**NAÏVE BAYES IMPLEMENTATION ON CAR EVALUATION DATASET IN WEKA**

SHRUTHI SREE THIRUNAVUKKARASU

1001933428

=== Run information ===

Scheme: weka.classifiers.bayes.NaiveBayes

Relation: car-weka.filters.unsupervised.attribute.StringToNominal-R3,4

Instances: 1728

Attributes: 7

buying

maint

doors

persons

lug\_boot

safety

performance

Test mode: 10-fold cross-validation

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

Naive Bayes Classifier

Class

Attribute unacc acc vgood good

(0.7) (0.22) (0.04) (0.04)

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

buying

vhigh 361.0 73.0 1.0 1.0

high 325.0 109.0 1.0 1.0

med 269.0 116.0 27.0 24.0

low 259.0 90.0 40.0 47.0

[total] 1214.0 388.0 69.0 73.0

maint

vhigh 361.0 73.0 1.0 1.0

high 315.0 106.0 14.0 1.0

med 269.0 116.0 27.0 24.0

low 269.0 93.0 27.0 47.0

[total] 1214.0 388.0 69.0 73.0

doors

2 327.0 82.0 11.0 16.0

3 301.0 100.0 16.0 19.0

4 293.0 103.0 21.0 19.0

5more 293.0 103.0 21.0 19.0

[total] 1214.0 388.0 69.0 73.0

persons

2 577.0 1.0 1.0 1.0

4 313.0 199.0 31.0 37.0

more 323.0 187.0 36.0 34.0

[total] 1213.0 387.0 68.0 72.0

lug\_boot

small 451.0 106.0 1.0 22.0

med 393.0 136.0 26.0 25.0

big 369.0 145.0 41.0 25.0

[total] 1213.0 387.0 68.0 72.0

safety

low 577.0 1.0 1.0 1.0

med 358.0 181.0 1.0 40.0

high 278.0 205.0 66.0 31.0

[total] 1213.0 387.0 68.0 72.0

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 1478 85.5324 %

Incorrectly Classified Instances 250 14.4676 %

Kappa statistic 0.6665

Mean absolute error 0.1137

Root mean squared error 0.2262

Relative absolute error 49.6626 %

Root relative squared error 66.9048 %

Total Number of Instances 1728

=== Detailed Accuracy By Class ===

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

0.960 0.203 0.917 0.960 0.938 0.783 0.982 0.993 unacc

0.706 0.098 0.672 0.706 0.689 0.597 0.950 0.842 acc

0.415 0.001 0.931 0.415 0.574 0.613 0.998 0.953 vgood

0.275 0.007 0.633 0.275 0.384 0.403 0.980 0.538 good

Weighted Avg. 0.855 0.164 0.852 0.855 0.847 0.720 0.976 0.940

=== Confusion Matrix ===

a b c d <-- classified as

1161 48 0 1 | a = unacc

104 271 0 9 | b = acc

0 37 27 1 | c = vgood

1 47 2 19 | d = good