the greatest potential in the financial industry. These data can

be quickly transformed into decision-making tools with added value by using efficient analysis techniques.

EXISTING SOLUTION:

1.“Adyan Nur Alfiyatin, Hilman Taufiq and their friends work on the house price prediction. They use regression analysis and Particle Swarm Optimization (PSO) to predict house price”.

2.One other similar work on the Mohamed El Mohadab, Belaid Bouikhalene and Said Safi to predict the rank for scientific research paper using supervised learning.

3. Arun, Garg Ishan and Kaur Sanmeet work on bank loan prediction on how to bank approve a loan. They proposed a model with the help of SVM and Neural networks like machine learning algorithms. This literature review helps us carry out our work and propose a reliable bank loan prediction model

4.Yamuna B et al, In this paper, they have used five different machine learning model to find the best fitting model. The five different models are linear regression, random forest, support vector machine, decision tree classifier, extreme gradient boost (XG Boost). Among all these machine learning algorithms XGBoost proved to be the best with accuracy 0.82

5.Chandan Soni et al, In this paper, a loan prediction system is presented that aids organizations in choosing whether to approve or deny loan requests from clients. The input variables such as loan ID, Marriage, loan amount, gender etc.., have been sent to train the model. The prediction is made using the Decision Tree Algorithm

6.Tanvir Anzum et al, In this paper, in order to predict fraudulent loan requests from clients, they have used six machine learning algorithms such as Decision tree, Support vector machine, Random forest, K closest neighbors, Ada-Boost, and Logistic regression. The K-Nearest Neighbors algorithm provided accuracy of 83.75%, which was superior to the other five machine learning technique

PROPOSED SOLUTION:

- Machine Learning techniques are very crucial and useful in the prediction of these types of data.
- Using classification algorithms such as Decision tree, Random forest, KNN, and xgboost. Train and test the data with these algorithms.
- From this best model is selected and saved in pkl format.
- Time period for loan sanctioning will be reduced.

- Whole process will be automated , so human error will be avoided.
- Eligible applicant will be sanctioned loan without any delay.

CONCLUSION:

Today's fast-growing IT industry needs to discover new technology and update the old technology that helps us to reduce human intervention and increase the efficiency of the work. This model is used for the banking system or anyone who wants to apply for a loan. It will be very helpful in bank management. From the analysis of the data, it is very clear that it reduces all the frauds done at the time of loan approval. Time is also very precious for everyone through this not only the bank but also the waiting time of the applicant will also reduce. As it seems, it will not deal with some special cases when only one parameter is enough for the decision, but it is quite efficient and reliable in some instant. In the future, this prediction module can be more improved and integrated. The system is prepared on the previous training data but in the future, it is possible to make changes to software, which can accept new testing data and should also take part in training data and predict accordingly.

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