

# Model Comparison Report

## Fit and error measures

Model	Accuracy	F1	AUC	Accuracy_Creditworthy	Accuracy_Non-Creditworthy
StepW	0.7733	0.8509	0.7745	0.9327	0.4130
Decision_Tree	0.7467	0.8257	0.7340	0.8654	0.4783
RF	0.7933	0.8658	0.7616	0.9615	0.4130
BM	0.7400	0.8312	0.7722	0.9231	0.3261

**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 BM

	Actual_Creditworthy	Actual_Non-Creditworthy
Predicted_Creditworthy	96	31
Predicted_Non-Creditworthy	8	15

## Confusion matrix of Decision\_Tree

	Actual_Creditworthy	Actual_Non-Creditworthy
Predicted_Creditworthy	90	24
Predicted_Non-Creditworthy	14	22

## Confusion matrix of RF

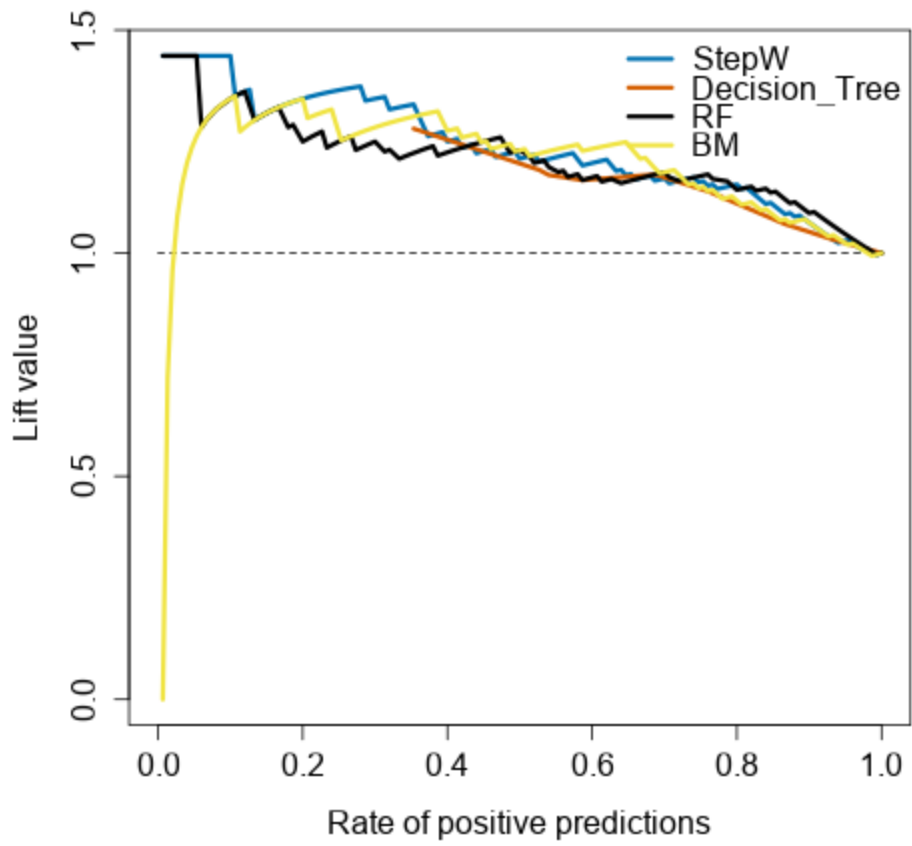
	Actual_Creditworthy	Actual_Non-Creditworthy
Predicted_Creditworthy	100	27
Predicted_Non-Creditworthy	4	19

## Confusion matrix of StepW

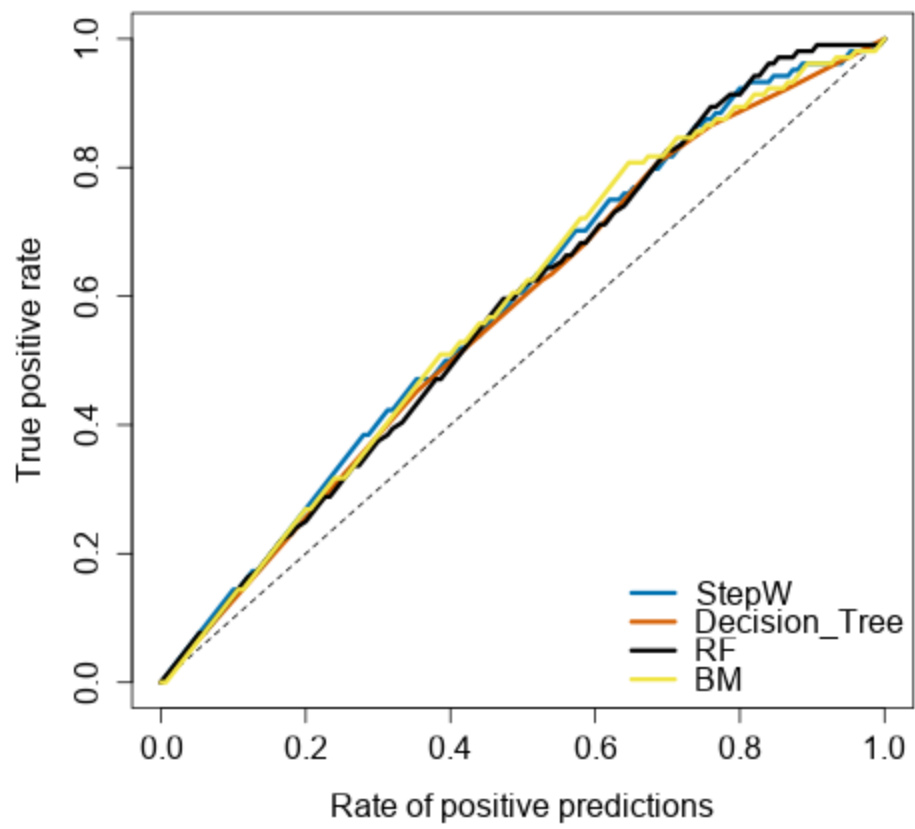
	Actual_Creditworthy	Actual_Non-Creditworthy
Predicted_Creditworthy	97	27
Predicted_Non-Creditworthy	7	19

## Performance Diagnostic Plots

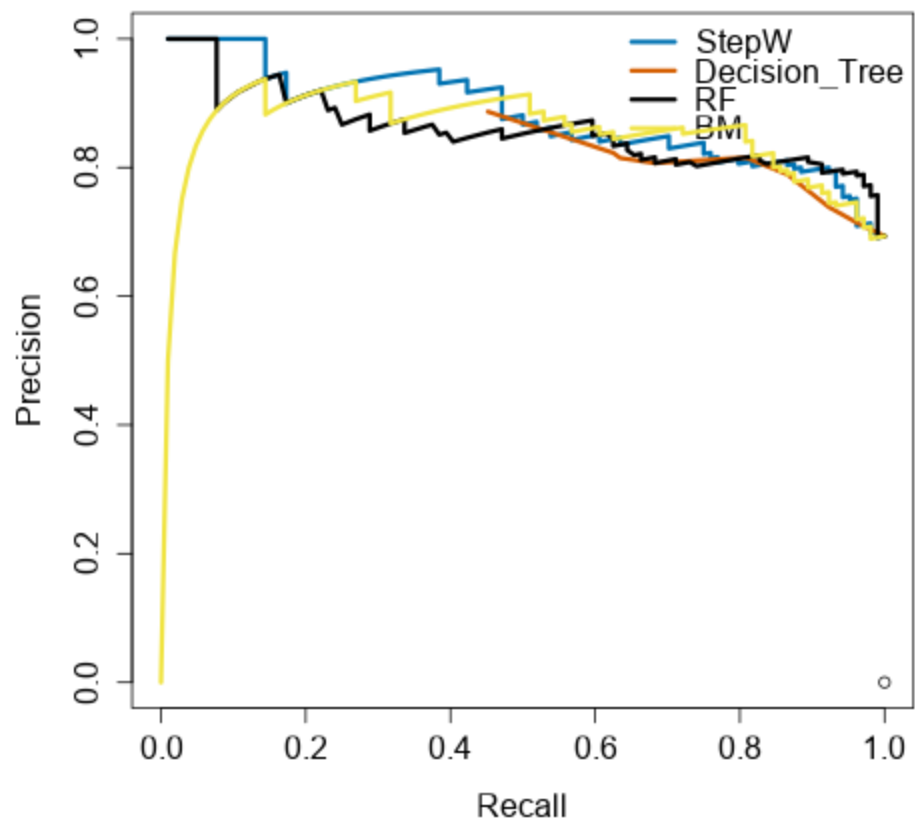
Lift curve



Gain chart



Precision and recall curve



ROC curve

