

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 -R first-last' -I 500 -num-slots 1 -S 10

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)

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Clusterer output

Attribute: residence\_since  
Normal Distribution. Mean = 3.3585 StdDev = 0.9789

Attribute: property\_magnitude  
Discrete Estimator. Counts = 85 92 59 125 (Total = 361)

Attribute: age  
Normal Distribution. Mean = 39.7059 StdDev = 11.9928

Attribute: other\_payment\_plans  
Discrete Estimator. Counts = 59 14 287 (Total = 360)

Attribute: housing  
Discrete Estimator. Counts = 67 201 92 (Total = 360)

Attribute: existing\_credits  
Normal Distribution. Mean = 1.4734 StdDev = 0.646

Attribute: job  
Discrete Estimator. Counts = 10 59 205 87 (Total = 361)

Attribute: num\_dependents  
Normal Distribution. Mean = 1.2521 StdDev = 0.4342

Attribute: own\_telephone  
Discrete Estimator. Counts = 117 242 (Total = 359)

Attribute: foreign\_worker  
Discrete Estimator. Counts = 346 13 (Total = 359)

Attribute: class  
Discrete Estimator. Counts = 224 135 (Total = 359)

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

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

Clustered Instances

0 681 ( 68%)

1 319 ( 32%)

Log likelihood: -34.5272

Status  
OK

Log

ENG IN 01:27 PM 13-09-2022

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☒ Use training set  
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(Norm) class  
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Start

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```
Number of iterations: 5
Within cluster sum of squared errors: 5665.9976202840735

Initial starting points (random):

Cluster 0: 'no checking',36,'critical/other existing credit','new car',7855,<100,1,<<X<4,4,'female div/dep/mar',none,2,'real estate',25,stores,own,2,skilled,1,ye
Cluster 1: '<0,24,'critical/other existing credit','used car',6615,<100,unemployed,2,'male single',none,4,'no known property',75,none,'for free',2,'high qualif/s
```

Final cluster centroids:

Attribute	Full Data (1000.0)	Cluster# 0 (643.0)	1 (357.0)
checking_status	no checking	no checking	<0
duration	20.903	19.9285	22.5583
credit_history	existing paid	existing paid	existing paid
purpose	radio/tv	radio/tv	new car
credit_amount	3271.258	2924.7869	3895.2941
savings_status	<100	<100	<100
employment	1<=X<4	1<=X<4	>=7
installment_commitment	2.973	2.9611	2.9944
personal_status	male single	male single	male single
other_parties	none	none	none
residence_since	2.045	2.5599	3.3505
property_magnitude	car	car	car no known property
age	35.546	33.2364	39.7059
other_payment_plans	none	none	none
housing	own	own	own
existing_credits	1.407	1.3701	1.4734
job	skilled	skilled	skilled
num_dependents	1.155	1.1011	1.2521
own_telephone	none	none	yes
foreign_worker	yes	yes	yes
class	good	good	good

OK

Log

 x 0