> LoadDataFromWeb()

[1] "Loading file: pml-training.csv"

[1] "Loading file: pml-testing.csv"

> executeML\_DecisionTree()

Confusion Matrix and Statistics

Reference

Prediction A B C D E

A 1943 183 56 45 11

B 139 1037 70 62 27

C 52 122 1076 231 60

D 57 113 85 837 165

E 41 63 81 111 1179

Overall Statistics

Accuracy : 0.7739

95% CI : (0.7645, 0.7831)

No Information Rate : 0.2845

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

Kappa : 0.7141

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

Statistics by Class:

Class: A Class: B Class: C Class: D Class: E

Sensitivity 0.8705 0.6831 0.7865 0.6509 0.8176

Specificity 0.9475 0.9529 0.9282 0.9360 0.9538

Pos Pred Value 0.8682 0.7768 0.6982 0.6659 0.7993

Neg Pred Value 0.9485 0.9261 0.9537 0.9319 0.9587

Prevalence 0.2845 0.1935 0.1744 0.1639 0.1838

Detection Rate 0.2476 0.1322 0.1371 0.1067 0.1503

Detection Prevalence 0.2852 0.1702 0.1964 0.1602 0.1880

Balanced Accuracy 0.9090 0.8180 0.8574 0.7934 0.8857

> executeML\_RandomForest()

[1] "Verify all data is clean and prepped, NAs are gone, etc."

[1] "Understand the Predictor Distribution"

A B C D E

28.43071 19.35292 17.44226 16.38927 18.38485

[1] "Confirm Classification Type of Target as Factor and add Numeric Version"

[1] "factor"

[1] "Build Random Forest Model and Evaluate it.."

Confusion Matrix and Statistics

Reference

Prediction A B C D E

A 2231 7 0 0 0

B 0 1511 7 0 0

C 0 0 1361 11 0

D 0 0 0 1275 2

E 1 0 0 0 1440

Overall Statistics

Accuracy : 0.9964

95% CI : (0.9948, 0.9976)

No Information Rate : 0.2845

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

Kappa : 0.9955

Mcnemar's Test P-Value : NA

Statistics by Class:

Class: A Class: B Class: C Class: D Class: E

Sensitivity 0.9996 0.9954 0.9949 0.9914 0.9986

Specificity 0.9988 0.9989 0.9983 0.9997 0.9998

Pos Pred Value 0.9969 0.9954 0.9920 0.9984 0.9993

Neg Pred Value 0.9998 0.9989 0.9989 0.9983 0.9997

Prevalence 0.2845 0.1935 0.1744 0.1639 0.1838

Detection Rate 0.2843 0.1926 0.1735 0.1625 0.1835

Detection Prevalence 0.2852 0.1935 0.1749 0.1628 0.1837

Balanced Accuracy 0.9992 0.9971 0.9966 0.9956 0.9992