Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Classifier

Choose **LWL** -U 0 -K -1 -A "weka.core.neighboursearch.LinearNNSearch -A \"weka.core.EuclideanDistance -R first-last\"" -W weka.classifiers.trees.DecisionSt

Test options

- Use training set
- Supplied test set — Set...
- Cross-validation — Folds 10
- Percentage split — % 66

More options...

(Num) soc

Start | Stop

Result list (right-click for options)

- 15:00:29 - rules.DecisionTable
- 15:00:42 - rules.M5Rules
- 15:01:03 - trees.RandomTree
- 15:01:17 - trees.DecisionStump
- 15:01:38 - functions.SMOreg
- 15:01:52 - functions.MultilayerPerceptron
- 15:02:01 - functions.LinearRegression
- 15:02:18 - functions.GaussianProcesses
- 15:02:45 - lazy.IBk
- 15:02:56 - lazy.KStar

Classifier output

```
               branch
               regno
               phy
               chem
               math
               sci
               soc
Test mode:    evaluate on training data

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

KStar Beta Verion (0.1b).
Copyright (c) 1995-97 by Len Trigg (trigg@cs.waikato.ac.nz).
Java port to Weka by Abdelaziz Mahoui (am14@cs.waikato.ac.nz).

KStar options : -B 20 -M a

Time taken to build model: 0 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0.01 seconds

=== Summary ===

Correlation coefficient                  1
Mean absolute error                      0.0002
Root mean squared error                  0.0005
Relative absolute error                  0.0023 %
Root relative squared error              0.004  %
Total Number of Instances                7
Ignored Class Unknown Instances                 1
```

Status

OK

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Classifier

Choose **IBk** -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A \"weka.core.EuclideanDistance -R first-last\""

Test options

- Use training set
- Supplied test set — Set...
- Cross-validation — Folds 10
- Percentage split — % 66

More options...

(Num) soc

Start | Stop

Result list (right-click for options)

- 15:00:29 - rules.DecisionTable
- 15:00:42 - rules.M5Rules
- 15:01:03 - trees.RandomTree
- 15:01:17 - trees.DecisionStump
- 15:01:38 - functions.SMOreg
- 15:01:52 - functions.MultilayerPerceptron
- 15:02:01 - functions.LinearRegression
- 15:02:18 - functions.GaussianProcesses
- 15:02:45 - lazy.IBk

Classifier output

```
               name
               branch
               regno
               phy
               chem
               math
               sci
               soc
Test mode:    evaluate on training data

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

IB1 instance-based classifier
using 1 nearest neighbour(s) for classification


Time taken to build model: 0 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0.01 seconds

=== Summary ===

Correlation coefficient                  1
Mean absolute error                      0
Root mean squared error                  0
Relative absolute error                  0      %
Root relative squared error              0      %
Total Number of Instances                7
Ignored Class Unknown Instances                  1
```

Status

OK

Log

x 0

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Classifier

Choose **GaussianProcesses** -L 1.0 -N 0 -K "weka.classifiers.functions.supportVector.PolyKernel -E 1.0 -C 250007" -S 1

Test options

- Use training set
- Supplied test set — Set...
- Cross-validation — Folds 10
- Percentage split — % 66

More options...

(Num) soc

Start | Stop

Result list (right-click for options)

- 15:00:29 - rules.DecisionTable
- 15:00:42 - rules.M5Rules
- 15:01:03 - trees.RandomTree
- 15:01:17 - trees.DecisionStump
- 15:01:38 - functions.SMOreg
- 15:01:52 - functions.MultilayerPerceptron
- 15:02:01 - functions.LinearRegression
- 15:02:18 - functions.GaussianProcesses

Classifier output

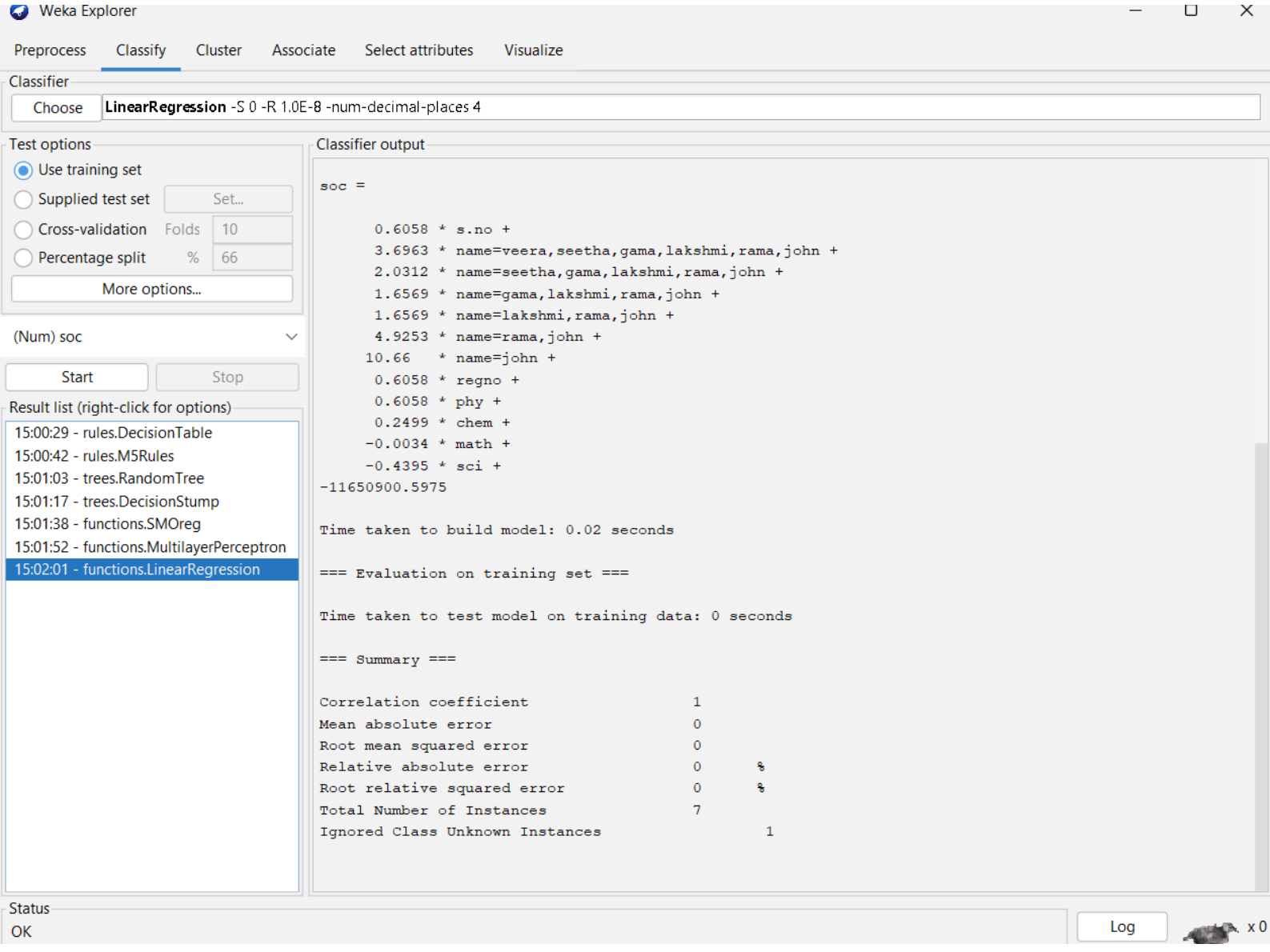
```
Kernel used:
  Linear Kernel: K(x,y) = <x,y>

All values shown based on: Normalize training data

Average Target Value : 0.4571428571428572
Inverted Covariance Matrix:
    Lowest Value = -0.12297573221523138
    Highest Value = 0.4780622867999899
Inverted Covariance Matrix * Target-value Vector:
    Lowest Value = -0.20461515650560352
    Highest Value = 0.1817828162662378



Time taken to build model: 0.02 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0.01 seconds

=== Summary ===

Correlation coefficient                  0.9969
Mean absolute error                      4.1848
Root mean squared error                  5.2228
Relative absolute error                 41.6775 %
Root relative squared error             40.512  %
Total Number of Instances                7
Ignored Class Unknown Instances                  1
```

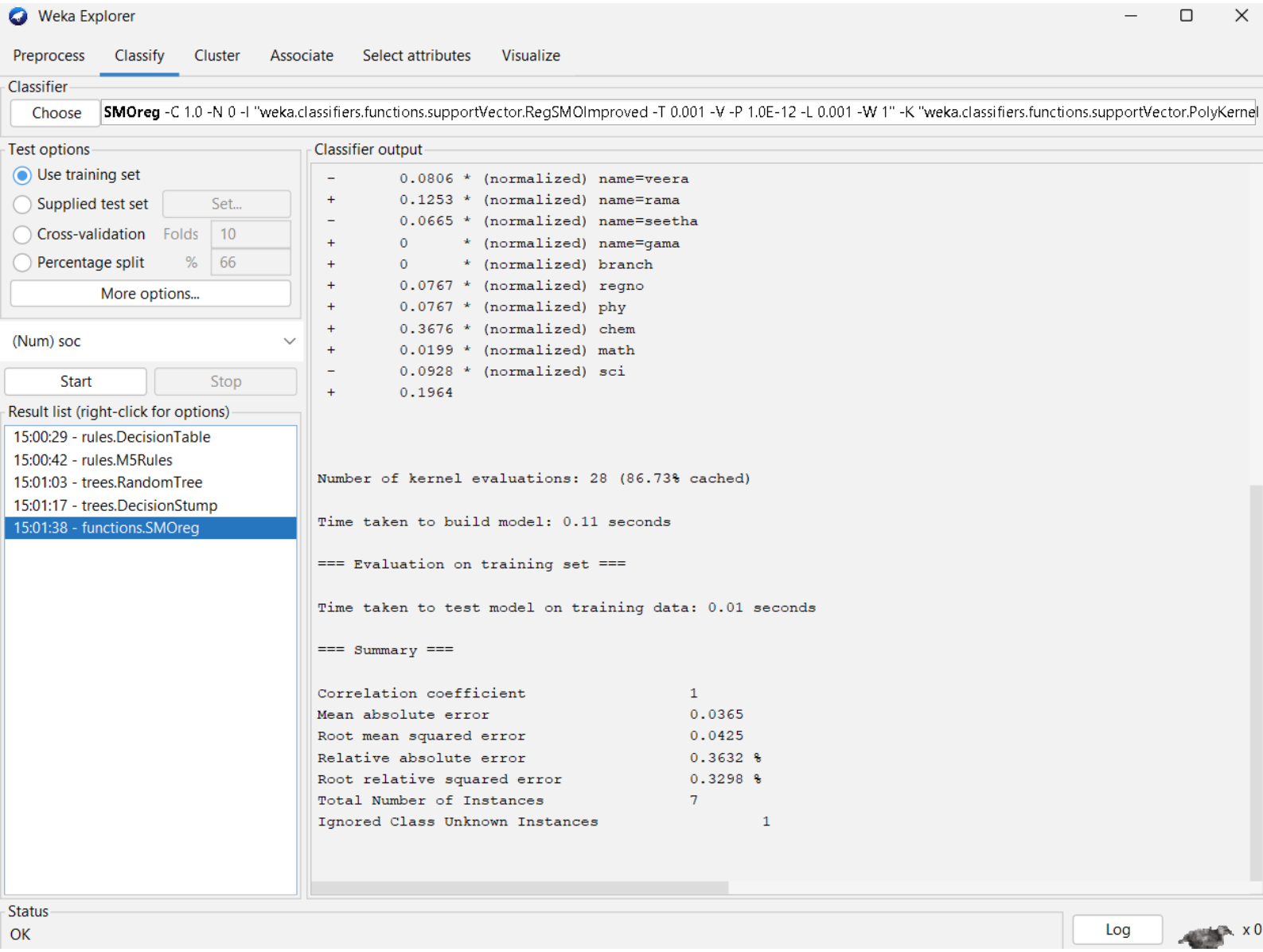
Status

OK

Log

x


Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Classifier
Choose
LinearRegression -S 0 -R 1.0E-8 -num-decimal-places 4
Test options
Use training set
Supplied test set
Set...
Cross-validation
Folds
10
Percentage split
%
66
More options...
(Num) soc
Start
Stop
Result list (right-click for options)
15:00:29 - rules.DecisionTable
15:00:42 - rules.M5Rules
15:01:03 - trees.RandomTree
15:01:17 - trees.DecisionStump
15:01:38 - functions.SMOreg
15:01:52 - functions.MultilayerPerceptron
15:02:01 - functions.LinearRegression
Classifier output
soc =
0.6058 * s.no +
3.6963 * name=veera,seetha,gama,lakshmi,rama,john +
2.0312 * name=seetha,gama,lakshmi,rama,john +
1.6569 * name=gama,lakshmi,rama,john +
1.6569 * name=lakshmi,rama,john +
4.9253 * name=rama,john +
10.66 * name=john +
0.6058 * regno +
0.6058 * phy +
0.2499 * chem +
-0.0034 * math +
-0.4395 * sci +
-11650900.5975
Time taken to build model: 0.02 seconds
=== Evaluation on training set ===
Time taken to test model on training data: 0 seconds
=== Summary ===
Correlation coefficient 1
Mean absolute error 0
Root mean squared error 0
Relative absolute error 0 %
Root relative squared error 0 %
Total Number of Instances 7
Ignored Class Unknown Instances 1
Status
OK
Log
x 0


Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Classifier
Choose
SMOreg -C 1.0 -N 0 -I "weka.classifiers.functions.supportVector.RegSMOImproved -T 0.001 -V -P 1.0E-12 -L 0.001 -W 1" -K "weka.classifiers.functions.supportVector.PolyKernel
Test options
Use training set
Supplied test set
Set...
Cross-validation
Folds
10
Percentage split
%
66
More options...
(Num) soc
Start
Stop
Result list (right-click for options)
15:00:29 - rules.DecisionTable
15:00:42 - rules.M5Rules
15:01:03 - trees.RandomTree
15:01:17 - trees.DecisionStump
15:01:38 - functions.SMOreg
Classifier output
- 0.0806 * (normalized) name=veera
+ 0.1253 * (normalized) name=rama
- 0.0665 * (normalized) name=seetha
+ 0 * (normalized) name=gama
+ 0 * (normalized) branch
+ 0.0767 * (normalized) regno
+ 0.0767 * (normalized) phy
+ 0.3676 * (normalized) chem
+ 0.0199 * (normalized) math
- 0.0928 * (normalized) sci
+ 0.1964
Number of kernel evaluations: 28 (86.73% cached)
Time taken to build model: 0.11 seconds
=== Evaluation on training set ===
Time taken to test model on training data: 0.01 seconds
=== Summary ===
Correlation coefficient 1
Mean absolute error 0.0365
Root mean squared error 0.0425
Relative absolute error 0.3632 %
Root relative squared error 0.3298 %
Total Number of Instances 7
Ignored Class Unknown Instances 1
Status
OK
Log
x 0

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Classifier

Choose **DecisionStump**

Test options

- Use training set
- Supplied test set — Set...
- Cross-validation — Folds 10
- Percentage split — % 66

More options...

(Num) soc

Start | Stop

Result list (right-click for options)

- 15:00:29 - rules.DecisionTable
- 15:00:42 - rules.M5Rules
- 15:01:03 - trees.RandomTree
- 15:01:17 - trees.DecisionStump

Classifier output

```
               chem
               math
               sci
               soc
Test mode:     evaluate on training data

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

Decision Stump

Classifications

s.no <= 2.5 : 16.5
s.no > 2.5 : 40.0
s.no is missing : 33.285714285714285


Time taken to build model: 0 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0 seconds

=== Summary ===

Correlation coefficient                  0.8235
Mean absolute error                      5.8571
Root mean squared error                  7.3144
Relative absolute error                 58.3333 %
Root relative squared error             56.7357 %
Total Number of Instances                7
Ignored Class Unknown Instances                  1
```

Status

OK

Log | x 0

Classifier

Choose **RandomTree** -K 0 -M 1.0 -V 0.001 -S 1

Test options

- Use training set
- Supplied test set — Set...
- Cross-validation — Folds 10
- Percentage split — % 66

More options...

(Num) soc

Start | Stop

Result list (right-click for options)

- 15:00:29 - rules.DecisionTable
- 15:00:42 - rules.M5Rules
- 15:01:03 - trees.RandomTree

Classifier output

```
==========

s.no < 2.5
|   s.no < 1.5 : 15 (1/0)
|   s.no >= 1.5 : 18 (1/0)
s.no >= 2.5
|   name = bhavya : 0 (0/0)
|   name = sneha : 0 (0/0)
|   name = john : 55 (1/0)
|   name = lakshmi : 36 (1/0)
|   name = veera : 32 (1/0)
|   name = rama : 44 (1/0)
|   name = seetha : 33 (1/0)
|   name = gama : 0 (0/0)

Size of the tree : 13

Time taken to build model: 0 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0 seconds

=== Summary ===

Correlation coefficient                  1
Mean absolute error                      0
Root mean squared error                  0
Relative absolute error                  0      %
Root relative squared error              0      %
Total Number of Instances                7
Ignored Class Unknown Instances                  1
```

Status

OK

Log

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Classifier

Choose **M5Rules** -M 4.0 -num-decimal-places 4

Test options

- Use training set
- Supplied test set — Set...
- Cross-validation — Folds 10
- Percentage split — % 66

More options...

(Num) soc

Start | Stop

Result list (right-click for options)

15:00:29 - rules.DecisionTable
15:00:42 - rules.M5Rules

Classifier output

```
Rule: 1
IF
        s.no > 2.5
THEN

soc =
        20.9833 * name=rama,john
        + 28.5167 [5/28.85%]

Rule: 2

soc =
        + 16.5 [2/100%]



Time taken to build model: 0.08 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0 seconds

=== Summary ===

Correlation coefficient                  0.9481
Mean absolute error                      4.2071
Root mean squared error                  4.6787
Relative absolute error                 41.9004 %
Root relative squared error             36.2918 %
Total Number of Instances                7
Ignored Class Unknown Instances                  1
```

Status

OK

Log

x 0

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Classifier

Choose **DecisionTable** -X 1 -S "weka.attributeSelection.BestFirst -D 1 -N 5"

Test options

- Use training set
- Supplied test set — Set...
- Cross-validation — Folds 10
- Percentage split — % 66

More options...

(Num) soc

Start | Stop

Result list (right-click for options)

15:00:29 - rules.DecisionTable

Classifier output

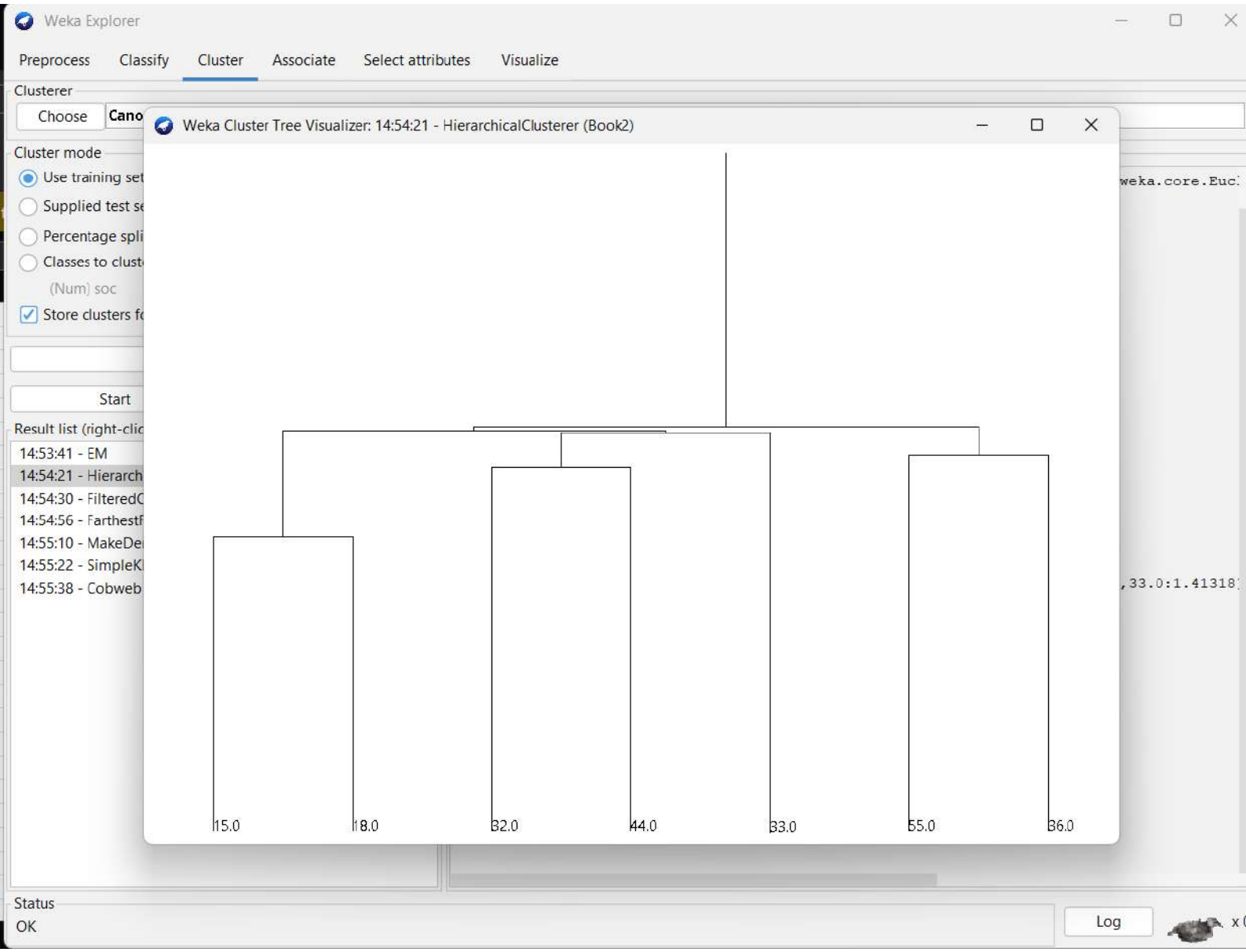
```
=== Classifier model (full training set) ===

Decision Table:

Number of training instances: 7
Number of Rules : 6
Non matches covered by Majority class.
        Best first.
        Start set: no attributes
        Search direction: forward
        Stale search after 5 node expansions
        Total number of subsets evaluated: 44
        Merit of best subset found:    9.361
Evaluation (for feature selection): CV (leave one out)
Feature set: 6,7,9

Time taken to build model: 0.01 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0 seconds

=== Summary ===

Correlation coefficient                  0.9981
Mean absolute error                      0.4286
Root mean squared error                  0.8018
Relative absolute error                  4.2683 %
Root relative squared error              6.2192 %
Total Number of Instances                7
Ignored Class Unknown Instances                  1
```

Status

OK

Log

x 0


Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Clusterer
Choose
Cano
Cluster mode
Use training set
Supplied test se
Percentage spli
Classes to clust
(Num) soc
Store clusters fo
Start
Result list (right-clic
14:53:41 - EM
14:54:21 - Hierarch
14:54:30 - FilteredC
14:54:56 - FarthestF
14:55:10 - MakeDe
14:55:22 - SimpleK
14:55:38 - Cobweb
Weka Cluster Tree Visualizer: 14:54:21 - HierarchicalClusterer (Book2)
15.0
18.0
32.0
44.0
33.0
55.0
36.0
weka.core.Euc
,33.0:1.41318
Status
OK
Log

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Attribute Evaluator

Choose **CfsSubsetEval** -P 1 -E 1

Search Method

Choose **BestFirst** -D 1 -N 5

Attribute Selection Mode

- Use full training set
- Cross-validation — Folds 10, Seed 1

No class

Start | Stop

Result list (right-click for options)

14:57:57 - BestFirst + CfsSubsetEval

Attribute selection output

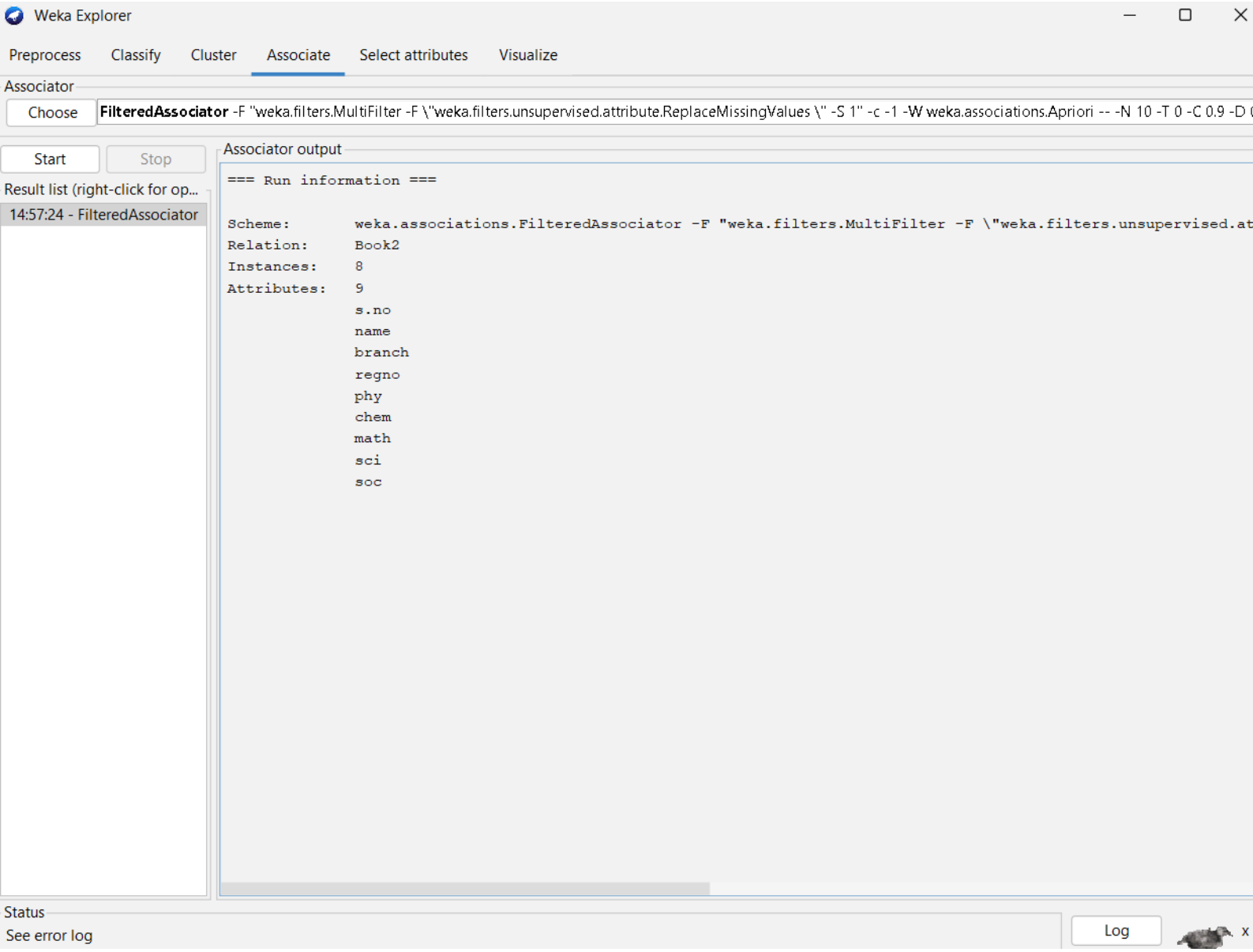
```
                name
                branch
                regno
                phy
                chem
                math
                sci
                soc
Evaluation mode:    evaluate on all training data



=== Attribute Selection on all input data ===

Search Method:
        Best first.
        Start set: no attributes
        Search direction: forward
        Stale search after 5 node expansions
        Total number of subsets evaluated: 38
        Merit of best subset found:    1

Attribute Subset Evaluator (supervised, Class (numeric): 9 soc):
        CFS Subset Evaluator
        Including locally predictive attributes

Selected attributes: 1,6 : 2
                     s.no
                     chem
```

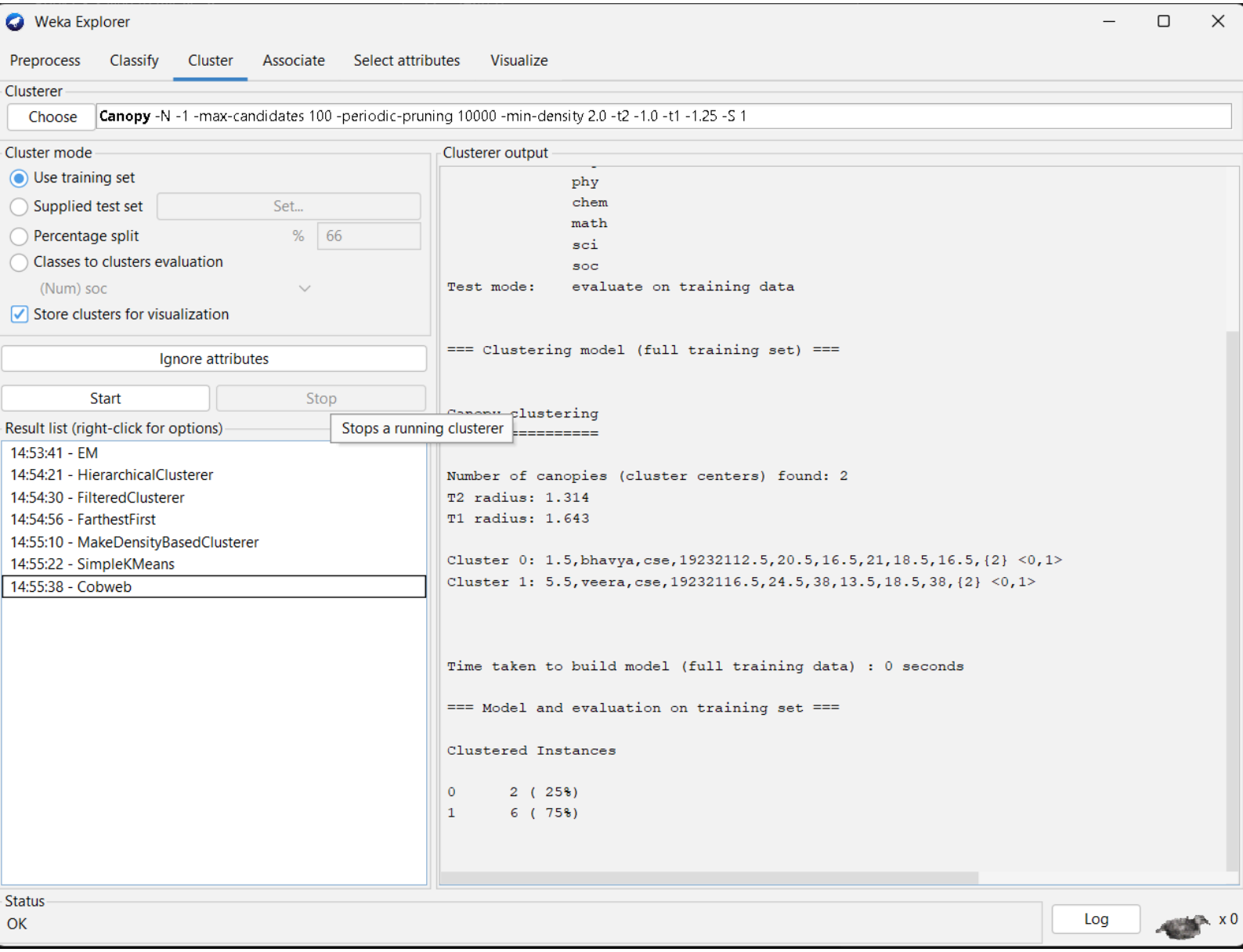
Status

OK

Log

x 0


Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Associator
Choose
FilteredAssociator -F "weka.filters.MultiFilter -F \"weka.filters.unsupervised.attribute.ReplaceMissingValues \" -S 1" -c -1 -W weka.associations.Apriori -- -N 10 -T 0 -C 0.9 -D
Start
Stop
Result list (right-click for op...
14:57:24 - FilteredAssociator
Associator output
=== Run information ===
Scheme: weka.associations.FilteredAssociator -F "weka.filters.MultiFilter -F \"weka.filters.unsupervised.at
Relation: Book2
Instances: 8
Attributes: 9
s.no
name
branch
regno
phy
chem
math
sci
soc
Status
See error log
Log
x


Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Clusterer
Choose
Canopy -N -1 -max-candidates 100 -periodic-pruning 10000 -min-density 2.0 -t2 -1.0 -t1 -1.25 -S 1
Cluster mode
Use training set
Supplied test set
Set...
Percentage split
%
66
Classes to clusters evaluation
(Num) soc
Store clusters for visualization
Ignore attributes
Start
Stop
Result list (right-click for options)
14:53:41 - EM
14:54:21 - HierarchicalClusterer
14:54:30 - FilteredClusterer
14:54:56 - FarthestFirst
14:55:10 - MakeDensityBasedClusterer
14:55:22 - SimpleKMeans
14:55:38 - Cobweb
Stops a running clusterer
Clusterer output
phy
chem
math
sci
soc
Test mode: evaluate on training data
=== Clustering model (full training set) ===
Canopy clustering
==========
Number of canopies (cluster centers) found: 2
T2 radius: 1.314
T1 radius: 1.643
Cluster 0: 1.5,bhavya,cse,19232112.5,20.5,16.5,21,18.5,16.5,{2} <0,1>
Cluster 1: 5.5,veera,cse,19232116.5,24.5,38,13.5,18.5,38,{2} <0,1>
Time taken to build model (full training data) : 0 seconds
=== Model and evaluation on training set ===
Clustered Instances
0 2 (25%)
1 6 (75%)
Status
OK
Log
x 0

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Clusterer

Choose **Cobweb** -A 1.0 -C 0.0028209479177387815 -S 42

Cluster mode

- (•) Use training set
- ( ) Supplied test set — Set...
- ( ) Percentage split — % 66
- ( ) Classes to clusters evaluation
  (Num) soc
- [x] Store clusters for visualization

Ignore attributes

Start | Stop

Result list (right-click for options)

- 14:53:41 - EM
- 14:54:21 - HierarchicalClusterer
- 14:54:30 - FilteredClusterer
- 14:54:56 - FarthestFirst
- 14:55:10 - MakeDensityBasedClusterer
- 14:55:22 - SimpleKMeans
- 14:55:38 - Cobweb

Clusterer output

```
|   leaf 1 [1]
node 0 [8]
|   node 2 [2]
|   |   leaf 3 [1]
|   node 2 [2]
|   |   leaf 4 [1]
node 0 [8]
|   leaf 5 [1]
node 0 [8]
|   leaf 6 [1]
node 0 [8]
|   node 7 [2]
|   |   leaf 8 [1]
|   node 7 [2]
|   |   leaf 9 [1]
node 0 [8]
|   leaf 10 [1]



Time taken to build model (full training data) : 0.02 seconds

=== Model and evaluation on training set ===

Clustered Instances

 1       1 ( 13%)
 3       1 ( 13%)
 4       1 ( 13%)
 5       1 ( 13%)
 6       1 ( 13%)
 8       1 ( 13%)
 9       1 ( 13%)
10       1 ( 13%)
```

Status

OK

Log

x 0

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Clusterer

Choose **SimpleKMeans** -init 0 -max-candidates 100 -periodic-pruning 10000 -min-density 2.0 -t1 -1.25 -t2 -1.0 -N 2 -A "weka.core.EuclideanDistance -R first-last" -I 500 -num-slots 1

Cluster mode

- (•) Use training set
- ( ) Supplied test set — Set...
- ( ) Percentage split — % 66
- ( ) Classes to clusters evaluation
  (Num) soc
- [x] Store clusters for visualization

Ignore attributes

Start | Stop

Result list (right-click for options)

- 14:53:41 - EM
- 14:54:21 - HierarchicalClusterer
- 14:54:30 - FilteredClusterer
- 14:54:56 - FarthestFirst
- 14:55:10 - MakeDensityBasedClusterer
- 14:55:22 - SimpleKMeans

Clusterer output

```
Cluster 0: 6,rama,cse,19232117,25,44,15,22,44
Cluster 1: 2,sneha,cse,19232113,21,18,22,18,18

Missing values globally replaced with mean/mode

Final cluster centroids:
                                Cluster#
Attribute       Full Data             0             1
                    (8.0)         (5.0)         (3.0)
=====================================================
s.no                 4.5           5.8        2.3333
name              bhavya          john        bhavya
branch               cse           cse           cse
regno         19232115.5    19232116.8 19232113.3333
phy                23.5          24.8       21.3333
chem                 31          35.8            23
math              22.75          20.4       26.6667
sci              18.875          19.6       17.6667
soc              33.2857       39.4571            23



Time taken to build model (full training data) : 0 seconds

=== Model and evaluation on training set ===

Clustered Instances

0       5 ( 63%)
1       3 ( 38%)
```

Status

OK

Log

x

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Clusterer

Choose **MakeDensityBasedClusterer** -M 1.0E-6 -W weka.clusterers.SimpleKMeans -- -init 0 -max-candidates 100 -periodic-pruning 10000 -min-density 2.0 -t1 -1.25 -t2 -1.0 -N 2 -A

Cluster mode

- (•) Use training set
- ( ) Supplied test set — Set...
- ( ) Percentage split — % 66
- ( ) Classes to clusters evaluation

(Num) soc

[x] Store clusters for visualization

Ignore attributes

Start | Stop

Result list (right-click for options)

14:53:41 - EM
14:54:21 - HierarchicalClusterer
14:54:30 - FilteredClusterer
14:54:56 - FarthestFirst
14:55:10 - MakeDensityBasedClusterer

Clusterer output

```
Attribute: s.no
Normal Distribution. Mean = 2.3333 StdDev = 1.2472
Attribute: name
Discrete Estimator. Counts =  2 2 1 2 1 1 1 1  (Total = 11)
Attribute: branch
Discrete Estimator. Counts =  4  (Total = 4)
Attribute: regno
Normal Distribution. Mean = 19232113.3333 StdDev = 1.2472
Attribute: phy
Normal Distribution. Mean = 21.3333 StdDev = 1.2472
Attribute: chem
Normal Distribution. Mean = 23 StdDev = 9.2736
Attribute: math
Normal Distribution. Mean = 26.6667 StdDev = 8.0554
Attribute: sci
Normal Distribution. Mean = 17.6667 StdDev = 1.2472
Attribute: soc
Normal Distribution. Mean = 23 StdDev = 9.2736


Time taken to build model (full training data) : 0.01 seconds

=== Model and evaluation on training set ===

Clustered Instances

0       5 ( 63%)
1       3 ( 38%)


Log likelihood: -21.40927
```

Status

OK

Log

x 0

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Clusterer

Choose **FarthestFirst** -N 2 -S 1

Cluster mode

- (•) Use training set
- ( ) Supplied test set — Set...
- ( ) Percentage split — % 66
- ( ) Classes to clusters evaluation

(Num) soc

[x] Store clusters for visualization

Ignore attributes

Start | Stop

Result list (right-click for options)

14:53:41 - EM
14:54:21 - HierarchicalClusterer
14:54:30 - FilteredClusterer
14:54:56 - FarthestFirst

Clusterer output

```
                regno
                phy
                chem
                math
                sci
                soc
Test mode:    evaluate on training data


=== Clustering model (full training set) ===


FarthestFirst
==============

Cluster centroids:

Cluster 0
         6.0 rama cse 1.9232117E7 25.0 44.0 15.0 22.0 44.0
Cluster 1
         1.0 bhavya cse 1.9232112E7 20.0 15.0 20.0 19.0 15.0



Time taken to build model (full training data) : 0 seconds

=== Model and evaluation on training set ===

Clustered Instances

0       6 ( 75%)
1       2 ( 25%)
```

Status

OK

Log

x 0

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Clusterer

Choose **FilteredClusterer** -F "weka.filters.AllFilter " -W weka.clusterers.SimpleKMeans -- -init 0 -max-candidates 100 -periodic-pruning 10000 -min-density 2.0 -t1 -1.25 -t2 -1.0 -N 2 -

Cluster mode

- (•) Use training set
- ( ) Supplied test set — Set...
- ( ) Percentage split — % 66
- ( ) Classes to clusters evaluation

(Num) soc

[x] Store clusters for visualization

Ignore attributes

Start | Stop

Result list (right-click for options)

14:53:41 - EM
14:54:21 - HierarchicalClusterer
14:54:30 - FilteredClusterer

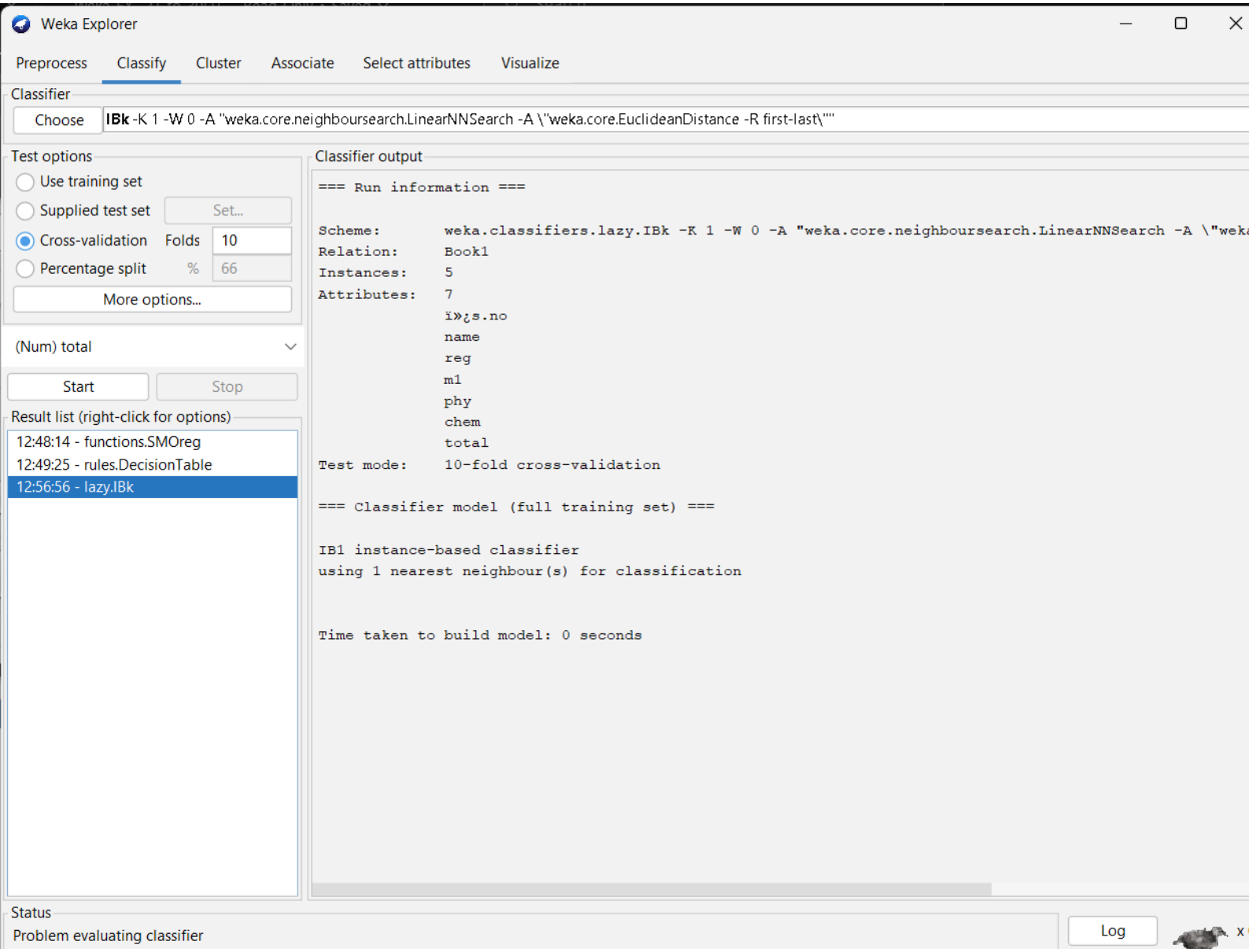
Clusterer output

```
Initial starting points (random):

Cluster 0: 6,rama,cse,19232117,25,44,15,22,44
Cluster 1: 2,sneha,cse,19232113,21,18,22,18,18

Missing values globally replaced with mean/mode

Final cluster centroids:
                                Cluster#
Attribute       Full Data             0             1
                    (8.0)         (5.0)         (3.0)
=====================================================
s.no                 4.5           5.8        2.3333
name              bhavya          john        bhavya
branch               cse           cse           cse
regno         19232115.5    19232116.8 19232113.3333
phy                23.5          24.8       21.3333
chem                 31          35.8            23
math              22.75          20.4       26.6667
sci              18.875          19.6       17.6667
soc              33.2857       39.4571            23



Time taken to build model (full training data) : 0 seconds

=== Model and evaluation on training set ===

Clustered Instances

0       5 ( 63%)
1       3 ( 38%)
```

Status

OK

Log x 0


Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Classifier
Choose
IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A \"weka.core.EuclideanDistance -R first-last\""
Test options
Use training set
Supplied test set
Set...
Cross-validation
Folds
10
Percentage split
%
66
More options...
(Num) total
Start
Stop
Result list (right-click for options)
12:48:14 - functions.SMOreg
12:49:25 - rules.DecisionTable
12:56:56 - lazy.IBk
Classifier output
=== Run information ===
Scheme: weka.classifiers.lazy.IBk -K 1 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A \"weka
Relation: Book1
Instances: 5
Attributes: 7
ï»¿s.no
name
reg
m1
phy
chem
total
Test mode: 10-fold cross-validation
=== Classifier model (full training set) ===
IB1 instance-based classifier
using 1 nearest neighbour(s) for classification
Time taken to build model: 0 seconds
Status
Problem evaluating classifier
Log

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Clusterer

Choose **HierarchicalClusterer** -N 2 -L SINGLE -P -A "weka.core.EuclideanDistance -R first-last"

Cluster mode

- (•) Use training set
- ( ) Supplied test set — Set...
- ( ) Percentage split — % 66
- ( ) Classes to clusters evaluation
  (Num) total
- [x] Store clusters for visualization

Ignore attributes

Start | Stop

Result list (right-click for options)

- 11:22:48 - EM
- 11:26:37 - SimpleKMeans
- 11:28:59 - SimpleKMeans
- 11:29:36 - SimpleKMeans
- 11:52:07 - SimpleKMeans
- 11:52:23 - EM
- 11:55:07 - HierarchicalClusterer

Clusterer output

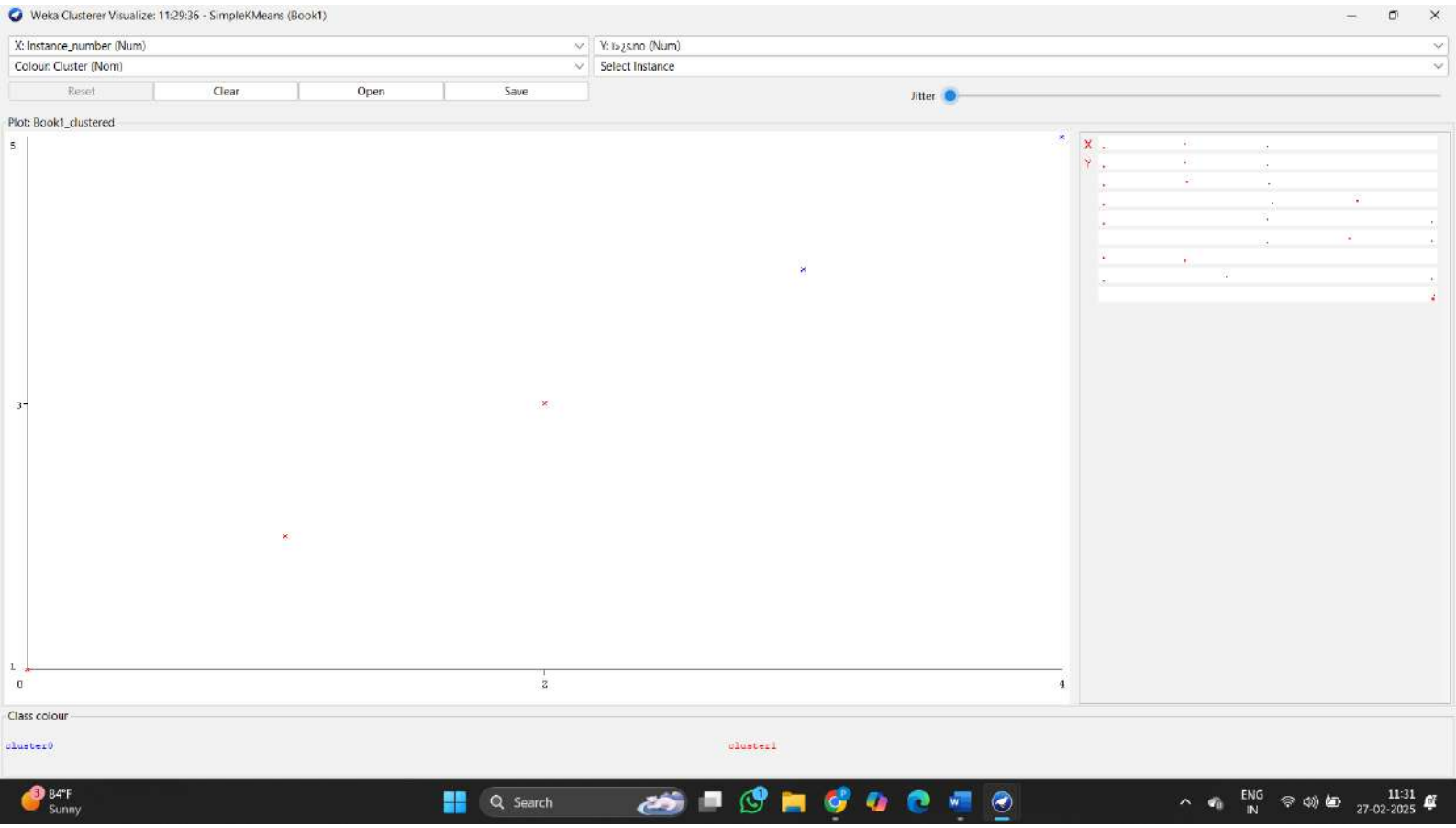
```
Relation:     Book1
Instances:    5
Attributes:   7
              i»¿s.no
              name
              reg
              m1
              phy
              chem
              total
Test mode:    evaluate on training data


=== Clustering model (full training set) ===

Cluster 0
(45.0:1.47528,(48.0:1.37645,53.0:1.37645):0.09883)

Cluster 1
(47.0:1.56569,45.0:1.56569)



Time taken to build model (full training data) : 0 seconds

=== Model and evaluation on training set ===

Clustered Instances

0       3 ( 60%)
1       2 ( 40%)
```

Status

OK

Log

x 0



Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Clusterer

Choose **EM** -I 100 -N -1 -X 10 -max -1 -ll-cv 1.0E-6 -ll-iter 1.0E-6 -M 1.0E-6 -K 10 -num-slots 1 -S 100

Cluster mode

- (•) Use training set
- ( ) Supplied test set — Set...
- ( ) Percentage split — % 66
- ( ) Classes to clusters evaluation
  - (Num) total
- [x] Store clusters for visualization

Ignore attributes

Start | Stop

Result list (right-click for options)

11:22:48 - EM

Clusterer output

```
                   (1)
======================
ï»¿s.no
  mean               3
  std. dev.     1.4142

name
  bhavya             2
  pavani             2
  lmi                2
  slmi               2
  kimi               2
  [total]           10
reg
  mean           518.4
  std. dev.   346.5092

m1
  mean              14
  std. dev.     2.2804

phy
  mean              17
  std. dev.     1.4142

chem
  mean            16.6
  std. dev.     1.3565

total
  mean            47.6
  std. dev.     2.9394
```

Status

OK

Log

x 0

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Clusterer

Choose **SimpleKMeans** -init 0 -max-candidates 100 -periodic-pruning 10000 -min-density 2.0 -t1 -1.25 -t2 -1.0 -N 2 -A "weka.core.EuclideanDistance -R first-last" -I 500 -num-slots 1

Cluster mode

- Use training set
- Supplied test set — Set...
- Percentage split — % 66
- Classes to clusters evaluation
  - (Num) total
- Store clusters for visualization

Ignore attributes

Start | Stop

Result list (right-click for options)

- 11:22:48 - EM
- 11:26:37 - SimpleKMeans

Clusterer output

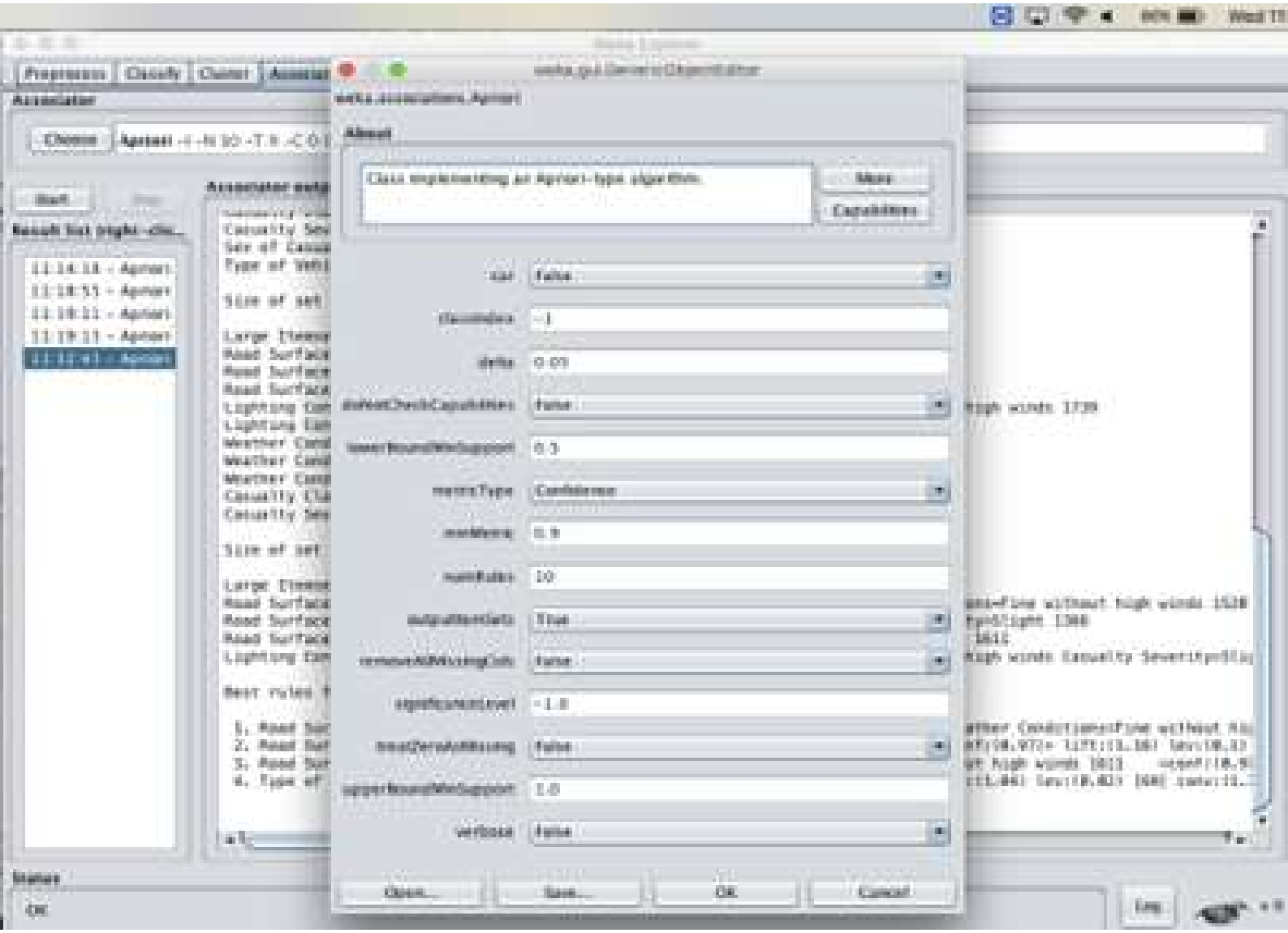
```
Initial starting points (random):

Cluster 0: 4,slmi,129,13,15,19,47
Cluster 1: 2,pavani,789,15,18,15,48

Missing values globally replaced with mean/mode

Final cluster centroids:
                        Cluster#
Attribute    Full Data          0          1
                 (5.0)      (2.0)      (3.0)
============================================
ï»¿s.no              3        4.5          2
name            bhavya       slmi     bhavya
reg              518.4      556.5        493
m1                  14       12.5         15
phy                 17       15.5         18
chem              16.6         18    15.6667
total             47.6         46    48.6667



Time taken to build model (full training data) : 0 seconds

=== Model and evaluation on training set ===

Clustered Instances

0       2 ( 40%)
1       3 ( 60%)
```

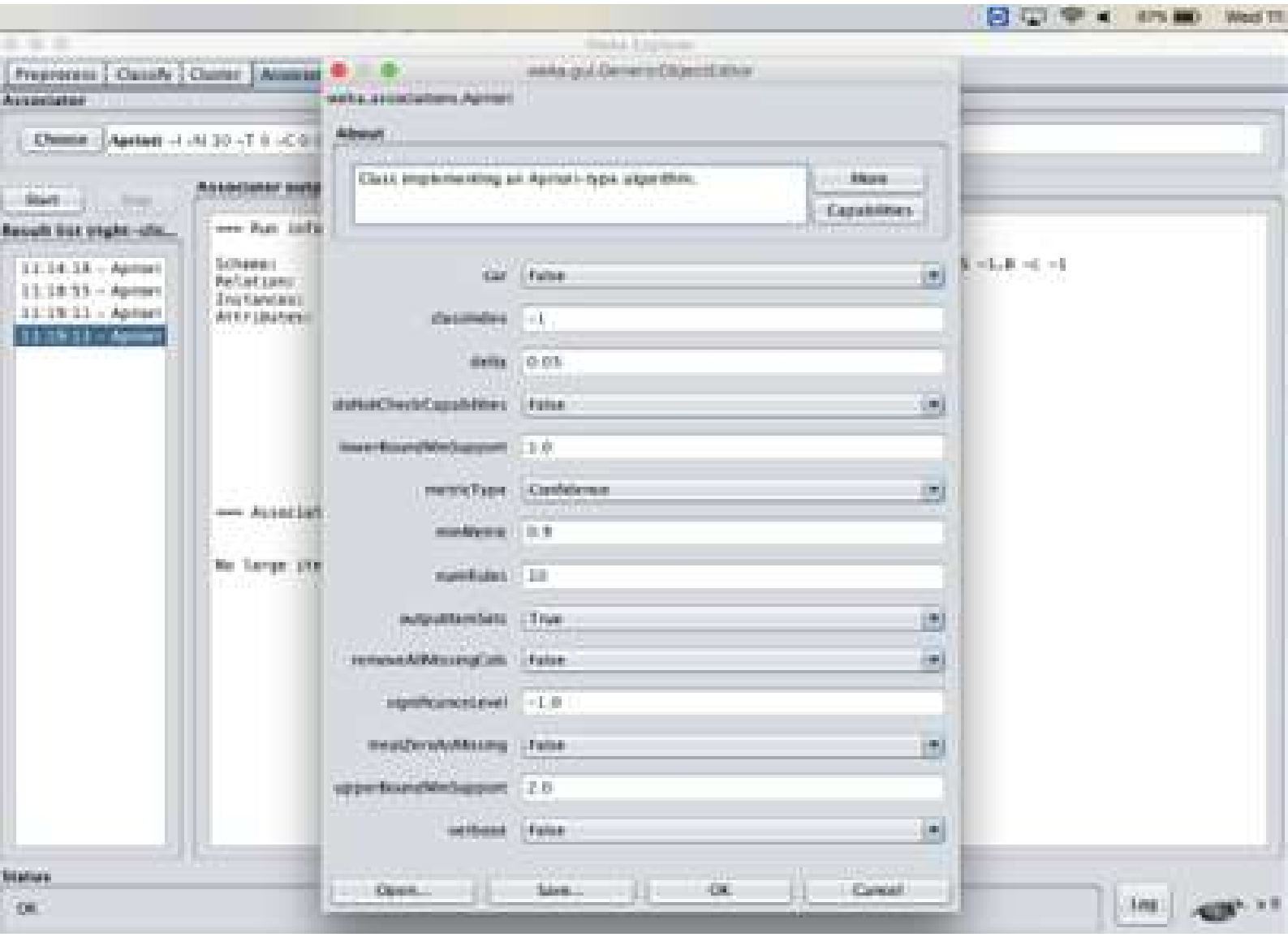
Status

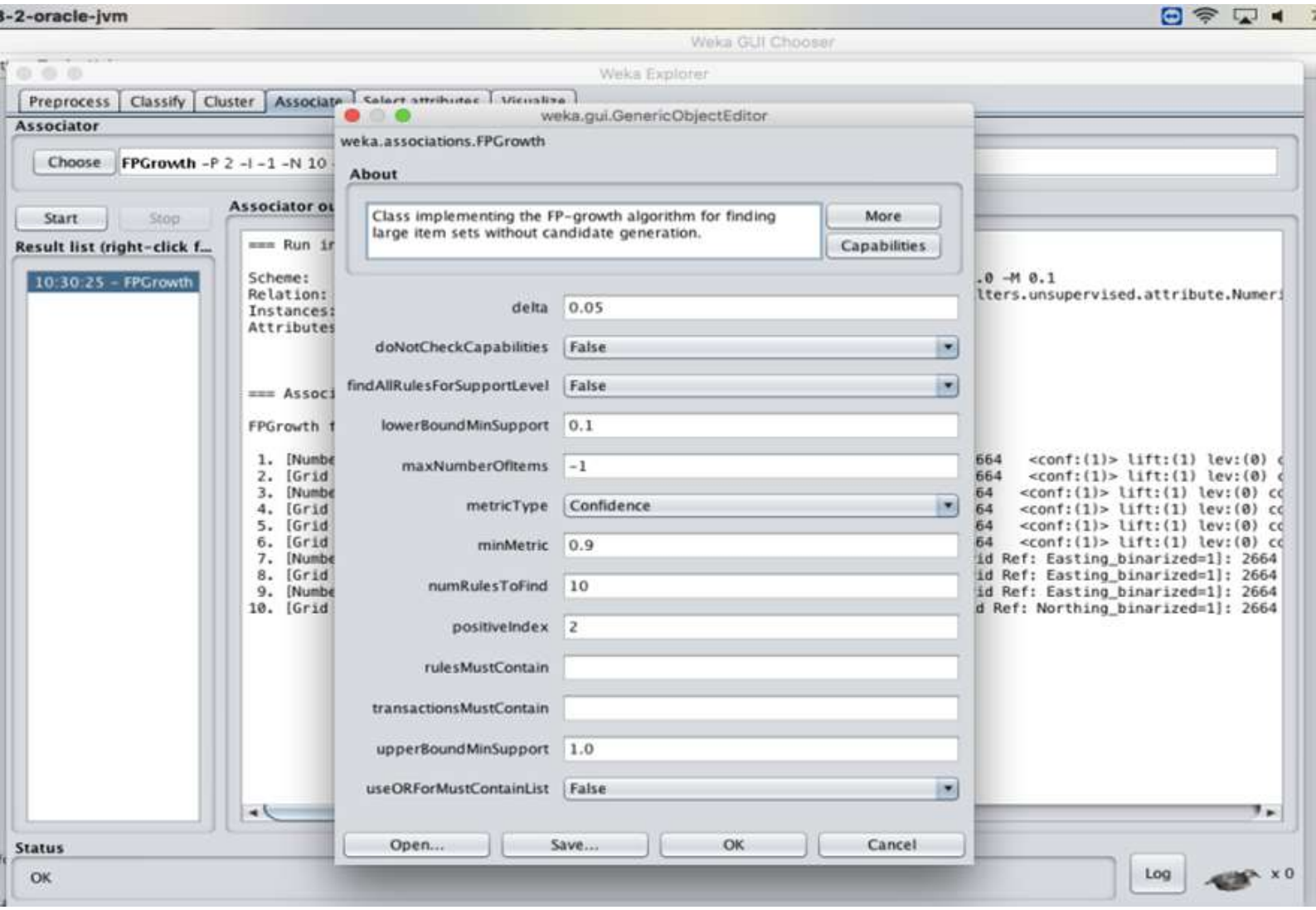
OK

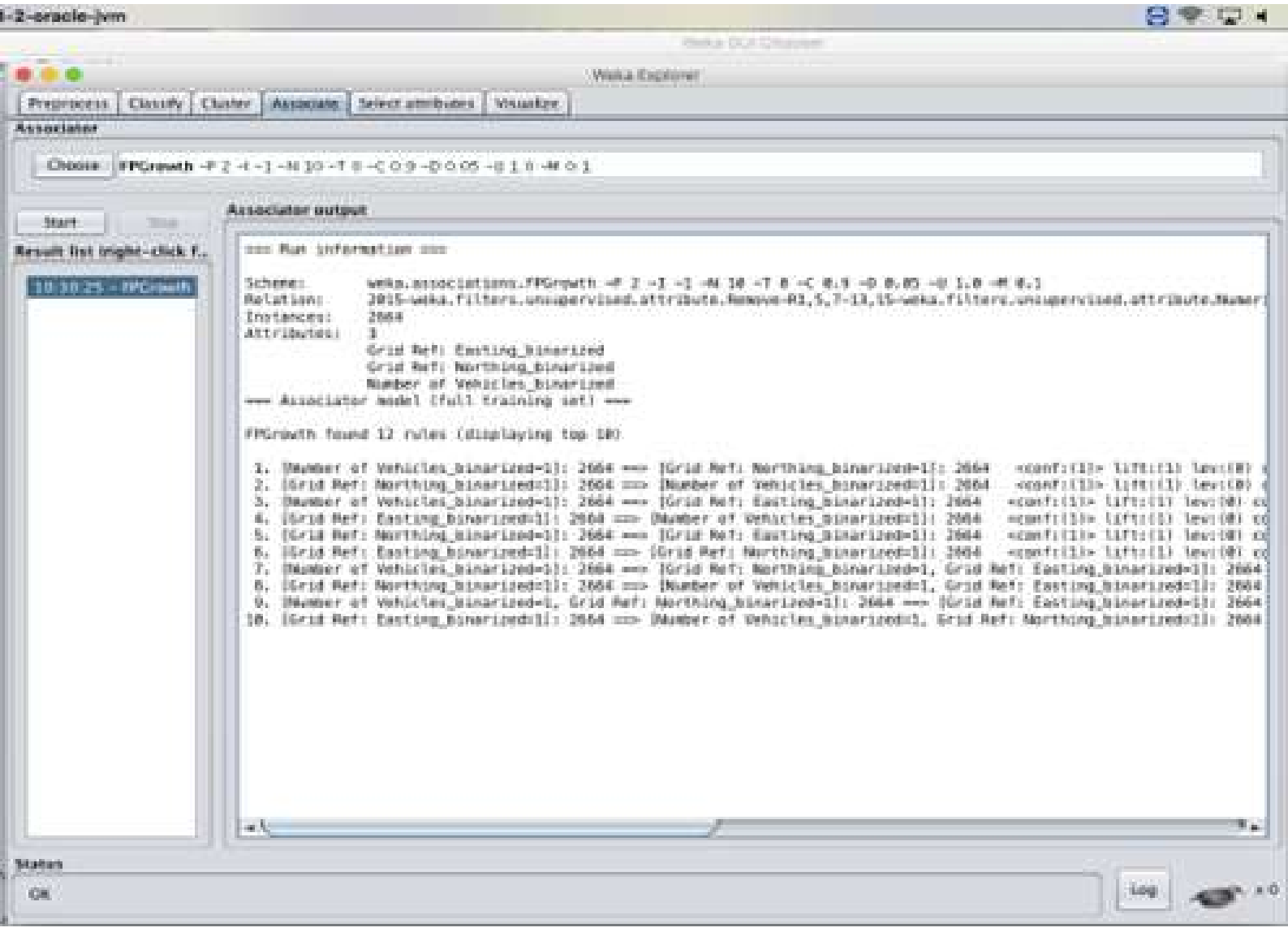
Log

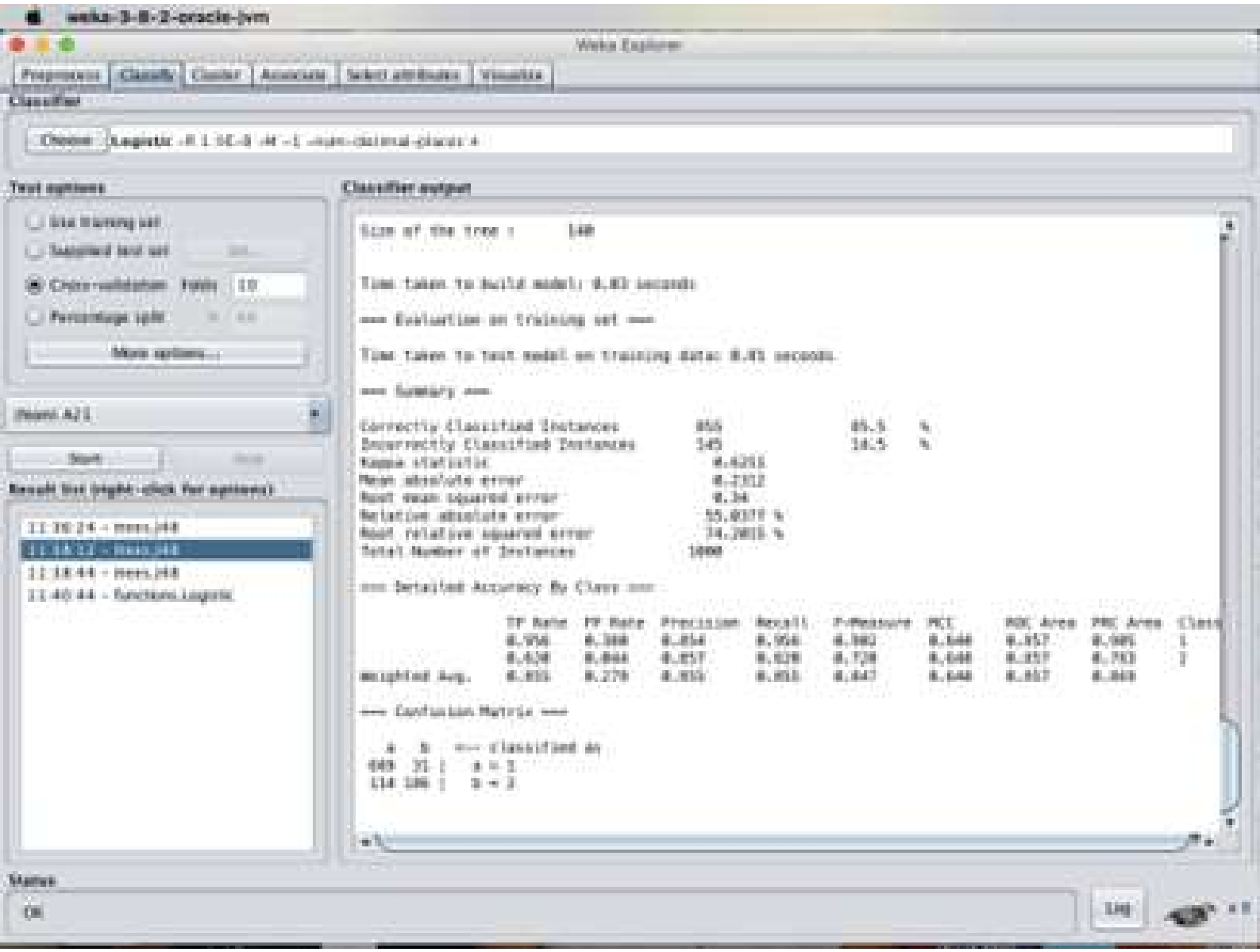
x 0

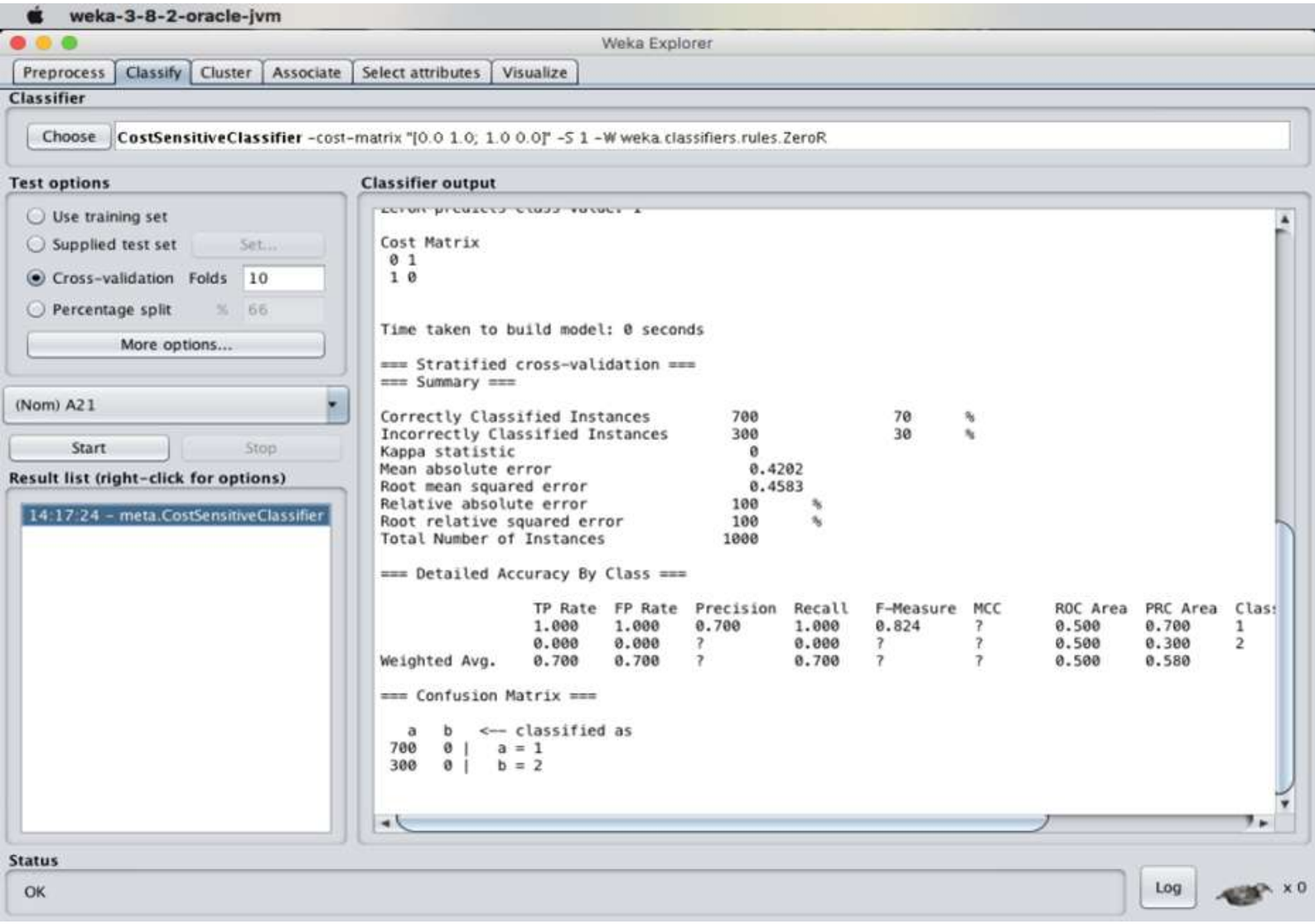

Preprocess
Classify
Cluster
Associate
Associator
Choose
Apriori -I -N 10 -T 0 -C 0.9
Start
Stop
Result list (right-clic...
11:14:14 - Apriori
11:18:55 - Apriori
11:19:11 - Apriori
11:19:13 - Apriori
11:32:41 - Apriori
Associator outp...
Casualty Se
Sex of Casua
Type of Vehi
Size of set
Large Itemse
Road Surface
Road Surface
Road Surface
Lightning Con
Lightning Con
Weather Cond
Weather Cond
Weather Cond
Casualty Cla
Casualty Se
Size of set
Large Itemse
Road Surface
Road Surface
Road Surface
Lightning Con
Best rules f
1. Road Sur
2. Road Sur
3. Road Sur
4. Type of
Status
OK
weka.gui.GenericObjectEditor
weka.associations.Apriori
About
Class implementing an Apriori-type algorithm.
More
Capabilities
car
False
False
-1
delta
0.05
doNotCheckCapabilities
False
False
lowerBoundMinSupport
0.1
metricType
Confidence
Confidence
minMetric
0.9
numRules
10
outputItemSets
True
True
removeAllMissingCols
False
False
significanceLevel
-1.0
treatZeroAsMissing
False
False
upperBoundMinSupport
1.0
verbose
False
False
Open...
Save...
OK
Cancel
high winds 1739
wise=Fine without high winds 1528
ghtlight 1366
1611
high winds Casualty Severity=Slig
ather Conditions=Fine without hi
07)(0.97)= 1171:(1.16) lev:(0.1)
ge high winds 1611 conf:(0.9
:11.84) lev:(0.02) [68] conv:(1.
Log

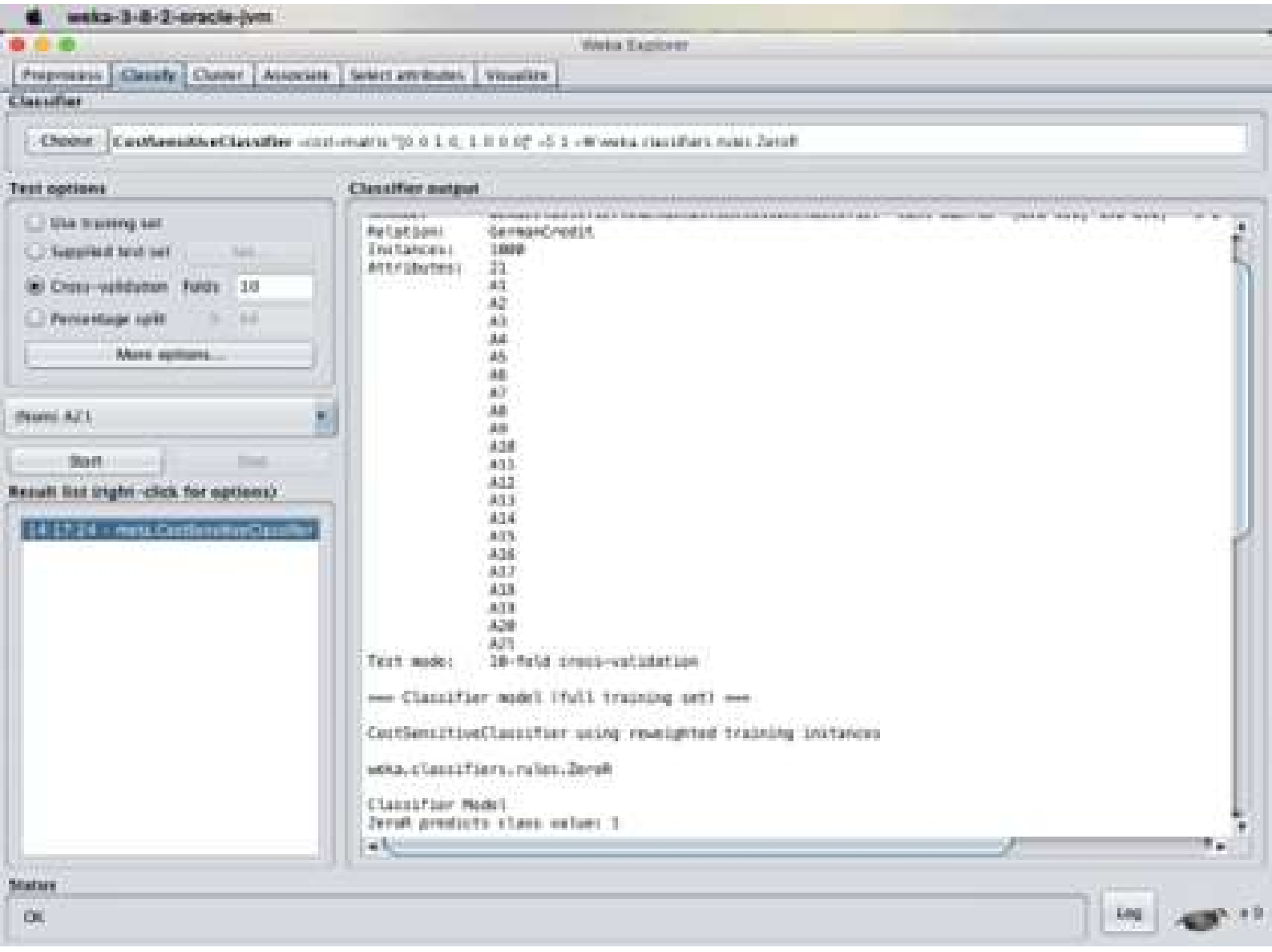

Preprocess
Classify
Cluster
Associate
Associator
Choose
Apriori -I -N 10 -T 0 -C 0.9
Start
Stop
Result list (right-click...
11:14:18 - Apriori
11:18:55 - Apriori
11:19:11 - Apriori
11:19:14 - Apriori
Associator output
=== Run ...
=== Associat...
No Target ...
weka.gui.GenericObjectEditor
weka.associations.Apriori
About
Class implementing an Apriori-type algorithm.
More
Capabilities
car
False
classIndex
-1
delta
0.05
doNotCheckCapabilities
False
lower-boundMinSupport
0.9
metricType
Confidence
minMetric
0.9
numRules
10
outputItemSets
True
removeAllMissingCols
False
significanceLevel
-1.0
treatZeroAsMissing
False
upper-boundMinSupport
1.0
verbose
False
Open...
Save...
OK
Cancel
Status
OK
Log
x 0


Weka GUI Chooser
Weka Explorer
Preprocess
Classify
Cluster
Associate
Associator
Choose
FPGrowth -P 2 -I -1 -N 10
Start
Stop
Result list (right-click f...
10:30:25 - FPGrowth
Status
OK
Log
x 0
weka.gui.GenericObjectEditor
weka.associations.FPGrowth
About
Class implementing the FP-growth algorithm for finding large item sets without candidate generation.
More
Capabilities
delta
0.05
doNotCheckCapabilities
False
findAllRulesForSupportLevel
False
lowerBoundMinSupport
0.1
maxNumberOfItems
-1
metricType
Confidence
minMetric
0.9
numRulesToFind
10
positiveIndex
2
rulesMustContain
transactionsMustContain
upperBoundMinSupport
1.0
useORForMustContainList
False
Open...
Save...
OK
Cancel


Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Associator
Choose
FPGrowth -P 2 -I -1 -N 10 -T 0 -C 0.9 -D 0.05 -U 1.0 -M 0.1
Start
Stop
Result list (right-click f...
10:10:25 - FPGrowth
Associator output
=== Run information ===
Scheme: weka.associations.FPGrowth -P 2 -I -1 -N 10 -T 0 -C 0.9 -D 0.05 -U 1.0 -M 0.1
Relation: 2015-weka.filters.unsupervised.attribute.Remove-R1,5,7-13,15-weka.filters.unsupervised.attribute.Numer
Instances: 2664
Attributes: 3
Grid Ref: Easting_binarized
Grid Ref: Northing_binarized
Number of Vehicles_binarized
=== Associator model (full training set) ===
FPGrowth found 12 rules (displaying top 10)
1. [Number of Vehicles_binarized=1]: 2664 ==> [Grid Ref: Northing_binarized=1]: 2664 <conf:(1)> lift:(1) lev:(0)
2. [Grid Ref: Northing_binarized=1]: 2664 ==> [Number of Vehicles_binarized=1]: 2664 <conf:(1)> lift:(1) lev:(0)
3. [Number of Vehicles_binarized=1]: 2664 ==> [Grid Ref: Easting_binarized=1]: 2664 <conf:(1)> lift:(1) lev:(0)
4. [Grid Ref: Easting_binarized=1]: 2664 ==> [Number of Vehicles_binarized=1]: 2664 <conf:(1)> lift:(1) lev:(0)
5. [Grid Ref: Northing_binarized=1]: 2664 ==> [Grid Ref: Easting_binarized=1]: 2664 <conf:(1)> lift:(1) lev:(0)
6. [Grid Ref: Easting_binarized=1]: 2664 ==> [Grid Ref: Northing_binarized=1]: 2664 <conf:(1)> lift:(1) lev:(0)
7. [Number of Vehicles_binarized=1]: 2664 ==> [Grid Ref: Northing_binarized=1, Grid Ref: Easting_binarized=1]: 2664
8. [Grid Ref: Northing_binarized=1]: 2664 ==> [Number of Vehicles_binarized=1, Grid Ref: Easting_binarized=1]: 2664
9. [Number of Vehicles_binarized=1, Grid Ref: Northing_binarized=1]: 2664 ==> [Grid Ref: Easting_binarized=1]: 2664
10. [Grid Ref: Easting_binarized=1]: 2664 ==> [Number of Vehicles_binarized=1, Grid Ref: Northing_binarized=1]: 2664
Status
OK
Log


weka-3-8-2-oracle-jvm
Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Classifier
Choose
Logistic -R 1.0E-8 -M -1 -num-decimal-places 4
Test options
Use training set
Supplied test set
Cross-validation
Folds
10
Percentage split
More options...
(Nom) A21
Start
Stop
Result list (right-click for options)
11:38:24 - trees.J48
11:38:44 - trees.J48
11:40:44 - functions.Logistic
Classifier output
Size of the tree : 140
Time taken to build model: 0.03 seconds
=== Evaluation on training set ===
Time taken to test model on training data: 0.01 seconds
=== Summary ===
Correctly Classified Instances 855 85.5 %
Incorrectly Classified Instances 145 14.5 %
Kappa statistic 0.6211
Mean absolute error 0.2312
Root mean squared error 0.34
Relative absolute error 55.0377 %
Root relative squared error 74.2015 %
Total Number of Instances 1000
=== Detailed Accuracy By Class ===
TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class
0.956 0.388 0.854 0.956 0.902 0.644 0.857 0.905 1
0.612 0.044 0.857 0.612 0.714 0.644 0.857 0.703 2
Weighted Avg. 0.855 0.279 0.855 0.855 0.847 0.644 0.857 0.848
=== Confusion Matrix ===
a b <-- classified as
669 31 | a = 1
114 186 | b = 2
Status
OK
Log


weka-3-8-2-oracle-jvm
Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Classifier
Choose
CostSensitiveClassifier -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
Set...
Cross-validation
Folds
10
Percentage split
%
66
More options...
(Nom) A21
Start
Stop
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 Instances 700 70 %
Incorrectly Classified Instances 300 30 %
Kappa statistic 0
Mean absolute error 0.4202
Root mean squared error 0.4583
Relative absolute error 100 %
Root relative squared error 100 %
Total Number of Instances 1000
=== Detailed Accuracy By Class ===
TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class
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
Weighted Avg. 0.700 0.700 ? 0.700 ? ? 0.500 0.580
=== Confusion Matrix ===
a b <-- classified as
700 0 | a = 1
300 0 | b = 2
Status
OK
Log
x 0


weka-3-8-2-oracle-jvm
Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Classifier
Choose
CostSensitiveClassifier
Test options
Use training set
Supplied test set
Cross-validation
Folds
10
Percentage split
More options...
(Num) A21
Start
Result list (right-click for options)
Classifier output
Relation: GermanCredit
Instances: 1000
Attributes: 21
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A15
A16
A17
A18
A19
A20
A21
Test mode: 10-fold cross-validation
=== Classifier model (full training set) ===
CostSensitiveClassifier using reweighted training instances
weka.classifiers.rules.ZeroR
Classifier Model
ZeroR predicts class value: 1
Status
OK
Log