

Weka

Dataset: vote.arff

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: All None Invert Pattern

| 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 |
| 16 | <input type="checkbox"/> export-administration-act-south-africa |
| 17 | <input type="checkbox"/> Class |

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

Status: OK Log x 0

Clasificador: ZeroR

=== Run information ===

Scheme: weka.classifiers.rules.ZeroR
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
Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

ZeroR predicts class value: democrat

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

| | | |
|----------------------------------|--------|-----------|
| Correctly Classified Instances | 267 | 61.3793 % |
| Incorrectly Classified Instances | 168 | 38.6207 % |
| Kappa statistic | 0 | |
| Mean absolute error | 0.4742 | |
| Root mean squared error | 0.4869 | |
| Relative absolute error | 100 | % |
| Root relative squared error | 100 | % |
| Total Number of Instances | 435 | |

=== Detailed Accuracy By Class ===

| | TP Rate | FP Rate | Precision | Recall | F-Measure | MCC | ROC Area | PRC Area | Class |
|---------------|---------|---------|-----------|--------|-----------|-----|----------|----------|------------|
| | 1.000 | 1.000 | 0.614 | 1.000 | 0.761 | ? | 0.491 | 0.609 | democrat |
| | 0.000 | 0.000 | ? | 0.000 | ? | ? | 0.491 | 0.382 | republican |
| Weighted Avg. | 0.614 | 0.614 | ? | 0.614 | ? | ? | 0.491 | 0.521 | |

=== Confusion Matrix ===

| | | |
|-----|---|-------------------|
| a | b | <-- classified as |
| 267 | 0 | a = democrat |
| 168 | 0 | b = republican |

Clasificador: PART

=== Classifier model (full training set) ===

PART decision list

physician-fee-freeze = n: democrat (253.41/3.75)

synfuels-corporation-cutback = n AND
education-spending = y: republican (125.78/1.29)

immigration = y AND
adoption-of-the-budget-resolution = n: republican (14.32/0.25)

crime = y AND
anti-satellite-test-ban = y: republican (13.08/1.63)

crime = y AND
adoption-of-the-budget-resolution = y AND
superfund-right-to-sue = y: democrat (7.05/0.07)

crime = y: republican (19.07/4.94)

: democrat (2.29/0.03)

Number of Rules : 7

Time taken to build model: 0.03 seconds

=== Stratified cross-validation ===

=== Summary ===

| | | |
|----------------------------------|-----------|-----------|
| Correctly Classified Instances | 412 | 94.7126 % |
| Incorrectly Classified Instances | 23 | 5.2874 % |
| Kappa statistic | 0.8879 | |
| Mean absolute error | 0.071 | |
| Root mean squared error | 0.2114 | |
| Relative absolute error | 14.9765 % | |
| Root relative squared error | 43.4245 % | |
| Total Number of Instances | 435 | |

=== Run information ===

Scheme: weka.classifiers.rules.PART -C 0.25 -M 2
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

Test mode: 10-fold cross-validation

=== Detailed Accuracy By Class ===

| | TP Rate | FP Rate | Precision | Recall | F-Measure | MCC | ROC Area | PRC Area | Class |
|---------------|---------|---------|-----------|--------|-----------|-------|----------|----------|------------|
| | 0.966 | 0.083 | 0.949 | 0.966 | 0.957 | 0.888 | 0.949 | 0.924 | democrat |
| | 0.917 | 0.034 | 0.945 | 0.917 | 0.931 | 0.888 | 0.949 | 0.937 | republican |
| Weighted Avg. | 0.947 | 0.064 | 0.947 | 0.947 | 0.947 | 0.888 | 0.949 | 0.929 | |

=== Confusion Matrix ===

a b <-- classified as
258 9 | a = democrat
14 154 | b = republican

Clasificador: DesitionTable

=== Run information ===

Scheme: weka.classifiers.rules.DecisionTable -X 1 -S "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
Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

Decision Table:

Number of training instances: 435
Number of Rules : 40
Non matches covered by Majority class.
Best first.
Start set: no attributes
Search direction: forward
Stale search after 5 node expansions
Total number of subsets evaluated: 125
Merit of best subset found: 96.322
Evaluation (for feature selection): CV (leave one out)
Feature set: 3,4,12,16,17

Time taken to build model: 0.17 seconds

=== Stratified cross-validation ===

=== Summary ===

| | | |
|----------------------------------|-----------|-----------|
| Correctly Classified Instances | 413 | 94.9425 % |
| Incorrectly Classified Instances | 22 | 5.0575 % |
| Kappa statistic | 0.8929 | |
| Mean absolute error | 0.0995 | |
| Root mean squared error | 0.208 | |
| Relative absolute error | 20.9752 % | |
| Root relative squared error | 42.7262 % | |
| Total Number of Instances | 435 | |

=== Detailed Accuracy By Class ===

| | TP Rate | FP Rate | Precision | Recall | F-Measure | MCC | ROC Area | PRC Area | Class |
|---------------|---------|---------|-----------|--------|-----------|-------|----------|----------|------------|
| | 0.966 | 0.077 | 0.952 | 0.966 | 0.959 | 0.893 | 0.981 | 0.990 | democrat |
| | 0.923 | 0.034 | 0.945 | 0.923 | 0.934 | 0.893 | 0.981 | 0.958 | republican |
| Weighted Avg. | 0.949 | 0.061 | 0.949 | 0.949 | 0.949 | 0.893 | 0.981 | 0.977 | |

=== Confusion Matrix ===

```
a  b  <-- classified as
258  9 |  a = democrat
13 155 |  b = republican
```