

# Model Comparison Report

## Fit and error measures

Model	Accuracy	F1	AUC	Accuracy_Creditworthy	Accuracy_Non-Creditworthy
Logistic_Regression	0.6833	0.6758	0.7721	0.6689	0.6974
Decision_Tree	0.7267	0.6917	0.7253	0.6216	0.8289
Random_Forest	0.7200	0.7162	0.7826	0.7162	0.7237
Boosted_Model	0.7000	0.6786	0.7867	0.6419	0.7566

**Model:** model names in the current comparison.

**Accuracy:** overall accuracy, number of correct predictions of all classes divided by total sample number.

**Accuracy\_[class name]:** accuracy of Class [class name] is defined as the number of cases that are **correctly** predicted to be Class [class name] divided by the total number of cases that actually belong to Class [class name], this measure is also known as *recall*.

**AUC:** area under the ROC curve, only available for two-class classification.

**F1:** F1 score,  $2 * \text{precision} * \text{recall} / (\text{precision} + \text{recall})$ . The *precision* measure is the percentage of actual members of a class that were predicted to be in that class divided by the total number of cases predicted to be in that class. In situations where there are three or more classes, average precision and average recall values across classes are used to calculate the F1 score.

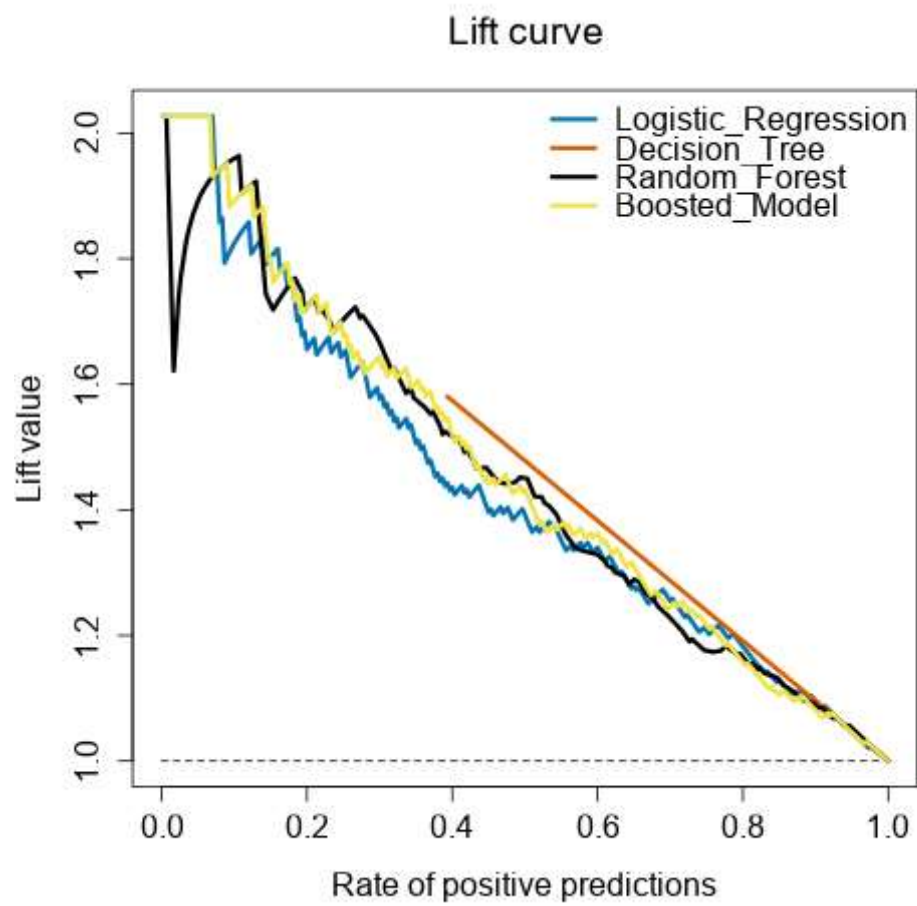
Confusion matrix of Boosted_Model		
	Actual_Creditworthy	Actual_Non-Creditworthy
Predicted_Creditworthy	95	37
Predicted_Non-Creditworthy	53	115

Confusion matrix of Decision_Tree		
	Actual_Creditworthy	Actual_Non-Creditworthy
Predicted_Creditworthy	92	26
Predicted_Non-Creditworthy	56	126

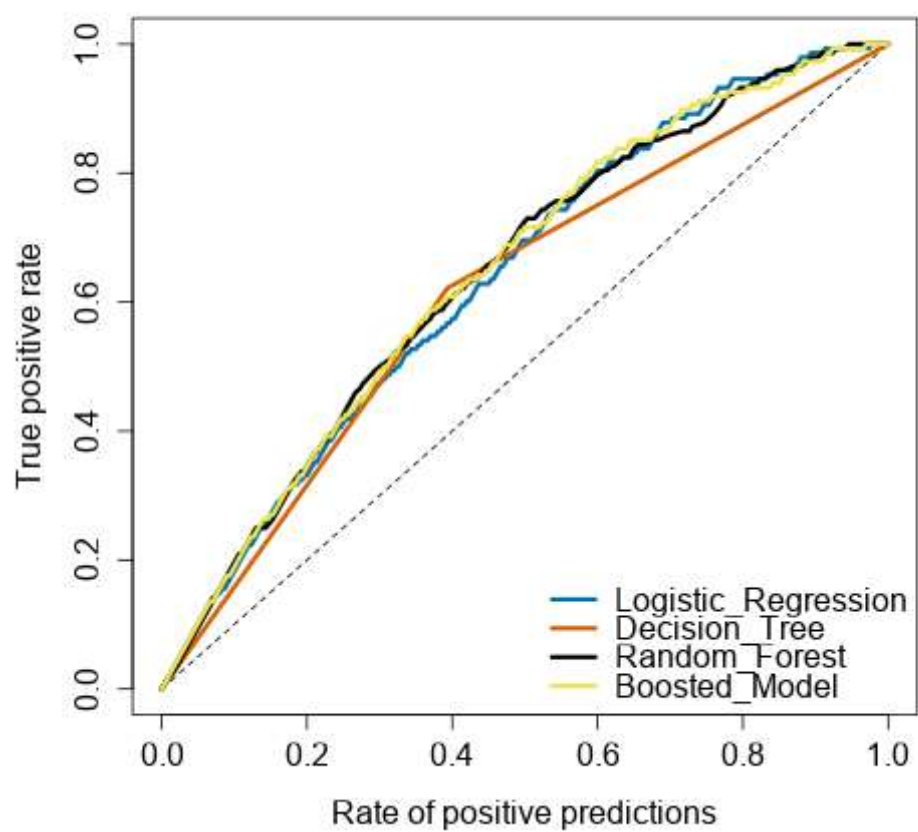
Confusion matrix of Logistic_Regression		
	Actual_Creditworthy	Actual_Non-Creditworthy
Predicted_Creditworthy	99	46
Predicted_Non-Creditworthy	49	106

Confusion matrix of Random_Forest		
	Actual_Creditworthy	Actual_Non-Creditworthy
Predicted_Creditworthy	106	42
Predicted_Non-Creditworthy	42	110

## Performance Diagnostic Plots



Gain chart



Precision and recall curve

