

Model Comparison Report

Fit and error measures

Model	Accuracy	F1	AUC	Accuracy_Creditworthy	Accuracy_Non-Creditworthy
Random_Forest	0.7933	0.8681	0.7368	0.9714	0.3778
Decision_Tree	0.6733	0.7721	0.6296	0.7905	0.4000
Logistic_Regression	0.7800	0.8520	0.7314	0.9048	0.4889
Boosting_model	0.7867	0.8632	0.7515	0.9619	0.3778

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 Boosting_model

	Actual_Creditworthy	Actual_Non-Creditworthy
Predicted_Creditworthy	101	28
Predicted_Non-Creditworthy	4	17

Confusion matrix of Decision_Tree

	Actual_Creditworthy	Actual_Non-Creditworthy
Predicted_Creditworthy	83	27
Predicted_Non-Creditworthy	22	18

Confusion matrix of Logistic_Regression

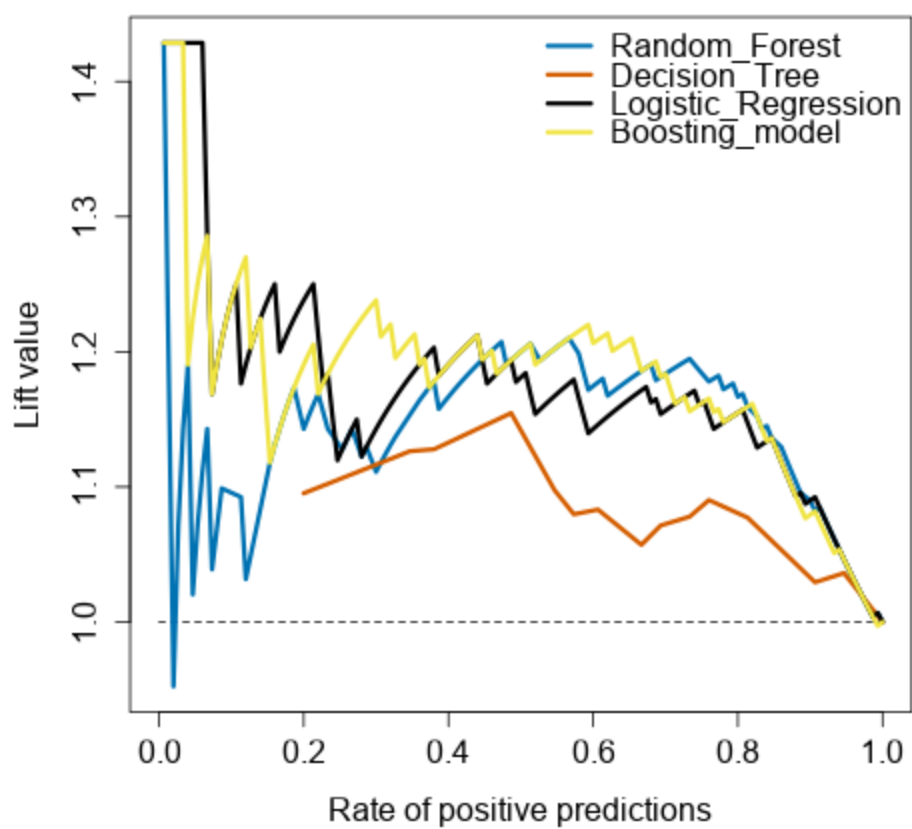
	Actual_Creditworthy	Actual_Non-Creditworthy
Predicted_Creditworthy	95	23
Predicted_Non-Creditworthy	10	22

Confusion matrix of Random_Forest

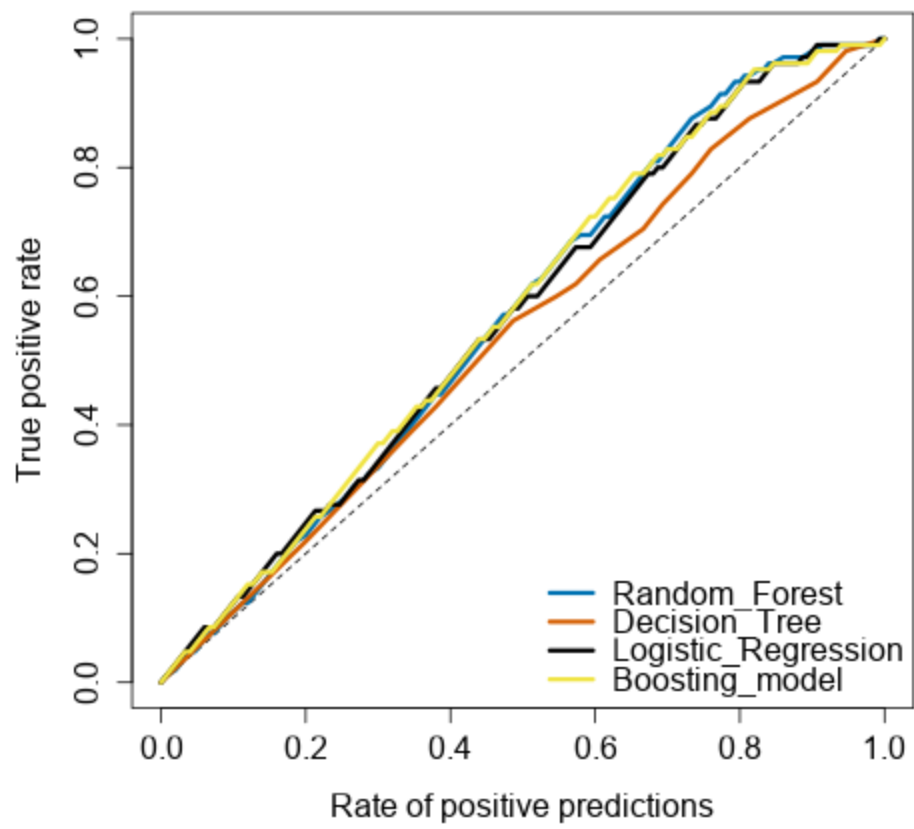
	Actual_Creditworthy	Actual_Non-Creditworthy
Predicted_Creditworthy	102	28
Predicted_Non-Creditworthy	3	17

Performance Diagnostic Plots

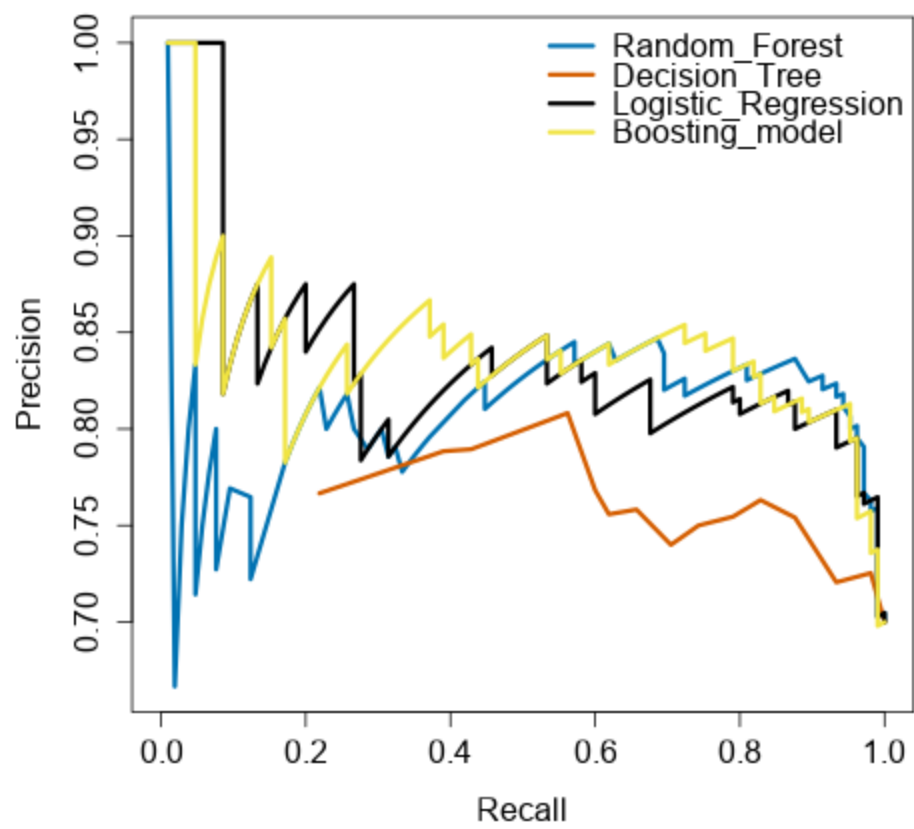
Lift curve



Gain chart



Precision and recall curve



ROC curve

