=== Run information ===

Scheme: weka.classifiers.meta.Stacking -X 10 -M "weka.classifiers.trees.J48 -C 0.25 -M 2" -S 1 -num-slots 1 -B "weka.classifiers.trees.DecisionStump " -B "weka.classifiers.trees.J48 -C 0.25 -M 2" -B "weka.classifiers.bayes.NaiveBayes "

Relation: binNomified

Instances: 14996

Attributes: 38

is\_attack

P101

P203

P205

P301

P401

P601

MV301

MV302

MV304

UV401

MV101

MV201

MV303

FIT101

LIT101

AIT202

AIT203

FIT201

DPIT301

FIT301

LIT301

AIT402

FIT401

LIT401

AIT501

AIT502

AIT503

AIT504

FIT501

FIT502

FIT503

FIT504

PIT501

PIT502

PIT503

FIT601

AIT201

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

Stacking

Base classifiers

Decision Stump

Classifications

AIT402 = GT\_6.677774905 : zero

AIT402 != GT\_6.677774905 : zero

AIT402 is missing : zero

Class distributions

AIT402 = GT\_6.677774905

zero one

1.0 0.0

AIT402 != GT\_6.677774905

zero one

0.6401345291479821 0.3598654708520179

AIT402 is missing

zero one

0.8715657508668978 0.12843424913310217

J48 pruned tree

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LIT401 = GT\_787.028992

| AIT402 = GT\_6.677774905: zero (9644.0)

| AIT402 = LT\_6.677774905

| | FIT301 = LT\_1.7269319900000002

| | | LIT101 = GT\_545.1423

| | | | FIT101 = LT\_4.3850686549999995

| | | | | P601 = one

| | | | | | MV304 = one

| | | | | | | PIT503 = GT\_114.481865

| | | | | | | | FIT601 = GT\_0.000288341

| | | | | | | | | P301 = one: zero (44.0)

| | | | | | | | | P301 = two

| | | | | | | | | | PIT501 = GT\_159.94296250000002: zero (67.0/8.0)

| | | | | | | | | | PIT501 = LT\_159.94296250000002: one (19.0)

| | | | | | | | FIT601 = LT\_0.000288341: zero (144.0)

| | | | | | | PIT503 = LT\_114.481865

| | | | | | | | AIT201 = GT\_128.5087125

| | | | | | | | | AIT203 = LT\_235.8625945: zero (501.0/1.0)

| | | | | | | | | AIT203 = GT\_235.8625945

| | | | | | | | | | FIT503 = GT\_0.6097366184999999

| | | | | | | | | | | PIT502 = GT\_2.8593855: zero (6.0)

| | | | | | | | | | | PIT502 = LT\_2.8593855

| | | | | | | | | | | | AIT503 = GT\_1016.24585: one (111.0/18.0)

| | | | | | | | | | | | AIT503 = LT\_1016.24585

| | | | | | | | | | | | | LIT301 = LT\_1010.5982650000001

| | | | | | | | | | | | | | AIT502 = GT\_68.25173225: zero (48.0)

| | | | | | | | | | | | | | AIT502 = LT\_68.25173225

| | | | | | | | | | | | | | | FIT401 = LT\_0.79857865: one (4.0)

| | | | | | | | | | | | | | | FIT401 = GT\_0.79857865

| | | | | | | | | | | | | | | | AIT504 = GT\_24.82055855: zero (27.0/5.0)

| | | | | | | | | | | | | | | | AIT504 = LT\_24.82055855: one (2.0)

| | | | | | | | | | | | | LIT301 = GT\_1010.5982650000001

| | | | | | | | | | | | | | AIT501 = LT\_7.74131627: zero (3.0)

| | | | | | | | | | | | | | AIT501 = GT\_7.74131627

| | | | | | | | | | | | | | | DPIT301 = LT\_12.544016849999998

| | | | | | | | | | | | | | | | FIT601 = GT\_0.000288341: one (33.0/3.0)

| | | | | | | | | | | | | | | | FIT601 = LT\_0.000288341

| | | | | | | | | | | | | | | | | FIT504 = GT\_0.21173492900000002

| | | | | | | | | | | | | | | | | | FIT401 = LT\_0.79857865

| | | | | | | | | | | | | | | | | | | FIT501 = LT\_0.801781585

| | | | | | | | | | | | | | | | | | | | AIT504 = GT\_24.82055855: zero (2.0)

| | | | | | | | | | | | | | | | | | | | AIT504 = LT\_24.82055855: one (4.0)

| | | | | | | | | | | | | | | | | | | FIT501 = GT\_0.801781585: one (6.0)

| | | | | | | | | | | | | | | | | | FIT401 = GT\_0.79857865: zero (13.0/3.0)

| | | | | | | | | | | | | | | | | FIT504 = LT\_0.21173492900000002: one (55.0/14.0)

| | | | | | | | | | | | | | | DPIT301 = GT\_12.544016849999998

| | | | | | | | | | | | | | | | FIT401 = LT\_0.79857865: one (13.0/1.0)

| | | | | | | | | | | | | | | | FIT401 = GT\_0.79857865: zero (20.0/3.0)

| | | | | | | | | | FIT503 = LT\_0.6097366184999999

| | | | | | | | | | | AIT501 = LT\_7.74131627

| | | | | | | | | | | | AIT503 = GT\_1016.24585: one (25.0)

| | | | | | | | | | | | AIT503 = LT\_1016.24585: zero (5.0)

| | | | | | | | | | | AIT501 = GT\_7.74131627

| | | | | | | | | | | | PIT502 = GT\_2.8593855: one (3.0)

| | | | | | | | | | | | PIT502 = LT\_2.8593855

| | | | | | | | | | | | | FIT401 = LT\_0.79857865

| | | | | | | | | | | | | | AIT503 = GT\_1016.24585: one (14.0)

| | | | | | | | | | | | | | AIT503 = LT\_1016.24585

| | | | | | | | | | | | | | | FIT501 = LT\_0.801781585: zero (5.0)

| | | | | | | | | | | | | | | FIT501 = GT\_0.801781585: one (6.0/2.0)

| | | | | | | | | | | | | FIT401 = GT\_0.79857865

| | | | | | | | | | | | | | AIT503 = GT\_1016.24585

| | | | | | | | | | | | | | | FIT504 = GT\_0.21173492900000002

| | | | | | | | | | | | | | | | DPIT301 = LT\_12.544016849999998: one (12.0/2.0)

| | | | | | | | | | | | | | | | DPIT301 = GT\_12.544016849999998: zero (2.0)

| | | | | | | | | | | | | | | FIT504 = LT\_0.21173492900000002: zero (391.0/88.0)

| | | | | | | | | | | | | | AIT503 = LT\_1016.24585: zero (173.0/12.0)

| | | | | | | | AIT201 = LT\_128.5087125

| | | | | | | | | AIT202 = GT\_8.9337995

| | | | | | | | | | MV302 = one

| | | | | | | | | | | FIT201 = GT\_2.316278455

| | | | | | | | | | | | LIT301 = LT\_1010.5982650000001

| | | | | | | | | | | | | FIT504 = GT\_0.21173492900000002: one (5.0)

| | | | | | | | | | | | | FIT504 = LT\_0.21173492900000002

| | | | | | | | | | | | | | FIT502 = LT\_0.3526962995: zero (22.0)

| | | | | | | | | | | | | | FIT502 = GT\_0.3526962995

| | | | | | | | | | | | | | | FIT401 = LT\_0.79857865

| | | | | | | | | | | | | | | | FIT503 = GT\_0.6097366184999999: one (6.0)

| | | | | | | | | | | | | | | | FIT503 = LT\_0.6097366184999999: zero (5.0/2.0)

| | | | | | | | | | | | | | | FIT401 = GT\_0.79857865

| | | | | | | | | | | | | | | | FIT503 = GT\_0.6097366184999999

| | | | | | | | | | | | | | | | | PIT502 = GT\_2.8593855: zero (35.0/5.0)

| | | | | | | | | | | | | | | | | PIT502 = LT\_2.8593855: one (3.0)

| | | | | | | | | | | | | | | | FIT503 = LT\_0.6097366184999999: zero (108.0/47.0)

| | | | | | | | | | | | LIT301 = GT\_1010.5982650000001: zero (79.0/2.0)

| | | | | | | | | | | FIT201 = LT\_2.316278455

| | | | | | | | | | | | AIT503 = GT\_1016.24585

| | | | | | | | | | | | | LIT301 = LT\_1010.5982650000001

| | | | | | | | | | | | | | FIT504 = GT\_0.21173492900000002: one (21.0)

| | | | | | | | | | | | | | FIT504 = LT\_0.21173492900000002

| | | | | | | | | | | | | | | P203 = two: one (77.0/13.0)

| | | | | | | | | | | | | | | P203 = one

| | | | | | | | | | | | | | | | MV201 = two: zero (19.0)

| | | | | | | | | | | | | | | | MV201 = zero

| | | | | | | | | | | | | | | | | FIT503 = GT\_0.6097366184999999: zero (2.0)

| | | | | | | | | | | | | | | | | FIT503 = LT\_0.6097366184999999: one (13.0/5.0)

| | | | | | | | | | | | | | | | MV201 = one

| | | | | | | | | | | | | | | | | FIT503 = GT\_0.6097366184999999: one (18.0/7.0)

| | | | | | | | | | | | | | | | | FIT503 = LT\_0.6097366184999999: zero (129.0/60.0)

| | | | | | | | | | | | | LIT301 = GT\_1010.5982650000001

| | | | | | | | | | | | | | FIT501 = LT\_0.801781585: zero (7.0)

| | | | | | | | | | | | | | FIT501 = GT\_0.801781585: one (240.0/32.0)

| | | | | | | | | | | | AIT503 = LT\_1016.24585

| | | | | | | | | | | | | P101 = two: zero (12.0)

| | | | | | | | | | | | | P101 = one: one (27.0)

| | | | | | | | | | MV302 = zero: zero (6.0)

| | | | | | | | | | MV302 = two

| | | | | | | | | | | P301 = one: zero (410.0)

| | | | | | | | | | | P301 = two

| | | | | | | | | | | | FIT502 = LT\_0.3526962995: zero (37.0)

| | | | | | | | | | | | FIT502 = GT\_0.3526962995

| | | | | | | | | | | | | DPIT301 = LT\_12.544016849999998

| | | | | | | | | | | | | | AIT504 = GT\_24.82055855: zero (31.0/6.0)

| | | | | | | | | | | | | | AIT504 = LT\_24.82055855: one (155.0/47.0)

| | | | | | | | | | | | | DPIT301 = GT\_12.544016849999998: zero (12.0)

| | | | | | | | | AIT202 = LT\_8.9337995

| | | | | | | | | | P301 = one: one (234.0)

| | | | | | | | | | P301 = two

| | | | | | | | | | | FIT502 = LT\_0.3526962995: zero (39.0/9.0)

| | | | | | | | | | | FIT502 = GT\_0.3526962995: one (125.0/25.0)

| | | | | | MV304 = zero: zero (16.0)

| | | | | | MV304 = two: zero (66.0)

| | | | | P601 = two: zero (230.0)

| | | | FIT101 = GT\_4.3850686549999995

| | | | | P101 = two

| | | | | | FIT601 = GT\_0.000288341: zero (46.0)

| | | | | | FIT601 = LT\_0.000288341: one (61.0/4.0)

| | | | | P101 = one: one (157.0)

| | | LIT101 = LT\_545.1423: zero (361.0)

| | FIT301 = GT\_1.7269319900000002: zero (381.0)

LIT401 = LT\_787.028992: one (399.0)

Number of Leaves : 68

Size of the tree : 132

Naive Bayes Classifier

Class

Attribute zero one

(0.87) (0.13)

===========================================

P101

two 5148.0 465.0

one 7924.0 1463.0

[total] 13072.0 1928.0

P203

two 5079.0 472.0

one 7993.0 1456.0

[total] 13072.0 1928.0

P205

two 5079.0 472.0

one 7993.0 1456.0

[total] 13072.0 1928.0

P301

one 6721.0 1116.0

two 6351.0 812.0

[total] 13072.0 1928.0

P401

two 13069.0 1927.0

one 3.0 1.0

[total] 13072.0 1928.0

P601

one 12841.0 1927.0

two 231.0 1.0

[total] 13072.0 1928.0

MV301

one 13053.0 1927.0

zero 16.0 1.0

two 4.0 1.0

[total] 13073.0 1929.0

MV302

one 6458.0 684.0

zero 83.0 1.0

two 6532.0 1244.0

[total] 13073.0 1929.0

MV304

one 12685.0 1927.0

zero 92.0 1.0

two 296.0 1.0

[total] 13073.0 1929.0

UV401

two 12829.0 1927.0

one 243.0 1.0

[total] 13072.0 1928.0

MV101

one 10780.0 1638.0

zero 111.0 10.0

two 2182.0 281.0

[total] 13073.0 1929.0

MV201

two 5162.0 474.0

zero 74.0 17.0

one 7837.0 1438.0

[total] 13073.0 1929.0

MV303

one 12988.0 1927.0

zero 19.0 1.0

two 66.0 1.0

[total] 13073.0 1929.0

FIT101

LT\_4.3850686549999995 12581.0 1713.0

GT\_4.3850686549999995 491.0 215.0

[total] 13072.0 1928.0

LIT101

GT\_545.1423 11744.0 1927.0

LT\_545.1423 1328.0 1.0

[total] 13072.0 1928.0

AIT202

GT\_8.9337995 12610.0 1184.0

LT\_8.9337995 462.0 744.0

[total] 13072.0 1928.0

AIT203

LT\_235.8625945 1329.0 741.0

GT\_235.8625945 11743.0 1187.0

[total] 13072.0 1928.0

FIT201

GT\_2.316278455 4798.0 391.0

LT\_2.316278455 8274.0 1537.0

[total] 13072.0 1928.0

DPIT301

LT\_12.544016849999998 9844.0 1911.0

GT\_12.544016849999998 3228.0 17.0

[total] 13072.0 1928.0

FIT301

LT\_1.7269319900000002 11912.0 1927.0

GT\_1.7269319900000002 1160.0 1.0

[total] 13072.0 1928.0

LIT301

LT\_1010.5982650000001 11668.0 767.0

GT\_1010.5982650000001 1404.0 1161.0

[total] 13072.0 1928.0

AIT402

GT\_6.677774905 9645.0 1.0

LT\_6.677774905 3427.0 1927.0

[total] 13072.0 1928.0

FIT401

LT\_0.79857865 5997.0 161.0

GT\_0.79857865 7075.0 1767.0

[total] 13072.0 1928.0

LIT401

GT\_787.028992 13071.0 1528.0

LT\_787.028992 1.0 400.0

[total] 13072.0 1928.0

AIT501

LT\_7.74131627 9038.0 41.0

GT\_7.74131627 4034.0 1887.0

[total] 13072.0 1928.0

AIT502

GT\_68.25173225 8181.0 107.0

LT\_68.25173225 4891.0 1821.0

[total] 13072.0 1928.0

AIT503

GT\_1016.24585 10105.0 1590.0

LT\_1016.24585 2967.0 338.0

[total] 13072.0 1928.0

AIT504

GT\_24.82055855 6071.0 1676.0

LT\_24.82055855 7001.0 252.0

[total] 13072.0 1928.0

FIT501

LT\_0.801781585 8101.0 90.0

GT\_0.801781585 4971.0 1838.0

[total] 13072.0 1928.0

FIT502

LT\_0.3526962995 8090.0 170.0

GT\_0.3526962995 4982.0 1758.0

[total] 13072.0 1928.0

FIT503

GT\_0.6097366184999999 9959.0 319.0

LT\_0.6097366184999999 3113.0 1609.0

[total] 13072.0 1928.0

FIT504

GT\_0.21173492900000002 6011.0 249.0

LT\_0.21173492900000002 7061.0 1679.0

[total] 13072.0 1928.0

PIT501

GT\_159.94296250000002 9481.0 39.0

LT\_159.94296250000002 3591.0 1889.0

[total] 13072.0 1928.0

PIT502

GT\_2.8593855 10572.0 671.0

LT\_2.8593855 2500.0 1257.0

[total] 13072.0 1928.0

PIT503

GT\_114.481865 9418.0 28.0

LT\_114.481865 3654.0 1900.0

[total] 13072.0 1928.0

FIT601

GT\_0.000288341 8186.0 1476.0

LT\_0.000288341 4886.0 452.0

[total] 13072.0 1928.0

AIT201

GT\_128.5087125 11378.0 394.0

LT\_128.5087125 1694.0 1534.0

[total] 13072.0 1928.0

Meta classifier

J48 pruned tree

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weka.classifiers.trees.J48-2:zero <= 0.714286

| weka.classifiers.trees.J48-2:zero <= 0.318519: one (1846.0/195.0)

| weka.classifiers.trees.J48-2:zero > 0.318519

| | weka.classifiers.bayes.NaiveBayes-3:zero <= 0.039183

| | | weka.classifiers.bayes.NaiveBayes-3:zero <= 0.002789

| | | | weka.classifiers.bayes.NaiveBayes-3:zero <= 0.0001

| | | | | weka.classifiers.trees.J48-2:zero <= 0.56701: zero (95.0/44.0)

| | | | | weka.classifiers.trees.J48-2:zero > 0.56701: one (16.0/3.0)

| | | | weka.classifiers.bayes.NaiveBayes-3:zero > 0.0001

| | | | | weka.classifiers.bayes.NaiveBayes-3:zero <= 0.001204: zero (24.0)

| | | | | weka.classifiers.bayes.NaiveBayes-3:zero > 0.001204

| | | | | | weka.classifiers.bayes.NaiveBayes-3:zero <= 0.001914: one (6.0)

| | | | | | weka.classifiers.bayes.NaiveBayes-3:zero > 0.001914: zero (74.0/28.0)

| | | weka.classifiers.bayes.NaiveBayes-3:zero > 0.002789: one (47.0/17.0)

| | weka.classifiers.bayes.NaiveBayes-3:zero > 0.039183

| | | weka.classifiers.trees.J48-2:zero <= 0.682432

| | | | weka.classifiers.trees.J48-2:zero <= 0.6: one (4.0/1.0)

| | | | weka.classifiers.trees.J48-2:zero > 0.6: zero (30.0/3.0)

| | | weka.classifiers.trees.J48-2:zero > 0.682432: one (2.0)

weka.classifiers.trees.J48-2:zero > 0.714286: zero (12852.0/146.0)

Number of Leaves : 11

Size of the tree : 21

Time taken to build model: 1.55 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 14515 96.7925 %

Incorrectly Classified Instances 481 3.2075 %

Kappa statistic 0.8561

Mean absolute error 0.0518

Root mean squared error 0.1617

Relative absolute error 23.1208 %

Root relative squared error 48.3437 %

Total Number of Instances 14996

=== Detailed Accuracy By Class ===

TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class

0.982 0.130 0.981 0.982 0.982 0.856 0.957 0.989 zero

0.870 0.018 0.879 0.870 0.874 0.856 0.957 0.863 one

Weighted Avg. 0.968 0.116 0.968 0.968 0.968 0.856 0.957 0.973

=== Confusion Matrix ===

a b <-- classified as

12840 230 | a = zero

251 1675 | b = one