

DWDM

WEKA – PROGRAM 24

The screenshot shows the Weka Explorer application window. The 'Cluster' tab is selected in the top menu. The 'Clusterer' section shows 'HierarchicalClusterer' selected with the command line: `-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 (Nom) class
- ☒ Store clusters for visualization

Ignore attributes: (empty field)

Buttons: Start, Stop

Result list (right-click for options):

- 17:04:08 - EM
- 17:10:04 - SimpleKMeans
- 17:19:56 - EM
- 17:21:49 - EM
- 17:23:43 - HierarchicalClusterer**

Clusterer output:

```
=== Run information ===

Scheme:      weka.clusterers.HierarchicalClusterer -N 2 -L SINGLE -P -A "weka.core.Euc
Relation:     iris
Instances:    150
Attributes:   5
              sepallength
              sepalwidth
              petallength
              petalwidth
              class
Test mode:    evaluate on training data

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

Cluster 0
((((((((((((((((((((0.0:0.03254,0.0:0.03254):0.00913,(0.0:0.03254,0.0:0.03254):0.00913)

Cluster 1
((((((((((((((((((((1.0:0.07344,((1.0:0.06508,1.0:0.06508):0.00066,(1.0:0.05008,1.0:0.05008):0.00066)

Time taken to build model (full training data) : 0.05 seconds

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

Clustered Instances

0      50 ( 33%)
1     100 ( 67%)
```

Status: OK

Log: (button) x 0

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
 (Nom) class
☒ Store clusters for visualization

Ignore attributes

Start Stop

Result list (right-click for options)

- 17:04:08 - EM
- 17:10:04 - SimpleKMeans
- 17:19:56 - EM
- 17:21:49 - EM
- 17:23:43 - HierarchicalClusterer
- 17:25:32 - HierarchicalClusterer**

Clusterer output

```

=== Run information ===

Scheme:      weka.clusterers.HierarchicalClusterer -N 2 -L SINGLE -P -A "weka.core.Euc
Relation:    iris
Instances:   150
Attributes:  5
              sepallength
              sepalwidth
              petallength
              petalwidth

Ignored:
              class

Test mode:   Classes to clusters evaluation on training data

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

Cluster 0
((((((((((((((((((((((0.2:0.03254,0.2:0.03254):0.00913,(0.3:0.03254,0.3:0.03254):0.00913;

Cluster 1
((((((((((((((((((((((((((1.4:0.07344,(((1.5:0.06508,1.5:0.06508):0.00066,(1.4:0.050

Time taken to build model (full training data) : 0.04 seconds

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

Clustered Instances

0      50 ( 33%)
1      100 ( 67%)
  
```

Status
OK

Log x0

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
 (Nom) class
☒ Store clusters for visualization

Ignore attributes

Start Stop

Result list (right-click for options)

- 17:04:08 - EM
- 17:10:04 - SimpleKMeans
- 17:19:56 - EM
- 17:21:49 - EM
- 17:23:43 - HierarchicalClusterer
- 17:25:32 - HierarchicalClusterer**

Clusterer output

```

Cluster 0
((((((((((((((((((((((0.2:0.03254,0.2:0.03254):0.00913,(0.3:0.03254,0.3:0.03254):0.00913;

Cluster 1
((((((((((((((((((((((((((1.4:0.07344,(((1.5:0.06508,1.5:0.06508):0.00066,(1.4:0.050

Time taken to build model (full training data) : 0.04 seconds

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

Clustered Instances

0      50 ( 33%)
1      100 ( 67%)

Class attribute: class
Classes to Clusters:

0 1 <-- assigned to cluster
50 0 | Iris-setosa
0 50 | Iris-versicolor
0 50 | Iris-virginica

Cluster 0 <-- Iris-setosa
Cluster 1 <-- Iris-versicolor

Incorrectly clustered instances :      50.0      33.3333 %
  
```

Status
OK

Log x0