Instant Home Loan Classifier

Lakshmi Chinta

GOALS

- Classify loan eligibility instantly
- Use supervised learning to analyze available data to classify one's eligibility for a home loan (Yes | No)

DATA SOURCES - OVERVIEW

- Dataset of Dream Housing Company
- Data was cleaned and preprocessed
- 614 records; 13 attributes
  - Loan_ID,Gender,Married,Education,Self_Employed,Loan_Amount_Term,LoanAmount,ApplicantIncome,CoApplicantIncome,Credit_History,Property_Area,Dependents,Loan_Status
  - 422 approved, 192 rejected

TOOLKIT

Flask
web development,
one drop at a time

matplotlib

scikit
learn

amazon
web services™

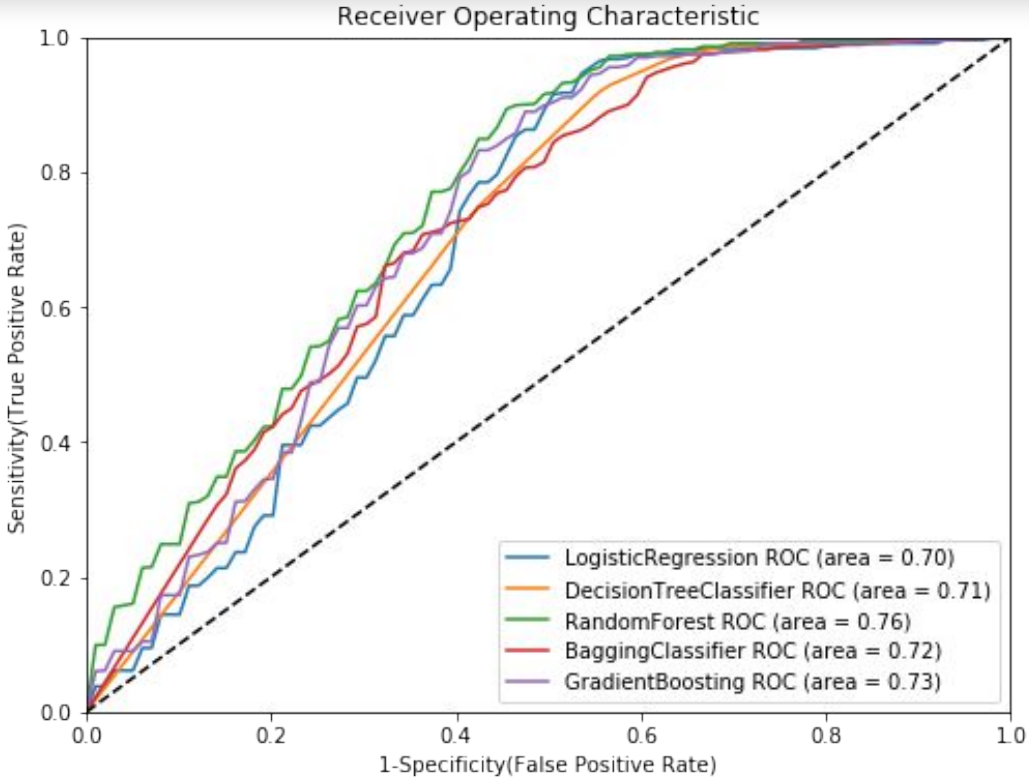
METHODOLOGY

- Build different models
- Evaluate the performance of models
- Pick a winner
- Deploy the model , model based UI on AWS

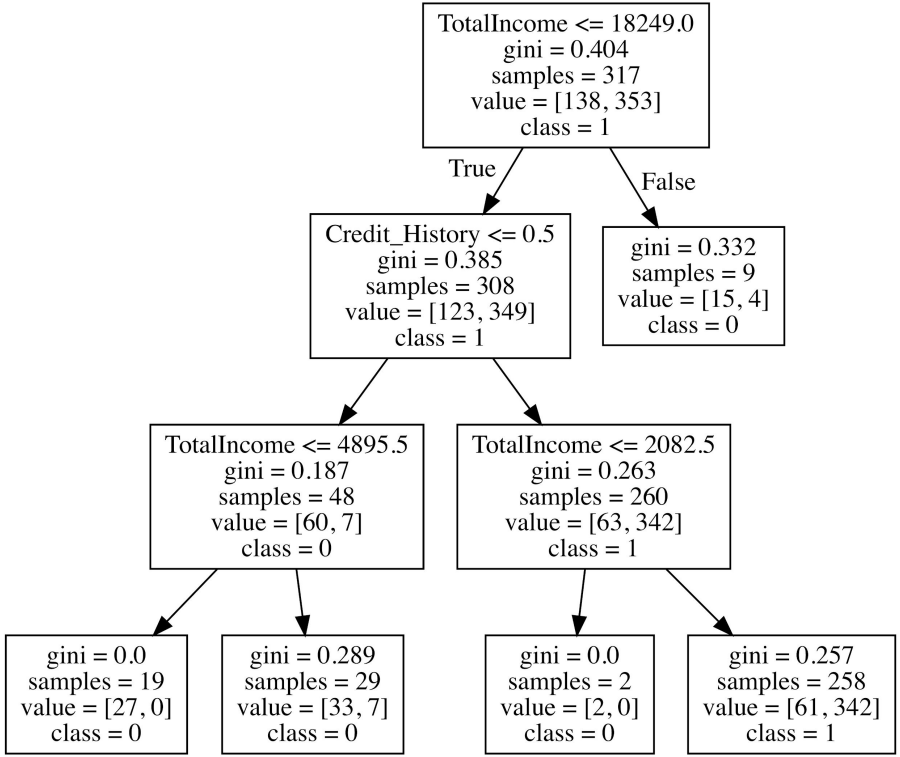
MODELING

- Logistic Regression Classifier
- Decision Tree Classifier
- Random Forest Classifier
- Bagging Classifier
- Gradient Boosting Classifier

ROC CURVES


Receiver Operating Characteristic
Sensitivity(True Positive Rate)
1-Specificity(False Positive Rate)
0.0
0.2
0.4
0.6
0.8
1.0
LogisticRegression ROC (area = 0.70)
DecisionTreeClassifier ROC (area = 0.71)
RandomForest ROC (area = 0.76)
BaggingClassifier ROC (area = 0.72)
GradientBoosting ROC (area = 0.73)

Decision Tree From Random Forest



Demo Video

126,124...

Loans approved to date... and counting!

Questions ?