=== 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

Instances: 25192

Attributes: 40

duration

protocol\_type

service

flag

src\_bytes

dst\_bytes

land

wrong\_fragment

urgent

hot

num\_failed\_logins

logged\_in

num\_compromised

root\_shell

su\_attempted

num\_root

num\_file\_creations

num\_shells

num\_access\_files

is\_guest\_login

count

srv\_count

serror\_rate

srv\_serror\_rate

rerror\_rate

srv\_rerror\_rate

same\_srv\_rate

diff\_srv\_rate

srv\_diff\_host\_rate

dst\_host\_count

dst\_host\_srv\_count

dst\_host\_same\_srv\_rate

dst\_host\_diff\_srv\_rate

dst\_host\_same\_src\_port\_rate

dst\_host\_srv\_diff\_host\_rate

dst\_host\_serror\_rate

dst\_host\_srv\_serror\_rate

dst\_host\_rerror\_rate

dst\_host\_srv\_rerror\_rate

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: 12.46 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 24934 98.9759 %

Incorrectly Classified Instances 258 1.0241 %

Kappa statistic 0.9821

Mean absolute error 0.0041

Root mean squared error 0.064

Relative absolute error 1.7893 %

Root relative squared error 18.9181 %

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

0.965 0.003 0.971 0.965 0.968 0.965 0.981 0.941 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

78 1 0 2210 0 | d = probe

8 0 0 0 3 | e = u2r