**Logistics Regression**

confusionMatrix(Actual\_tr, as.factor(pred\_tr1), positive = "0")

Confusion Matrix and Statistics

Reference

Prediction 0 1

0 2676 431

1 2183 2409

Accuracy : 0.6605

95% CI : (0.6498, 0.6711)

No Information Rate : 0.6311

P-Value [Acc> NIR] : 4.239e-08

Kappa : 0.3536

Mcnemar's Test P-Value :< 2.2e-16

Sensitivity : 0.5507

Specificity : 0.8482

PosPredValue : 0.8613

NegPredValue : 0.5246

Prevalence : 0.6311

Detection Rate : 0.3476

Detection Prevalence : 0.4036

Balanced Accuracy : 0.6995

'Positive' Class : 0

>confusionMatrix(Actual\_test, as.factor(pred\_tst1), positive = "0")

Confusion Matrix and Statistics

Reference

Prediction 0 1

0 1142 187

1 947 1024

Accuracy : 0.6564

95% CI : (0.6399, 0.6726)

No Information Rate : 0.633

P-Value [Acc> NIR] : 0.002767

Kappa : 0.3466

Mcnemar's Test P-Value :< 2.2e-16

Sensitivity : 0.5467

Specificity : 0.8456

PosPredValue : 0.8593

NegPredValue : 0.5195

Prevalence : 0.6330

Detection Rate : 0.3461

Detection Prevalence : 0.4027

Balanced Accuracy : 0.6961

'Positive' Class : 0

#############################

**Random Forest**

confusionMatrix(Actual\_tr, as.factor(pred\_tr\_rf), positive = "0")

Confusion Matrix and Statistics

Reference

Prediction 0 1

0 2287 820

1 1779 2813

Accuracy : 0.6624

95% CI : (0.6517, 0.673)

No Information Rate : 0.5281

P-Value [Acc> NIR] : < 2.2e-16

Kappa : 0.3321

Mcnemar's Test P-Value :< 2.2e-16

Sensitivity : 0.5625

Specificity : 0.7743

PosPredValue : 0.7361

NegPredValue : 0.6126

Prevalence : 0.5281

Detection Rate : 0.2971

Detection Prevalence : 0.4036

Balanced Accuracy : 0.6684

'Positive' Class : 0

>confusionMatrix(Actual\_test, as.factor(pred\_test\_rf), positive = "0")

Confusion Matrix and Statistics

Reference

Prediction 0 1

0 984 345

1 767 1204

Accuracy : 0.663

95% CI : (0.6466, 0.6792)

No Information Rate : 0.5306

P-Value [Acc> NIR] : < 2.2e-16

Kappa : 0.334

Mcnemar's Test P-Value :< 2.2e-16

Sensitivity : 0.5620

Specificity : 0.7773

PosPredValue : 0.7404

NegPredValue : 0.6109

Prevalence : 0.5306

Detection Rate : 0.2982

Detection Prevalence : 0.4027

Balanced Accuracy : 0.6696

'Positive' Class : 0

##############################

**Support vector machine**

confusionMatrix(Actual\_tr, as.factor(pred\_tr\_svm), positive = "0")

Confusion Matrix and Statistics

Reference

Prediction 0 1

0 2306 801

1 1774 2818

Accuracy : 0.6655

95% CI : (0.6549, 0.6761)

No Information Rate : 0.5299

P-Value [Acc> NIR] : < 2.2e-16

Kappa : 0.3387

Mcnemar's Test P-Value :< 2.2e-16

Sensitivity : 0.5652

Specificity : 0.7787

PosPredValue : 0.7422

NegPredValue : 0.6137

Prevalence : 0.5299

Detection Rate : 0.2995

Detection Prevalence : 0.4036

Balanced Accuracy : 0.6719

'Positive' Class : 0

>confusionMatrix(Actual\_test, as.factor(pred\_test\_svm), positive = "0")

Confusion Matrix and Statistics

Reference

Prediction 0 1

0 981 348

1 787 1184

Accuracy : 0.6561

95% CI : (0.6396, 0.6723)

No Information Rate : 0.5358

P-Value [Acc> NIR] : < 2.2e-16

Kappa : 0.3216

Mcnemar's Test P-Value :< 2.2e-16

Sensitivity : 0.5549

Specificity : 0.7728

PosPredValue : 0.7381

NegPredValue : 0.6007

Prevalence : 0.5358

Detection Rate : 0.2973

Detection Prevalence : 0.4027

Balanced Accuracy : 0.6639

'Positive' Class : 0

#########################

**XGB**

>confusionMatrix(Actual\_tr, as.factor(pred\_tr\_xgb), positive = "0")

Confusion Matrix and Statistics

Reference

Prediction 0 1

0 2617 490

1 1789 2803

Accuracy : 0.704

95% CI : (0.6936, 0.7142)

No Information Rate : 0.5723

P-Value [Acc> NIR] : < 2.2e-16

Kappa : 0.424

Mcnemar's Test P-Value :< 2.2e-16

Sensitivity : 0.5940

Specificity : 0.8512

PosPredValue : 0.8423

NegPredValue : 0.6104

Prevalence : 0.5723

Detection Rate : 0.3399

Detection Prevalence : 0.4036

Balanced Accuracy : 0.7226

'Positive' Class : 0

>confusionMatrix(Actual\_test, as.factor(pred\_test\_xgb), positive = "0")

Confusion Matrix and Statistics

Reference

Prediction 0 1

0 1081 248

1 832 1139

Accuracy : 0.6727

95% CI : (0.6564, 0.6887)

No Information Rate : 0.5797

P-Value [Acc> NIR] : < 2.2e-16

Kappa : 0.3651

Mcnemar's Test P-Value :< 2.2e-16

Sensitivity : 0.5651

Specificity : 0.8212

PosPredValue : 0.8134

NegPredValue : 0.5779

Prevalence : 0.5797

Detection Rate : 0.3276

Detection Prevalence : 0.4027

Balanced Accuracy : 0.6931

'Positive' Class : 0