=== Run information ===

Scheme: weka.classifiers.functions.LibSVM -S 0 -K 2 -D 3 -G 0.0 -R 0.0 -N 0.5 -M 40.0 -C 1.0 -E 0.001 -P 0.1 -model "C:\\Program Files\\Weka-3-8-5" -seed 1

Relation: KDDTrain20P\_05A.arff-weka.filters.unsupervised.attribute.Remove-R42-weka.filters.unsupervised.attribute.RemoveUseless-M99.0-weka.filters.unsupervised.attribute.SortLabels-R2-SNON-CASE-weka.filters.unsupervised.attribute.OrdinalToNumeric-R2-4-weka.filters.unsupervised.attribute.MathExpression-E(A-MEAN)/SD-weka.filters.unsupervised.attribute.Remove-V-R5,3,28,4,6,27,33,21,31,32,36,23,37,24,12,35,34,30,22,29,38,2,39,25,1,26,10,20,8,13,16,14,17,19,11,15,9,18,last-weka.filters.unsupervised.attribute.Remove-V-R5,3,28,4,6,27,33,21,31,32,36,23,37,24,12,35,34,30,22,29,38,2,39,25,1,26,10,20,8,13,16,14,17,19,11,15,9,18,last

Instances: 25192

Attributes: 39

src\_bytes

service

diff\_srv\_rate

flag

dst\_bytes

same\_srv\_rate

dst\_host\_diff\_srv\_rate

count

dst\_host\_srv\_count

dst\_host\_same\_srv\_rate

dst\_host\_serror\_rate

serror\_rate

dst\_host\_srv\_serror\_rate

srv\_serror\_rate

logged\_in

dst\_host\_srv\_diff\_host\_rate

dst\_host\_same\_src\_port\_rate

dst\_host\_count

srv\_count

srv\_diff\_host\_rate

dst\_host\_rerror\_rate

protocol\_type

dst\_host\_srv\_rerror\_rate

rerror\_rate

duration

srv\_rerror\_rate

hot

is\_guest\_login

wrong\_fragment

num\_compromised

num\_root

root\_shell

num\_file\_creations

num\_access\_files

num\_failed\_logins

su\_attempted

urgent

num\_shells

class

Test mode: 10-fold cross-validation

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

LibSVM wrapper, original code by Yasser EL-Manzalawy (= WLSVM)

Time taken to build model: 20.56 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 24937 98.9878 %

Incorrectly Classified Instances 255 1.0122 %

Kappa statistic 0.9823

Mean absolute error 0.004

Root mean squared error 0.0636

Relative absolute error 1.7685 %

Root relative squared error 18.8077 %

Total Number of Instances 25192

=== Detailed Accuracy By Class ===

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

0.992 0.012 0.989 0.992 0.991 0.980 0.990 0.986 normal

0.997 0.001 0.998 0.997 0.998 0.996 0.998 0.996 dos

0.813 0.001 0.867 0.813 0.840 0.839 0.906 0.707 r2l

0.967 0.003 0.971 0.967 0.969 0.966 0.982 0.942 probe

0.273 0.000 1.000 0.273 0.429 0.522 0.636 0.273 u2r

Weighted Avg. 0.990 0.007 0.990 0.990 0.990 0.983 0.991 0.983

=== Confusion Matrix ===

a b c d e <-- classified as

13341 17 26 65 0 | a = normal

24 9210 0 0 0 | b = dos

36 3 170 0 0 | c = r2l

75 1 0 2213 0 | d = probe

8 0 0 0 3 | e = u2r