DECISION TREE

=== Run information ===

Scheme: weka.classifiers.trees.J48 -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

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

J48 pruned tree

----

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

physician-fee-freeze = y

| synfuels-corporation-cutback = n: republican (145.71/4.0)| synfuels-corporation-cutback = y| | 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: 0.02 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances   419   96.3218 %

Incorrectly Classified Instances   16   3.6782 %

Kappa statistic   0.9224

Mean absolute error   0.0611

Root mean squared error   0.1748

Relative absolute error   12.887 %

Root relative squared error   35.9085 %

Total Number of Instances   435

=== 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
```

Tree View

physician-fee-freeze

= n

democrat (253.41/3.75)

= y

synfuels-corporation-cutback

= n

republican (145.71/4.0)

= y

mx-missile

= n

adoption-of-the-budget-resolution

= y

democrat (6.03/1.03)

= n

republican (22.61/3.32)

= y

anti-satellite-test-ban

= n

democrat (5.04/0.02)

= y

republican (2.21)