

# Model Comparison Report

## Fit and error measures

| Model          | Accuracy | F1     | AUC    | Accuracy_Creditworthy | Accuracy_Non-Creditworthy |
|----------------|----------|--------|--------|-----------------------|---------------------------|
| LM_Result      | 0.7800   | 0.8520 | 0.7310 | 0.8051                | 0.6875                    |
| DT_Results     | 0.7467   | 0.8273 | 0.7054 | 0.7913                | 0.6000                    |
| RM_Results     | 0.8133   | 0.8793 | 0.7380 | 0.8031                | 0.8696                    |
| Bosted_Results | 0.7867   | 0.8621 | 0.7526 | 0.7874                | 0.7826                    |

**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], number of samples that are **correctly** predicted to be Class [class name] divided by number of samples predicted to be Class [class name]

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

**F1:** F1 score, precision \* recall / (precision + recall)

## Confusion matrix of Bosted\_Results

|                            | Actual_Creditworthy | Actual_Non-Creditworthy |
|----------------------------|---------------------|-------------------------|
| Predicted_Creditworthy     | 100                 | 27                      |
| Predicted_Non-Creditworthy | 5                   | 18                      |

## Confusion matrix of DT\_Results

|                            | Actual_Creditworthy | Actual_Non-Creditworthy |
|----------------------------|---------------------|-------------------------|
| Predicted_Creditworthy     | 91                  | 24                      |
| Predicted_Non-Creditworthy | 14                  | 21                      |

## Confusion matrix of LM\_Result

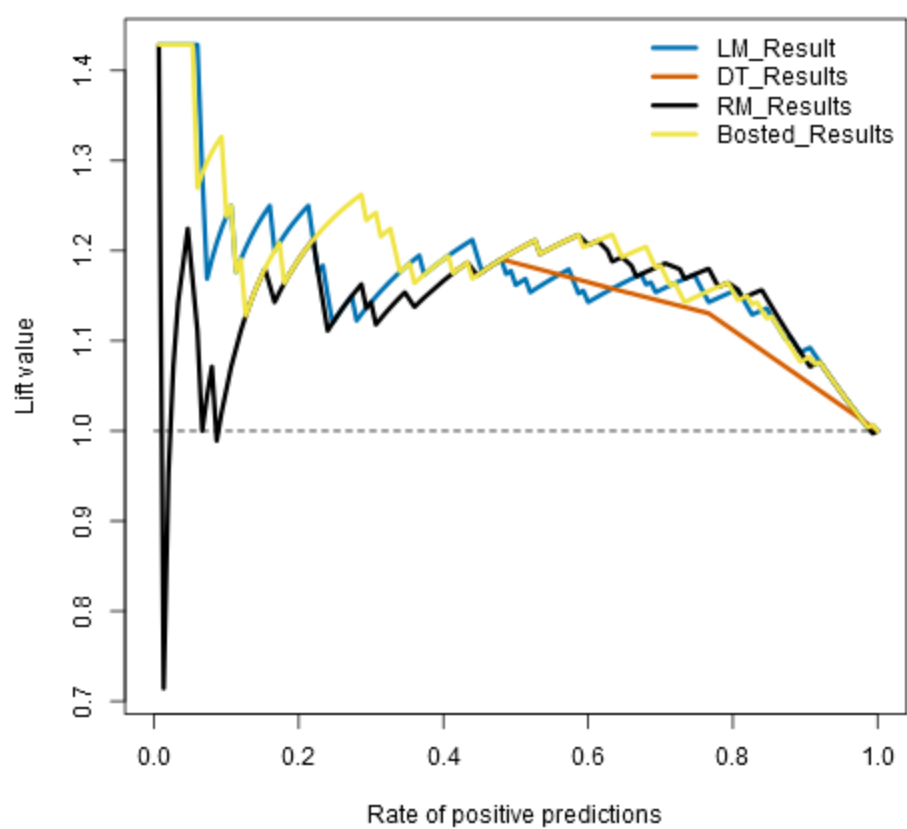
|                            | Actual_Creditworthy | Actual_Non-Creditworthy |
|----------------------------|---------------------|-------------------------|
| Predicted_Creditworthy     | 95                  | 23                      |
| Predicted_Non-Creditworthy | 10                  | 22        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

## Confusion matrix of RM\_Results

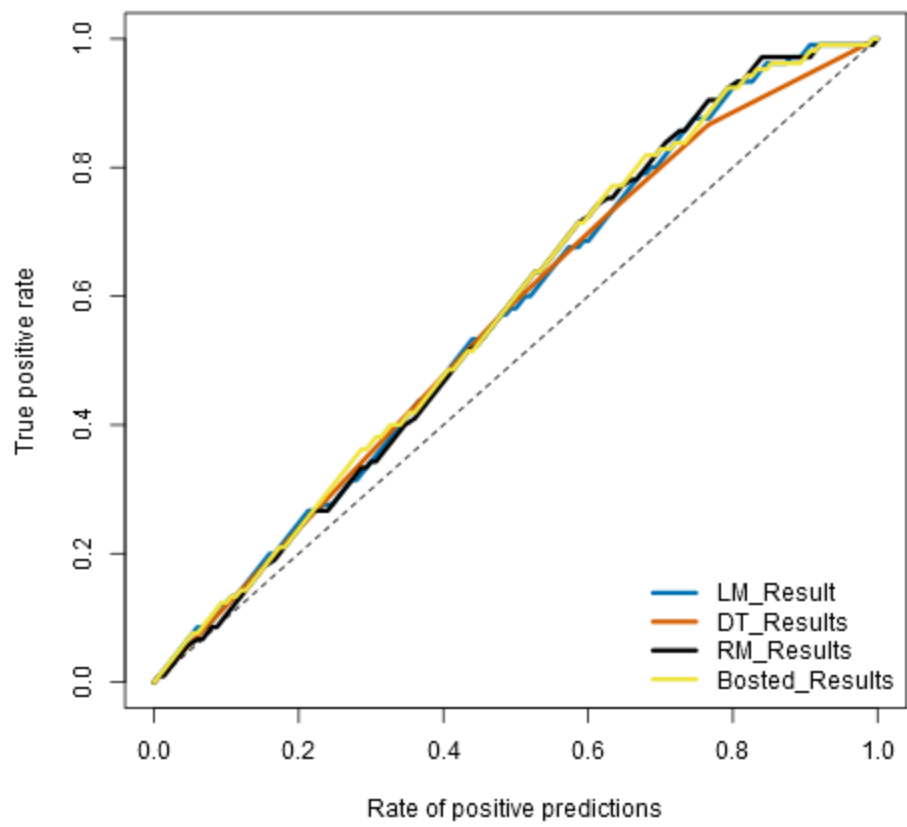
|                            | Actual_Creditworthy | Actual_Non-Creditworthy |
|----------------------------|---------------------|-------------------------|
| Predicted_Creditworthy     | 102                 | 25                      |
| Predicted_Non-Creditworthy | 3                   | 20                      |

## Performance Diagnostic Plots

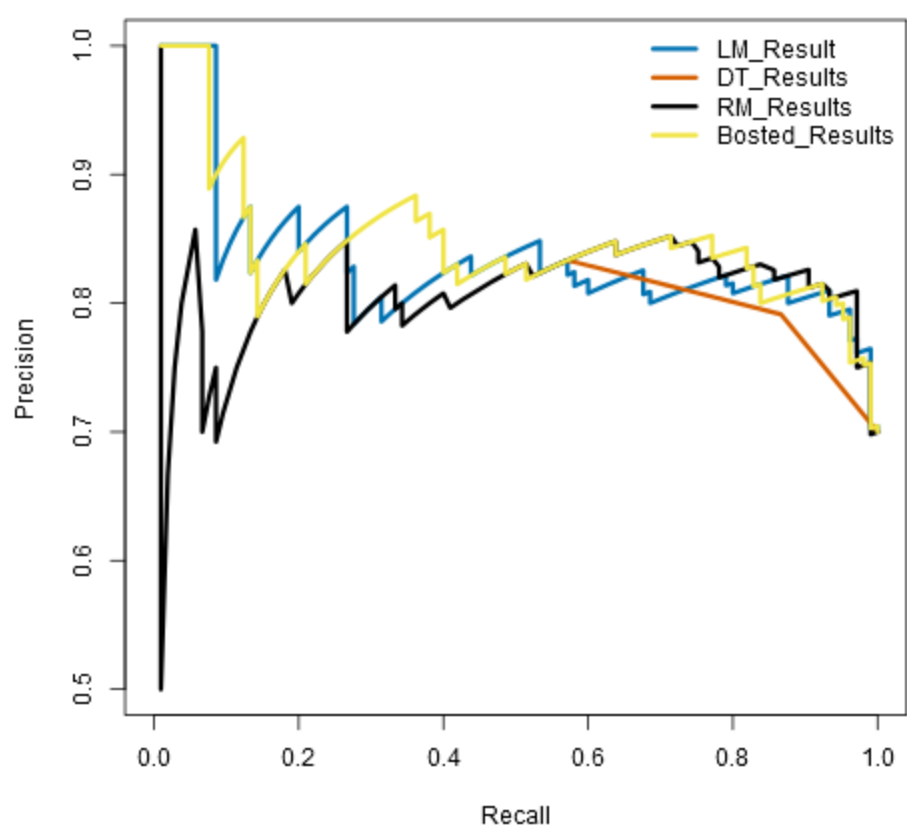
Lift curve



Gain chart



Precision and recall curve



ROC curve

