

EXPERIMENT-12

PREDICTION OF CATEGORICAL DATA USING SMO ALGORITHM THROUGH WEKA

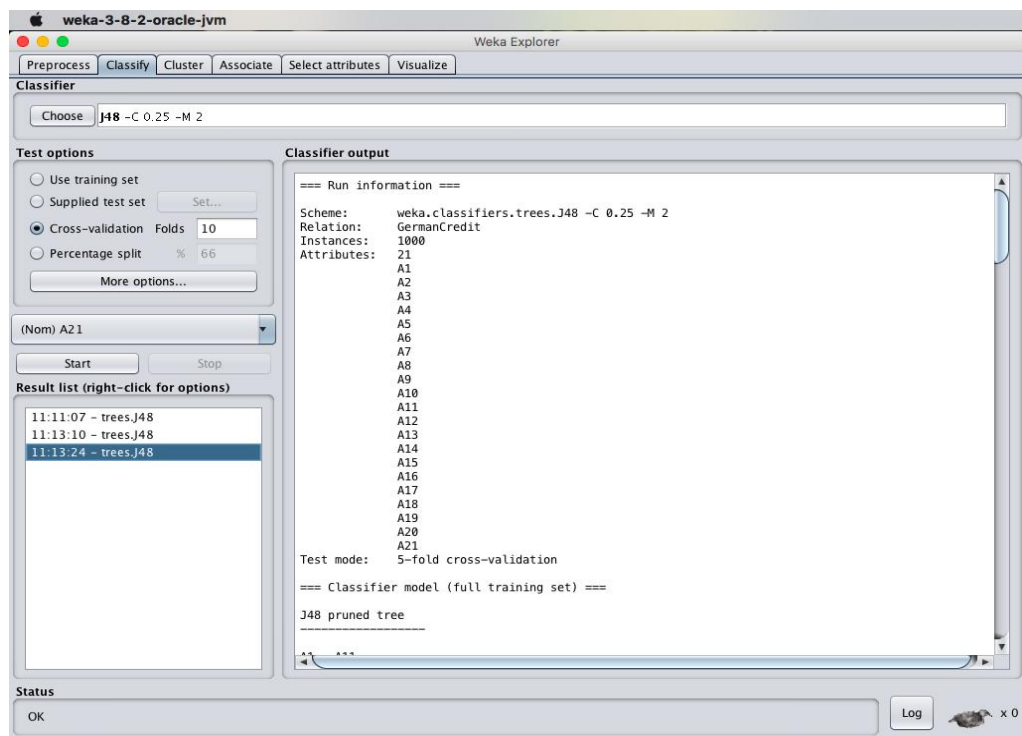
Name: S.G.DEVSACHIN

Reg.No: 192111088

Subject: CSA1672, Data warehouse and data mining

OUTPUT:

DECISION TREE:



weka-3-8-2-oracle-jvm Weka Explorer

Preprocess **Classify** Cluster Associate Select attributes Visualize

Classifier Choose **J48 -C 0.25 -M 2**

Test options

☐ Use training set

☐ Supplied test set Set...

☒ Cross-validation Folds **10**

☐ Percentage split % **66**

More options...

(Nom) A21

Start Stop

Result list (right-click for options)

11:11:07 - trees.J48
11:13:10 - trees.J48
11:13:24 - trees.J48

Classifier output

```

A4 = A46: 1 (0.0)
A4 = A47: 1 (0.0)
A4 = A48: 1 (0.0)
A4 = A49: 1 (0.0)
A4 = A410: 1 (0.0)
A6 = A62
A4 = A40: 2 (15.0/5.0)
A4 = A41: 1 (3.0)
A4 = A42: 2 (4.0/1.0)
A4 = A43: 2 (8.0/2.0)
A4 = A44: 1 (0.0)
A4 = A45: 1 (2.0)
A4 = A46: 1 (0.0)
A4 = A47: 1 (0.0)
A4 = A48: 1 (0.0)
A4 = A49
A15 = A151
A16 <= 1: 1 (2.0)
A16 > 1: 2 (2.0)
A15 = A152: 1 (6.0)
A15 = A153: 2 (1.0)
A4 = A410: 1 (1.0)
A6 = A63: 1 (11.0/3.0)
A6 = A64: 1 (13.0/3.0)
A6 = A65: 1 (41.0/5.0)
A5 > 9857: 2 (20.0/3.0)
A1 = A13: 1 (63.0/14.0)
A1 = A14: 1 (394.0/46.0)

Number of Leaves : 103
Size of the tree : 140

```

Status OK Log x 0

weka-3-8-2-oracle-jvm Weka Explorer

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Classifier Choose **J48 -C 0.25 -M 2**

Test options

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More options...

(Nom) A21

Start Stop

Result list (right-click for options)

11:11:07 - trees.J48
11:13:10 - trees.J48
11:13:24 - trees.J48

Classifier output

```

Number of Leaves : 103
Size of the tree : 140

Time taken to build model: 0.02 seconds

=== Stratified cross-validation ===
=== Summary ===
Correctly Classified Instances 733 73.3 %
Incorrectly Classified Instances 267 26.7 %
Kappa statistic 0.3264
Mean absolute error 0.3293
Root mean squared error 0.4579
Relative absolute error 78.3705 %
Root relative squared error 99.914 %
Total Number of Instances 1000

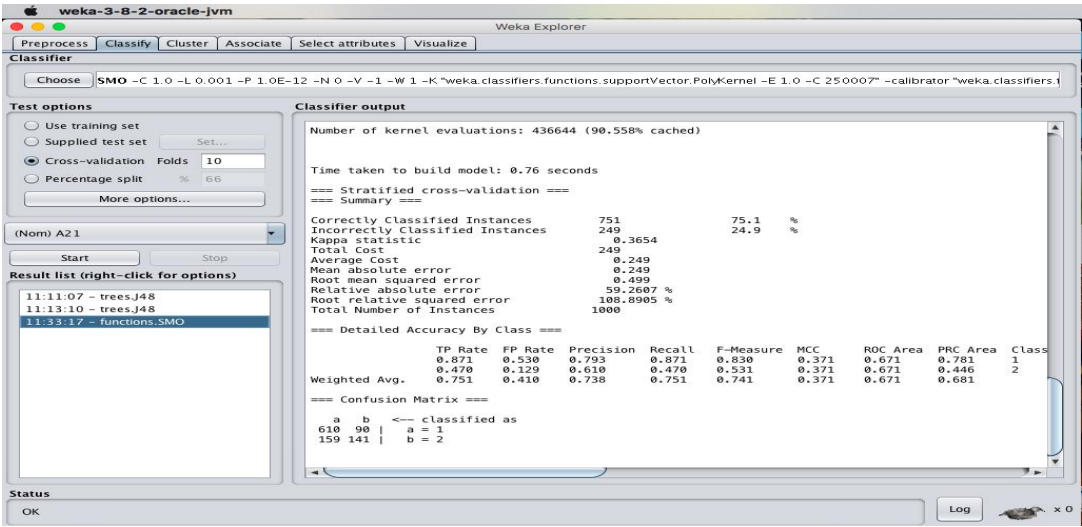
=== Detailed Accuracy By Class ===
TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class
0.851 0.543 0.785 0.851 0.817 0.330 0.685 0.789 1
0.457 0.149 0.568 0.457 0.506 0.330 0.685 0.483 2
Weighted Avg. 0.733 0.425 0.720 0.733 0.724 0.330 0.685 0.697

=== Confusion Matrix ===
a b <- classified as
596 104 | a = 1
163 137 | b = 2

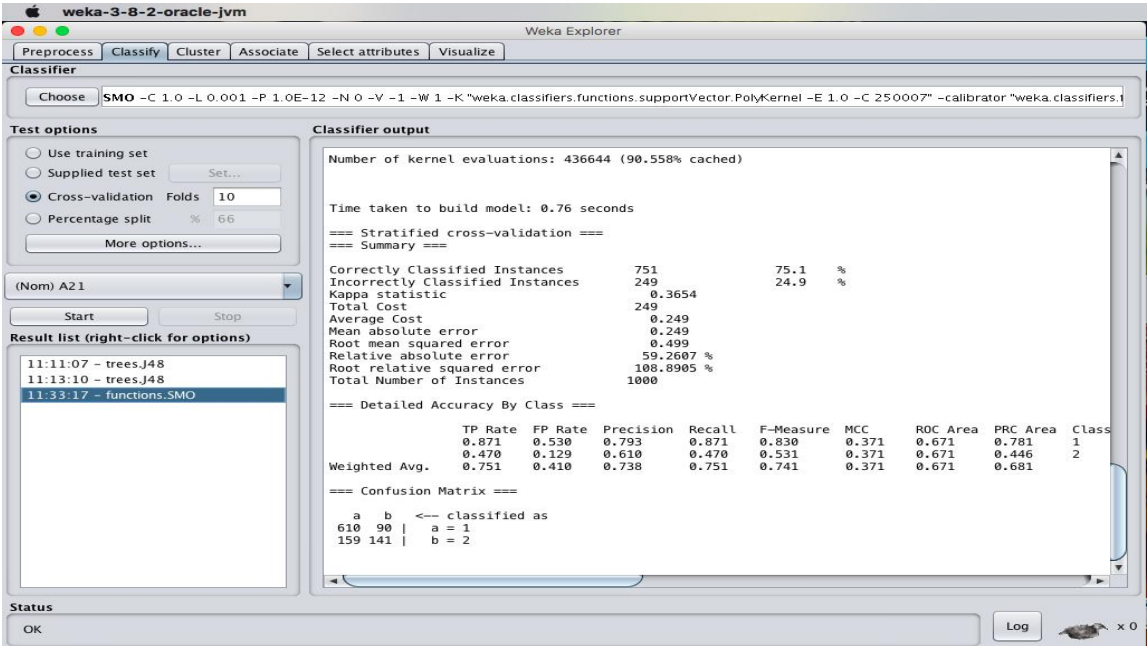
```

Status OK Log x 0

SMO ALGORITHM:



ANALYSIS:



weka-3-8-2-oracle-jvm

Weka Explorer

PreprocessClassifyClusterAssociateSelect attributesVisualize

Classifier

ChooseCostSensitiveClassifier-cost-matrix "[0.0 1.0; 1.0 0.0]" -S 1 -W weka.classifiers.rules.ZeroR

Test options

☐ Use training set

☐ Supplied test set

☒ Cross-validation

☐ Percentage split

Set...

Folds10

%66

More options...

(Nom) A21

StartStop

Result list (right-click for options)

14:17:24 - meta.CostSensitiveClassifier

Classifier output

Cost Matrix

0 1

1 0

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances70070%

Incorrectly Classified Instances30030%

Kappa statistic0

Mean absolute error0.4202

Root mean squared error0.4583

Relative absolute error100%

Root relative squared error100%

Total Number of Instances1000

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
Weighted Avg.	1.000	1.000	0.700	1.000	0.824	?	0.500	0.700	1
	0.000	0.000	?	0.000	?	?	0.500	0.300	2
	0.700	0.700	?	0.700	?	?	0.500	0.500	

=== Confusion Matrix ===

a

b

<- classified as

7000 | a = 1

3000 | b = 2

Status

OK

Log

x 0