# Model Comparison Report

## Fit and error measures

| Model | Accuracy | F1 | AUC | Accuracy_Creditworthy | Accuracy_Non-Creditworthy |
|---|---|---|---|---|---|
| dt_model | 0.7467 | 0.8304 | 0.7035 | 0.8857 | 0.4222 |
| fm_model | 0.7933 | 0.8681 | 0.7368 | 0.9714 | 0.3778 |
| boost_model | 0.7867 | 0.8632 | 0.7515 | 0.9619 | 0.3778 |
| lr_model | 0.7600 | 0.8364 | 0.7306 | 0.8762 | 0.4889 |

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 * precision * recall / (precision + 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 boost_model

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

## Confusion matrix of dt_model

| | Actual_Creditworthy | Actual_Non-Creditworthy |
|---|---|---|
| Predicted_Creditworthy | 93 | 26 |
| Predicted_Non-Creditworthy | 12 | 19 |

## Confusion matrix of fm_model

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

## Confusion matrix of lr_model

| | Actual_Creditworthy | Actual_Non-Creditworthy |
|---|---|---|
| Predicted_Creditworthy | 92 | 23 |
| Predicted_Non-Creditworthy | 13 | 22 |

## Performance Diagnostic Plots

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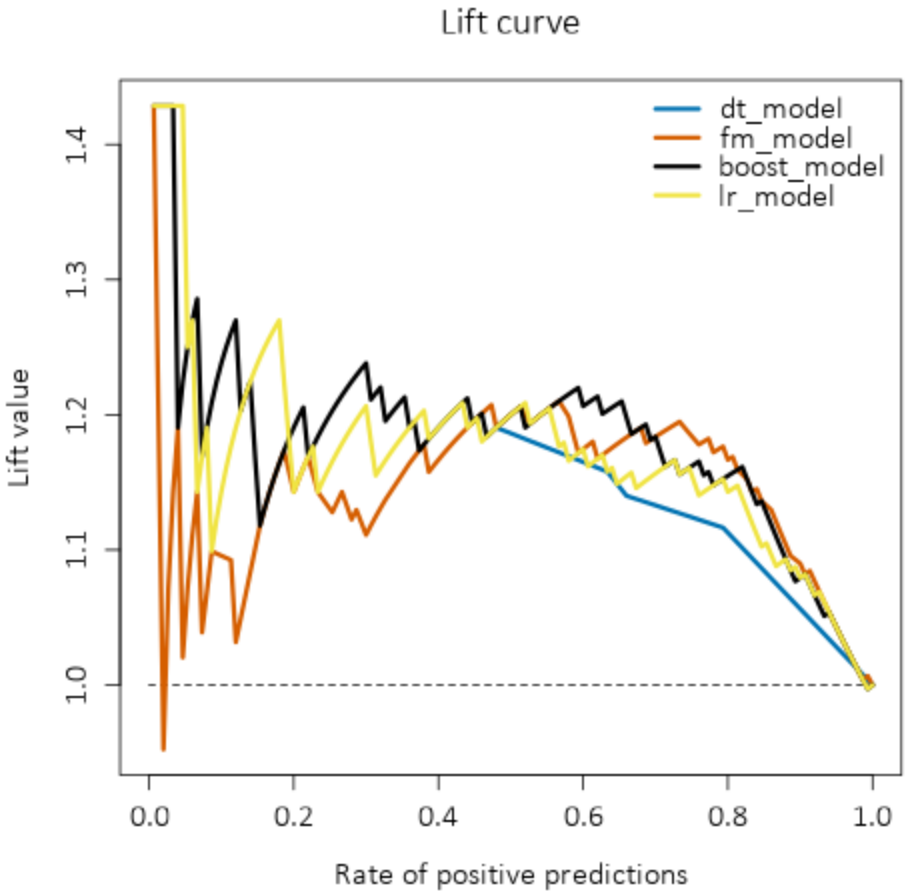

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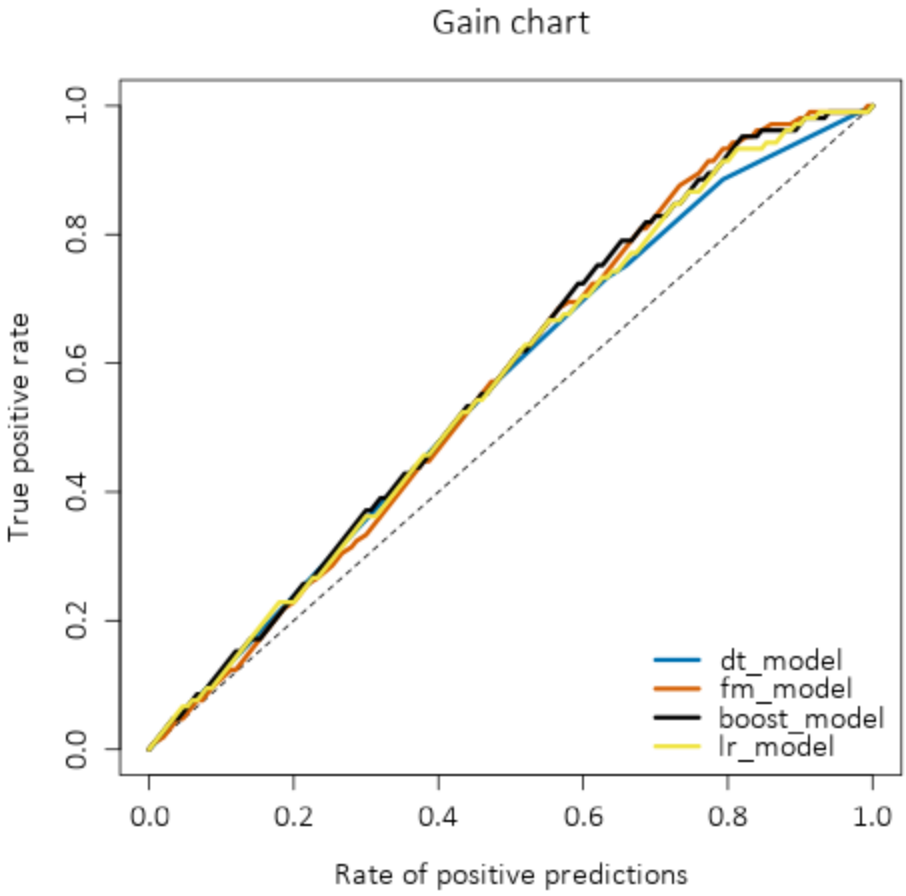

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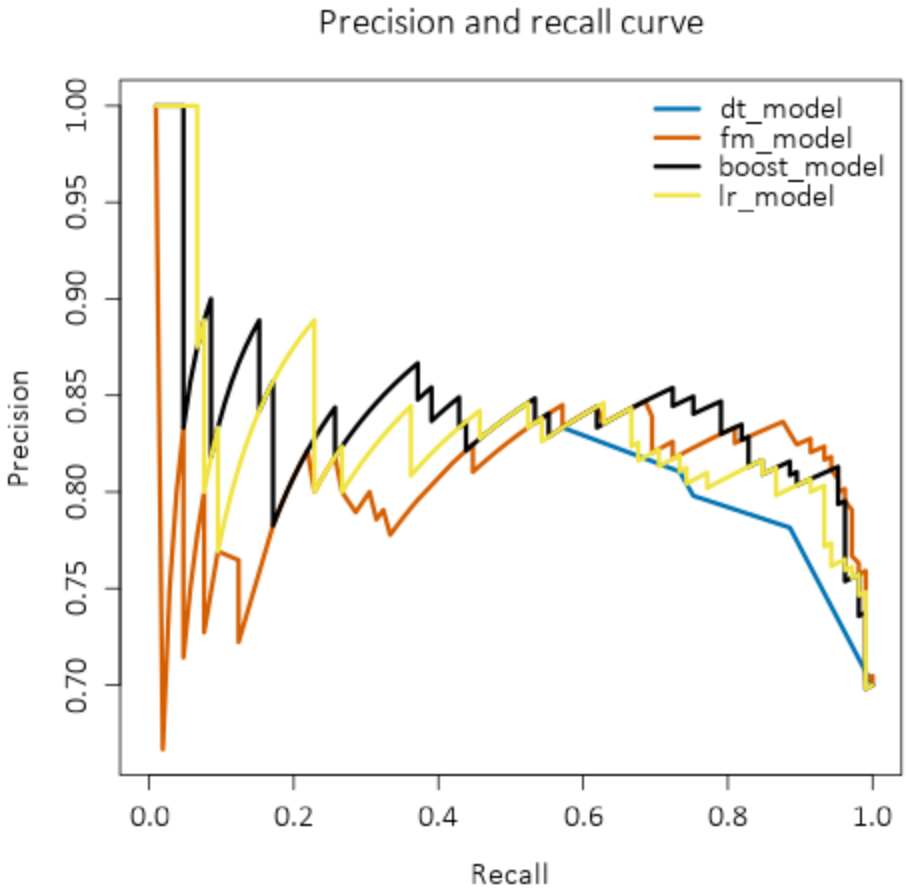

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