

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 "weka.core.EuclideanDistance"

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)
11:52:24 - MakeDensityBasedClusterer

Clusterer output

```

=== Run information ===

Scheme:      weka.clusterers.MakeDensityBasedClusterer -M 1.0E-6 -W weka.clusterers.SimpleKMeans -- -init 0
Relation:    breast-cancer
Instances:   286
Attributes:  10
age
menopause
tumor-size
inv-nodes
node-caps
deg-malig
breast
breast-quad
irradiat
Class

Test mode:   evaluate on training data

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

MakeDensityBasedClusterer:

Wrapped clusterer:
kMeans
=====

Number of iterations: 3
Within cluster sum of squared errors: 1177.0

Initial starting points (random):

Cluster 0: 50-59,premeno,10-14,0-2,no,2,right,left_up,no,no-recurrence-events
  
```

Status
OK

Log x0

Weka Explorer

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```

Cluster 1: 40-49,premeno,15-19,0-2,yes,3,right,left_up,no,recurrence-events

Missing values globally replaced with mean/mode

Final cluster centroids:

Attribute          Full Data          Cluster#          0          1
(286.0)            (225.0)            (61.0)
=====
age                50-59              50-59             40-49
menopause          premeno            premeno            premeno
tumor-size         30-34              25-29             30-34
inv-nodes          0-2                0-2               0-2
node-caps          no                 no                 yes
deg-malig          2                  2                  3
breast             left               left               left
breast-quad        left_low           left_low           left_low
irradiat           no                 no                 no
Class              no-recurrence-events no-recurrence-events recurrence-events

Fitted estimators (with ML estimates of variance):

Cluster: 0 Prior probability: 0.7847

Attribute: age
Discrete Estimator. Counts = 1 2 27 65 84 46 7 1 1 (Total = 234)
Attribute: menopause
Discrete Estimator. Counts = 8 106 114 (Total = 228)
Attribute: tumor-size
Discrete Estimator. Counts = 9 5 28 28 43 48 34 12 18 3 8 1 (Total = 237)
Attribute: inv-nodes
  
```

Status
OK

Log x0

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 "weka.core.EuclideanDistance"

Cluster mode

Use training set

Supplied test set

Percentage split

Classes to clusters evaluation

Set...

%

66

(Nom) Class

Store clusters for visualization

Ignore attributes

Start

Stop

Result list (right-click for options)

11:52:24 - MakeDensityBasedClusterer

Clusterer output

Attribute: age

Discrete Estimator. Counts = 1 1 11 27 14 13 1 1 1 (Total = 70)

Attribute: menopause

Discrete Estimator. Counts = 1 25 38 (Total = 64)

Attribute: tumor-size

Discrete Estimator. Counts = 1 1 2 4 9 8 28 9 6 2 2 1 (Total = 73)

Attribute: inv-nodes

Discrete Estimator. Counts = 25 19 11 4 3 4 1 1 2 1 1 1 1 (Total = 74)

Attribute: node-caps

Discrete Estimator. Counts = 37 26 (Total = 63)

Attribute: deg-malig

Discrete Estimator. Counts = 5 10 49 (Total = 64)

Attribute: breast

Discrete Estimator. Counts = 36 27 (Total = 63)

Attribute: breast-quad

Discrete Estimator. Counts = 19 26 11 6 4 (Total = 66)

Attribute: irradiat

Discrete Estimator. Counts = 26 37 (Total = 63)

Attribute: Class

Discrete Estimator. Counts = 9 54 (Total = 63)

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

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

Clustered Instances

0 226 (79%)

1 60 (21%)

Log likelihood: -9.79929

Status

OK

Log

x 0