Loan Approval Prediction

The aim of this project is to predict whether the loan would be approved by the bank, by analyzing the applicant's information which includes loan amount, tenure, cibil score, education, assets and many other variables. Through this project, we can analyze the factors that affect the loan approval and also predict the loan approval status for a new applicant. Moreover, this will help in providing priority services to the customers who are more likely to get their loan approved.

About the dataset

The loan approval dataset is a collection of financial records and associated information used to determine the eligibility of individuals or organizations for obtaining loans from a lending institution. It includes various factors such as cibil score, income, employment status, loan term, loan amount, assets value, and loan status. This dataset is commonly used in machine learning and data analysis to develop models and algorithms that predict the likelihood of loan approval based on the given features.

Conclusion

From the exploratory data analysis, we can conclude that the following factors are important for the approval of loan:

- CIBIL Score: People with higher CIBIL score have higher chances of loan approval
- Number of Dependents: People with more number of dependents have less chances of loan approval
- Assets: People with more assets (including movable and immovable) have higher chances of loan approval
- Loan Amount and Tenure: People with higher loan amount and lower tenure have more chances of loan approval

Coming to the machine learning models, I have used Decision Tree Classifier and Random Forest Classifier. Both the models have given excellent results having accuracies - 91.4 % and 89.4 % repectively. But the decision tree classifier has yielded better results than the random forest classifier.