





Disclaimer: Homework made up for educational purposes.

Dream Housing Finance company deals in all kinds of home loans. They have presence across all urban, semi urban and rural areas. Customer first applies for home loan and after that company validates the customer eligibility for loan.

Company wants to automate the loan eligibility process (real time) 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 provided a dataset to identify the customers segments that are eligible for loan amount so that they can specifically target these customers.

Variable Description Loan ID Unique Loan ID Gender Male/ Female

Married Applicant married (Y/N) **Dependents** Number of dependents

Education Applicant Education (Graduate/ Under Graduate)

Self_Employed Self employed (Y/N) **ApplicantIncome** Applicant income CoapplicantIncome Coapplicant income

Loan amount in thousands LoanAmount Loan_Amount_Term Term of loan in months

Credit History credit history meets quidelines Property_Area Urban/ Semi Urban/ Rural Loan_Status (Target) Loan approved (Y/N)

Task: You are asked to predict loan eligibility using Ensemble Learning algorithms such as Voting, BaggingClassifier, GradientBoostingClassifier, XGBClassifier, lightgbm, CatBoostClassifier.

