

Loan Prediction using Machine Learning

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Abstract: *With the advancement in technology, there are so many enhancements in the banking sector also. The number of applications is increasing every day for loan approval. There are some bank policies that they have to consider while selecting an applicant for loan approval. Based on some parameters, the bank has to decide which one is best for approval. It is tough and risky to check out manually every person and then recommended for loan approval. In this work, we use a machine learning technique that will predict the person who is reliable for a loan, based on the previous record of the person whom the loan amount is accredited before. This work's primary objective is to predict whether the loan approval to a specific individual is safe or not.*

Keywords: Loan Dataset, Logistic Regression, Random Forest, Flask

Problem Statement: *A Company wants to automate the loan eligibility process (realtime) 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 dataset.*

REFERENCES

- [1] Kumar Arun, Garg Ishan, Kaur Sanmeer, Loan Approval Prediction based on Machine Learning Approach.
- [2] Adyan Nur Alfiyatin, Hilman Taufiq, Ruth Ema Febrita, Wayan Firdaus Mahmudy, 'Modeling House Price Prediction using Regression Analysis and Particle Swarm Optimization'. International Journal of Advanced Computer Science and Applications (Vol. 8, No. 10, 2017).
- [3] Mohamed El Mohadab, Belaid Bouikhalene, Said Safi, 'Predicting rank for scientific research papers using supervised learning' Applied Computing and Informatics 15 (2019) 182–190.
- [4] K. Hanumantha Rao, G. Srinivas, A. Damodhar, M. Vikas Krishna: Implementation of Anomaly Detection Technique Using Machine Learning Algorithms: Internatinal Journal of Computer Science and Telecommunications (Volume2, Issue3, June 2011).
- [5] J. R. Quinlan. Induction of Decision Tree. Machine Learning, Vol. 1, No. 1. pp. 81-106., 1086.
- [6] G. Arutjothi, C. Senthamarai: Prediction of loan status in commercial bank using machine learning classifier, International Conference on Intelligent Sustainable Systems (ICISS), 2017.
- [7] J.R. Quinlan. Induction of decision trees. Machine learning Springer, 1(1):81–106, 1086.
- [8] Vishnu Vardhan case study of bank loan prediction, <https://medium.com/@vishnumbaprof/case-study-loan-prediction-ac035f3ec9e4>.
- [9] S.S. Keerthi and E.G. Gilbert. Convergence of a generalize SMO algorithm for SVM classifier design. Machine Learning, Springer, 46(1):351–360, 2002.

[10] J.M. Chambers. Computational methods for data analysis. Applied Statistics, Wiley, 1(2):1–10, 1077