[1] "Pred Random Forest"

[1] "Pred Naive Bayes"

[1] "Pred CHAID"

[1] "Pred CART"

[1] "Pred C50"

[1] "Pred CumSVM"

[1] "Pred Random Forest"

[1] "Pred Naive Bayes"

[1] "Pred CHAID"

[1] "Pred CART"

[1] "Pred C50"

[1] "Pred CumSVM"

Confusion Matrix and Statistics

Reference

Prediction 1 2 3

1 177 5 54

2 0 7 0

3 229 17 4659

Overall Statistics

Accuracy : 0.9408

95% CI : (0.934, 0.947)

No Information Rate : 0.9155

P-Value [Acc > NIR] : 4.582e-12

Kappa : 0.5226

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

Statistics by Class:

Class: 1 Class: 2 Class: 3

Sensitivity 0.43596 0.241379 0.9885

Specificity 0.98756 1.000000 0.4345

Pos Pred Value 0.75000 1.000000 0.9498

Neg Pred Value 0.95338 0.995721 0.7778

Prevalence 0.07887 0.005633 0.9155

Detection Rate 0.03438 0.001360 0.9050

Detection Prevalence 0.04584 0.001360 0.9528

Balanced Accuracy 0.71176 0.620690 0.7115

Confusion Matrix and Statistics

Reference

Prediction 1 2 3

1 231 5 368

2 83 9 502

3 92 15 3843

Overall Statistics

Accuracy : 0.7931

95% CI : (0.7818, 0.8041)

No Information Rate : 0.9155

P-Value [Acc > NIR] : 1

Kappa : 0.2808

Mcnemar's Test P-Value : <2e-16

Statistics by Class:

Class: 1 Class: 2 Class: 3

Sensitivity 0.56897 0.310345 0.8154

Specificity 0.92134 0.885720 0.7540

Pos Pred Value 0.38245 0.015152 0.9729

Neg Pred Value 0.96149 0.995608 0.2738

Prevalence 0.07887 0.005633 0.9155

Detection Rate 0.04487 0.001748 0.7465

Detection Prevalence 0.11733 0.115385 0.7673

Balanced Accuracy 0.74515 0.598032 0.7847

Confusion Matrix and Statistics

Reference

Prediction 1 2 3

1 113 5 82

2 1 1 1

3 292 23 4630

Overall Statistics

Accuracy : 0.9215

95% CI : (0.9138, 0.9287)

No Information Rate : 0.9155

P-Value [Acc > NIR] : 0.06202

Kappa : 0.3323

Mcnemar's Test P-Value : < 2e-16

Statistics by Class:

Class: 1 Class: 2 Class: 3

Sensitivity 0.27833 0.0344828 0.9824

Specificity 0.98165 0.9996093 0.2759

Pos Pred Value 0.56500 0.3333333 0.9363

Neg Pred Value 0.94078 0.9945578 0.5911

Prevalence 0.07887 0.0056333 0.9155

Detection Rate 0.02195 0.0001943 0.8994

Detection Prevalence 0.03885 0.0005828 0.9606

Balanced Accuracy 0.62999 0.5170460 0.6291

Confusion Matrix and Statistics

Reference

Prediction 1 2 3

1 126 3 80

2 0 0 0

3 280 26 4633

Overall Statistics

Accuracy : 0.9244

95% CI : (0.9169, 0.9315)

No Information Rate : 0.9155

P-Value [Acc > NIR] : 0.01042

Kappa : 0.3621

Mcnemar's Test P-Value : < 2e-16

Statistics by Class:

Class: 1 Class: 2 Class: 3

Sensitivity 0.31034 0.000000 0.9830

Specificity 0.98250 1.000000 0.2966

Pos Pred Value 0.60287 NaN 0.9380

Neg Pred Value 0.94331 0.994367 0.6172

Prevalence 0.07887 0.005633 0.9155

Detection Rate 0.02448 0.000000 0.9000

Detection Prevalence 0.04060 0.000000 0.9594

Balanced Accuracy 0.64642 0.500000 0.6398

Confusion Matrix and Statistics

Reference

Prediction 1 2 3

1 183 4 81

2 1 8 0

3 222 17 4632

Overall Statistics

Accuracy : 0.9369

95% CI : (0.9299, 0.9434)

No Information Rate : 0.9155

P-Value [Acc > NIR] : 5.485e-09

Kappa : 0.513

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

Statistics by Class:

Class: 1 Class: 2 Class: 3

Sensitivity 0.45074 0.275862 0.9828

Specificity 0.98208 0.999805 0.4506

Pos Pred Value 0.68284 0.888889 0.9509

Neg Pred Value 0.95430 0.995914 0.7076

Prevalence 0.07887 0.005633 0.9155

Detection Rate 0.03555 0.001554 0.8998

Detection Prevalence 0.05206 0.001748 0.9462

Balanced Accuracy 0.71641 0.637833 0.7167

> print(confusionMatrix(predRF\_MDA, responMDA));

+ print(confusionMatrix(predNB\_MDA, responMDA));

+ print(confusionMatrix(predCHAID\_MDA, responMDA));

+ print(confusionMatrix(predCART\_MDA, responMDA));

+ print(confusionMatrix(predC50\_MDA, responMDA));

+ print(confusionMatrix(predSVM\_MDA, responMDA));

+

Confusion Matrix and Statistics

Reference

Prediction 1 2 3

1 200 3 48

2 0 9 0

3 206 17 4665

Overall Statistics

Accuracy : 0.9468

95% CI : (0.9403, 0.9527)

No Information Rate : 0.9155

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

Kappa : 0.5805

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

Statistics by Class:

Class: 1 Class: 2 Class: 3

Sensitivity 0.49261 0.310345 0.9898

Specificity 0.98925 1.000000 0.4874

Pos Pred Value 0.79681 1.000000 0.9544

Neg Pred Value 0.95793 0.996108 0.8154

Prevalence 0.07887 0.005633 0.9155

Detection Rate 0.03885 0.001748 0.9062

Detection Prevalence 0.04876 0.001748 0.9495

Balanced Accuracy 0.74093 0.655172 0.7386

Confusion Matrix and Statistics

Reference

Prediction 1 2 3

1 292 8 523

2 28 8 284

3 86 13 3906

Overall Statistics

Accuracy : 0.817

95% CI : (0.8062, 0.8275)

No Information Rate : 0.9155

P-Value [Acc > NIR] : 1

Kappa : 0.3341

Mcnemar's Test P-Value : <2e-16

Statistics by Class:

Class: 1 Class: 2 Class: 3

Sensitivity 0.71921 0.275862 0.8288

Specificity 0.88802 0.939051 0.7724

Pos Pred Value 0.35480 0.025000 0.9753

Neg Pred Value 0.97364 0.995650 0.2940

Prevalence 0.07887 0.005633 0.9155

Detection Rate 0.05672 0.001554 0.7587

Detection Prevalence 0.15987 0.062160 0.7780

Balanced Accuracy 0.80362 0.607456 0.8006

Confusion Matrix and Statistics

Reference

Prediction 1 2 3

1 115 3 89

2 4 4 1

3 287 22 4623

Overall Statistics

Accuracy : 0.9211

95% CI : (0.9134, 0.9284)

No Information Rate : 0.9155

P-Value [Acc > NIR] : 0.07555

Kappa : 0.3413

Mcnemar's Test P-Value : < 2e-16

Statistics by Class:

Class: 1 Class: 2 Class: 3

Sensitivity 0.28325 0.137931 0.9809

Specificity 0.98060 0.999023 0.2897

Pos Pred Value 0.55556 0.444444 0.9373

Neg Pred Value 0.94111 0.995135 0.5833

Prevalence 0.07887 0.005633 0.9155

Detection Rate 0.02234 0.000777 0.8980

Detection Prevalence 0.04021 0.001748 0.9580

Balanced Accuracy 0.63193 0.568477 0.6353

Confusion Matrix and Statistics

Reference

Prediction 1 2 3

1 131 3 79

2 0 0 0

3 275 26 4634

Overall Statistics

Accuracy : 0.9256

95% CI : (0.9181, 0.9326)

No Information Rate : 0.9155

P-Value [Acc > NIR] : 0.004367

Kappa : 0.3754

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

Statistics by Class:

Class: 1 Class: 2 Class: 3

Sensitivity 0.32266 0.000000 0.9832

Specificity 0.98271 1.000000 0.3080

Pos Pred Value 0.61502 NaN 0.9390

Neg Pred Value 0.94428 0.994367 0.6291

Prevalence 0.07887 0.005633 0.9155

Detection Rate 0.02545 0.000000 0.9002

Detection Prevalence 0.04138 0.000000 0.9586

Balanced Accuracy 0.65268 0.500000 0.6456

Confusion Matrix and Statistics

Reference

Prediction 1 2 3

1 181 4 58

2 0 10 2

3 225 15 4653

Overall Statistics

Accuracy : 0.9409

95% CI : (0.9342, 0.9472)

No Information Rate : 0.9155

P-Value [Acc > NIR] : 3.103e-12

Kappa : 0.5317

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

Statistics by Class:

Class: 1 Class: 2 Class: 3

Sensitivity 0.44581 0.344828 0.9873

Specificity 0.98693 0.999609 0.4483

Pos Pred Value 0.74486 0.833333 0.9510

Neg Pred Value 0.95413 0.996301 0.7647

Prevalence 0.07887 0.005633 0.9155

Detection Rate 0.03516 0.001943 0.9038

Detection Prevalence 0.04720 0.002331 0.9505

Balanced Accuracy 0.71637 0.672218 0.7178