

Weka Explorer

Preprocess

Classify

Cluster

Associate

Select attributes

Visualize

Open file...

Open URL...

Open DB...

Generate...

Undo

Edit...

Save...

Filter

Choose

None

Apply

Stop

Current relation

Relation: vote

Instances: 435

Attributes: 17

Sum of weights: 435

Attributes

AllNoneInvertPattern

No.		Name
1	<input checked="" type="checkbox"/>	handicapped-infants
2	<input type="checkbox"/>	water-project-cost-sharing
3	<input type="checkbox"/>	adoption-of-the-budget-resolution
4	<input type="checkbox"/>	physician-fee-freeze
5	<input type="checkbox"/>	el-salvador-aid
6	<input type="checkbox"/>	religious-groups-in-schools
7	<input type="checkbox"/>	anti-satellite-test-ban
8	<input type="checkbox"/>	aid-to-nicaraguan-contras
9	<input type="checkbox"/>	mx-missile
10	<input type="checkbox"/>	immigration
11	<input type="checkbox"/>	synfuels-corporation-cutback
12	<input type="checkbox"/>	education-spending
13	<input type="checkbox"/>	superfund-right-to-sue
14	<input type="checkbox"/>	crime
15	<input type="checkbox"/>	duty-free-exports

Remove

Selected attribute

Name: handicapped-infants

Missing: 12 (3%)

Distinct: 2

Type: Nominal

Unique: 0 (0%)

No.	Label	Count	Weight
1	n	236	236.0
2	y	187	187.0

Class: Class (Nom)

Visualize All

236

187

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...

(Nom) Class

Start

Stop

Result list (right-click for options)

17:18:56 - trees.RandomTree

Classifier output

Time taken to build model: 0.02 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	407	93.5632 %
Incorrectly Classified Instances	28	6.4368 %
Kappa statistic	0.8636	
Mean absolute error	0.0699	
Root mean squared error	0.2379	
Relative absolute error	14.7341 %	
Root relative squared error	48.8605 %	
Total Number of Instances	435	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.955	0.095	0.941	0.955	0.948	0.864	0.966	0.971	democrat
	0.905	0.045	0.927	0.905	0.916	0.864	0.967	0.937	republican
Weighted Avg.	0.936	0.076	0.936	0.936	0.935	0.864	0.966	0.958	

=== Confusion Matrix ===

a	b	<-- classified as
255	12	a = democrat
16	152	b = republican

Status

OK

Log

 x 0

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 -S 10

Cluster mode

- ☐ Use training set
- ☐ Supplied test set
- ☐ Percentage split %
- ☒ Classes to clusters evaluation
- (Nom) Class
- ☒ Store clusters for visualization

Ignore attributes

Start

Stop

Result list (right-click for options)

17:20:11 - SimpleKMeans

Clusterer output

=== Run information ===

```
Scheme:      weka.clusterers.SimpleKMeans -init 0 -max-candidates 100 -periodic-pruning 10000 -min-density 2.0 -t1 -1.25 -t2 -1.0 -N 2 -A '
Relation:    vote
Instances:   435
Attributes:  17
             handicapped-infants
             water-project-cost-sharing
             adoption-of-the-budget-resolution
             physician-fee-freeze
             el-salvador-aid
             religious-groups-in-schools
             anti-satellite-test-ban
             aid-to-nicaraguan-contras
             mx-missile
             immigration
             synfuels-corporation-cutback
             education-spending
             superfund-right-to-sue
             crime
             duty-free-exports
             export-administration-act-south-africa
```

Ignored:

Class

Test mode: Classes to clusters evaluation on training data

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

Status

OK

Log

x 0

Associator

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

Start

Stop

Associator output

Result list (right-click...)

17:20:42 - Apriori

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:(76.58)
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:(22.18)
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

 x 0

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)

17:21:25 - BestFirst + CfsSubsetEval

Attribute selection output

=== Run information ===

Evaluator: weka.attributeSelection.CfsSubsetEval -P 1 -E 1
Search: weka.attributeSelection.BestFirst -D 1 -N 5
Relation: vote
Instances: 435
Attributes: 17

handicapped-infants
water-project-cost-sharing
adoption-of-the-budget-resolution
physician-fee-freeze
el-salvador-aid
religious-groups-in-schools
anti-satellite-test-ban
aid-to-nicaraguan-contras
mx-missile
immigration
synfuels-corporation-cutback
education-spending
superfund-right-to-sue
crime
duty-free-exports
export-administration-act-south-africa
Class

Status

OK

Log

 x 0

Preprocess Classify Cluster Associate Select attributes Visualize

Plot Matrix

	handicapped-infants	water-project-cost-shutdown	negotiation-of-the-budget	physician-fee-freeze	el-salvador-aid	religious-groups-in-schools	satellite-test-ban	aid-to-nicaraguan-contra	missile	immigration	synfuels-corporation-shutdown
Class											
export-administration											
duty-free-exports											

PlotSize: [100]

PointSize: [1]

Jitter:

Colour: crime (Nom)

☐ Fast scrolling (uses more memory)

Update

Select Attributes

SubSample % :

100

Class Colour

democrat republican

Status

OK

Log

x 0