



Weka Explorer

PreprocessClassifyClusterAssociateSelect attributesVisualize

Classifier

ChooseJ48 -C 0.25 -M 2

Test options

Use training set

Supplied test set

Cross-validation

Folds10

Percentage split

%66

More options...

(Nom) Class

StartStop

Result list (right-click for options)

00:49:13 - trees.J48

Classifier output

| | mx-missile = n

| | | adoption-of-the-budget-resolution = n: republican (22.61/3.32)

| | | adoption-of-the-budget-resolution = y

| | | | anti-satellite-test-ban = n: democrat (5.04/0.02)

| | | | anti-satellite-test-ban = y: republican (2.21)

| | mx-missile = y: democrat (6.03/1.03)

Number of Leaves : 6

Size of the tree : 11

Time taken to build model: 0.03 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances41996.3218 %

Incorrectly Classified Instances163.6782 %

Kappa statistic0.9224

Mean absolute error0.0611

Root mean squared error0.1748

Relative absolute error12.887 %

Root relative squared error35.9085 %

Total Number of Instances435

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.970	0.048	0.970	0.970	0.970	0.922	0.971	0.965	democrat
	0.952	0.030	0.952	0.952	0.952	0.922	0.971	0.947	republican
Weighted Avg.	0.963	0.041	0.963	0.963	0.963	0.922	0.971	0.958	

=== Confusion Matrix ===

a b <-- classified as

259 8 | a = democrat

8 160 | b = republican

StatusOK

Log

x0

Weka Explorer

PreprocessClassifyClusterAssociateSelect attributesVisualize

Cluster

ChooseSimpleKMeans-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

Percentage split

Classes to clusters evaluation

Store clusters for visualization

Set...

%

66

(Nom) Class

Ignore attributes

Start

Stop

Result list (right-click for options)

08:51:18 - SimpleKMeans

Cluster output

Cluster 1: n,n,y,n,y,n,y,y,n,n,n,n,y,n,y, democrat

Missing values globally replaced with mean/mode

Final cluster centroids:

Attribute	Full Data	Cluster#	
	0	1	
	(435.0)	(214.0)	(221.0)
handicapped-infants	n	n	y
water-project-cost-sharing	y	y	n
adoption-of-the-budget-resolution	y	n	y
physician-fee-freeze	n	y	n
el-salvador-aid	y	y	n
religious-groups-in-schools	y	y	n
anti-satellite-test-ban	y	n	y
aid-to-nicaraguan-contras	y	n	y
mx-missile	y	n	y
immigration	y	y	y
syntuels-corporation-outback	n	n	n
education-spending	n	y	n
superfund-right-to-act	y	y	n
crime	y	y	n
duty-free-exports	n	n	y
export-administration-act-south-africa	y	y	y
Class	democrat	republican	democrat

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

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

Clustered Instances

0	214 (49%)
1	221 (51%)

Status

OK

Log

x0

Weka Explorer

Preprocess

Classify

Cluster

Associate

Select attributes

Visualize

Associator

ChooseApriori -N 10 -T 0 -C 0.9 -D 0.05 -U 1.0 -M 0.1 -S -1.0 -c 1

Start

Stop

Result list (right-click for ...)

08:52:17 - Apriori

Associator output

education-spending
superfund-right-to-sue
crime
duty-free-exports
export-administration-act-south-africa
Class

=== Associator model (full training set) ===

Apriori
=====

Minimum support: 0.45 (136 instances)
Minimum metric <confidence>: 0.9
Number of cycles performed: 11

Generated sets of large itemsets:

Size of set of large itemsets L(1): 20
Size of set of large itemsets L(2): 17
Size of set of large itemsets L(3): 6
Size of set of large itemsets L(4): 1

Best rules found:

1. adoption-of-the-budget-resolution=y physician-fee-freeze=n 219 ==> Class=democrat 219 <conf:(1)> lift:(1.63) lev:(0.19) [84] conv:(84.58)
2. adoption-of-the-budget-resolution=y physician-fee-freeze=n aid-to-nicaraguan-contras=y 198 ==> Class=democrat 198 <conf:(1)> lift:(1.63) lev:(0.18) [76] conv:(76.47)
3. physician-fee-freeze=n aid-to-nicaraguan-contras=y 211 ==> Class=democrat 210 <conf:(1)> lift:(1.62) lev:(0.19) [80] conv:(40.74)
4. physician-fee-freeze=n education-spending=n 202 ==> Class=democrat 201 <conf:(1)> lift:(1.62) lev:(0.18) [77] conv:(39.01)
5. physician-fee-freeze=n 247 ==> class=democrat 245 <conf:(0.99)> lift:(1.62) lev:(0.21) [93] conv:(31.8)
6. el-salvador-aid=n Class=democrat 200 ==> aid-to-nicaraguan-contras=y 197 <conf:(0.98)> lift:(1.77) lev:(0.2) [85] conv:(22.18)
7. el-salvador-aid=n 208 ==> aid-to-nicaraguan-contras=y 204 <conf:(0.98)> lift:(1.76) lev:(0.2) [88] conv:(18.46)
8. adoption-of-the-budget-resolution=y aid-to-nicaraguan-contras=y Class=democrat 203 ==> physician-fee-freeze=n 198 <conf:(0.98)> lift:(1.72) lev:(0.19) [82] conv:(14.62)
9. el-salvador-aid=n aid-to-nicaraguan-contras=y 204 ==> Class=democrat 197 <conf:(0.97)> lift:(1.57) lev:(0.17) [71] conv:(9.85)
10. aid-to-nicaraguan-contras=y Class=democrat 218 ==> physician-fee-freeze=n 210 <conf:(0.96)> lift:(1.7) lev:(0.2) [86] conv:(10.47)

Status
OK

Log

x0

Weka Explorer

Preprocess

Classify

Cluster

Associate

Select attributes

Visualize

Attribute Evaluator

ChooseCfsSubsetEval -P 1 -E 1

Search Method

ChooseBestFirst -D 1 -N 5

Attribute Selection Mode

☒ Use full training set

☐ Cross-validation

Folds10

Seed1

No class

Start

Stop

Result list (right-click for options)

08:52:37 - BestFirst + CfsSubsetEval

Attribute selection output

religious-groups-in-schools

anti-satellite-test-ban

aid-to-nicaraguan-contras

mx-missile

immigration

synfuels-corporation-outback

education-spending

superfund-right-to-sue

crime

duty-free-exports

export-administration-act-south-africa

Class

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: 85

Merit of best subset found: 0.729

Attribute Subset Evaluator (supervised, Class (nominal): 17 Class):

Cfs Subset Evaluator

Including locally predictive attributes

Selected attributes: 3,4,10,11 : 4

adoption-of-the-budget-resolution

physician-fee-freeze

immigration

synfuels-corporation-outback

Status

OK

Log

x 0

