=== Run information ===

Scheme: weka.classifiers.meta.FilteredClassifier -F "weka.filters.supervised.attribute.Discretize -R first-last -precision 6" -W weka.classifiers.rules.JRip -- -F 3 -N 2.0 -O 2 -S 1

Relation: autos-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1

Instances: 103

Attributes: 26

normalized-losses

make

fuel-type

aspiration

num-of-doors

body-style

drive-wheels

engine-location

wheel-base

length

width

height

curb-weight

engine-type

num-of-cylinders

engine-size

fuel-system

bore

stroke

compression-ratio

horsepower

peak-rpm

city-mpg

highway-mpg

price

symboling

Test mode: evaluate on training data

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

FilteredClassifier using weka.classifiers.rules.JRip -F 3 -N 2.0 -O 2 -S 1 on data filtered through weka.filters.supervised.attribute.Discretize -R first-last -precision 6

Filtered Header

@relation autos-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1-weka.filters.supervised.attribute.Discretize-Rfirst-last-precision6

@attribute normalized-losses {'\'(-inf-116.5]\'','\'(116.5-inf)\''}

@attribute make {alfa-romero,audi,bmw,chevrolet,dodge,honda,isuzu,jaguar,mazda,mercedes-benz,mercury,mitsubishi,nissan,peugot,plymouth,porsche,renault,saab,subaru,toyota,volkswagen,volvo}

@attribute fuel-type {diesel,gas}

@attribute aspiration {std,turbo}

@attribute num-of-doors {four,two}

@attribute body-style {hardtop,wagon,sedan,hatchback,convertible}

@attribute drive-wheels {4wd,fwd,rwd}

@attribute engine-location {front,rear}

@attribute wheel-base {'\'(-inf-95.5]\'','\'(95.5-101.6]\'','\'(101.6-inf)\''}

@attribute length {'\'(-inf-173.3]\'','\'(173.3-inf)\''}

@attribute width {'\'(-inf-64.3]\'','\'(64.3-inf)\''}

@attribute height {'\'(-inf-52.45]\'','\'(52.45-56.15]\'','\'(56.15-56.25]\'','\'(56.25-inf)\''}

@attribute curb-weight {'\'(-inf-1846.5]\'','\'(1846.5-2212.5]\'','\'(2212.5-inf)\''}

@attribute engine-type {dohc,dohcv,l,ohc,ohcf,ohcv,rotor}

@attribute num-of-cylinders {eight,five,four,six,three,twelve,two}

@attribute engine-size {'\'All\''}

@attribute fuel-system {1bbl,2bbl,4bbl,idi,mfi,mpfi,spdi,spfi}

@attribute bore {'\'(-inf-3.255]\'','\'(3.255-inf)\''}

@attribute stroke {'\'All\''}

@attribute compression-ratio {'\'All\''}

@attribute horsepower {'\'All\''}

@attribute peak-rpm {'\'All\''}

@attribute city-mpg {'\'All\''}

@attribute highway-mpg {'\'(-inf-33.5]\'','\'(33.5-inf)\''}

@attribute price {'\'(-inf-8883]\'','\'(8883-inf)\''}

@attribute symboling {-3,-2,-1,0,1,2,3}

@data

Classifier Model

JRIP rules:

===========

(height = '(56.15-56.25]') => symboling=-2 (2.0/0.0)

(wheel-base = '(101.6-inf)') and (normalized-losses = '(-inf-116.5]') => symboling=-1 (12.0/1.0)

(height = '(-inf-52.45]') and (price = '(8883-inf)') and (length = '(-inf-173.3]') => symboling=3 (13.0/2.0)

(make = saab) and (normalized-losses = '(116.5-inf)') => symboling=3 (2.0/0.0)

(curb-weight = '(-inf-1846.5]') => symboling=2 (3.0/0.0)

(fuel-system = mpfi) and (wheel-base = '(95.5-101.6]') => symboling=2 (14.0/5.0)

(wheel-base = '(-inf-95.5]') => symboling=1 (20.0/3.0)

(make = audi) => symboling=1 (2.0/0.0)

=> symboling=0 (35.0/8.0)

Number of Rules : 9

Time taken to build model: 0.01 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0 seconds

=== Summary ===

Correctly Classified Instances 84 81.5534 %

Incorrectly Classified Instances 19 18.4466 %

Kappa statistic 0.7626

Mean absolute error 0.0855

Root mean squared error 0.2068

Relative absolute error 38.4007 %

Root relative squared error 62.1655 %

Total Number of Instances 103

=== Detailed Accuracy By Class ===

TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class

0.000 0.000 0.000 0.000 0.000 0.000 ? ? -3

1.000 0.000 1.000 1.000 1.000 1.000 1.000 1.000 -2

1.000 0.011 0.917 1.000 0.957 0.952 0.995 0.917 -1

0.818 0.114 0.771 0.818 0.794 0.693 0.904 0.736 0

0.704 0.039 0.864 0.704 0.776 0.713 0.884 0.743 1

0.750 0.057 0.706 0.750 0.727 0.676 0.907 0.660 2

0.929 0.022 0.867 0.929 0.897 0.880 0.976 0.844 3

Weighted Avg. 0.816 0.060 0.818 0.816 0.814 0.755 0.921 0.765

=== Confusion Matrix ===

a b c d e f g <-- classified as

0 0 0 0 0 0 0 | a = -3

0 2 0 0 0 0 0 | b = -2

0 0 11 0 0 0 0 | c = -1

0 0 1 27 1 4 0 | d = 0

0 0 0 5 19 1 2 | e = 1

0 0 0 2 2 12 0 | f = 2

0 0 0 1 0 0 13 | g = 3

=== Run information ===

Scheme: weka.classifiers.meta.FilteredClassifier -F "weka.filters.supervised.attribute.Discretize -R first-last -precision 6" -W weka.classifiers.rules.JRip -- -F 3 -N 2.0 -O 2 -S 1

Relation: autos-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1

Instances: 103

Attributes: 26

normalized-losses

make

fuel-type

aspiration

num-of-doors

body-style

drive-wheels

engine-location

wheel-base

length

width

height

curb-weight

engine-type

num-of-cylinders

engine-size

fuel-system

bore

stroke

compression-ratio

horsepower

peak-rpm

city-mpg

highway-mpg

price

symboling

Test mode: 5-fold cross-validation

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

FilteredClassifier using weka.classifiers.rules.JRip -F 3 -N 2.0 -O 2 -S 1 on data filtered through weka.filters.supervised.attribute.Discretize -R first-last -precision 6

Filtered Header

@relation autos-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1-weka.filters.supervised.attribute.Discretize-Rfirst-last-precision6

@attribute normalized-losses {'\'(-inf-116.5]\'','\'(116.5-inf)\''}

@attribute make {alfa-romero,audi,bmw,chevrolet,dodge,honda,isuzu,jaguar,mazda,mercedes-benz,mercury,mitsubishi,nissan,peugot,plymouth,porsche,renault,saab,subaru,toyota,volkswagen,volvo}

@attribute fuel-type {diesel,gas}

@attribute aspiration {std,turbo}

@attribute num-of-doors {four,two}

@attribute body-style {hardtop,wagon,sedan,hatchback,convertible}

@attribute drive-wheels {4wd,fwd,rwd}

@attribute engine-location {front,rear}

@attribute wheel-base {'\'(-inf-95.5]\'','\'(95.5-101.6]\'','\'(101.6-inf)\''}

@attribute length {'\'(-inf-173.3]\'','\'(173.3-inf)\''}

@attribute width {'\'(-inf-64.3]\'','\'(64.3-inf)\''}

@attribute height {'\'(-inf-52.45]\'','\'(52.45-56.15]\'','\'(56.15-56.25]\'','\'(56.25-inf)\''}

@attribute curb-weight {'\'(-inf-1846.5]\'','\'(1846.5-2212.5]\'','\'(2212.5-inf)\''}

@attribute engine-type {dohc,dohcv,l,ohc,ohcf,ohcv,rotor}

@attribute num-of-cylinders {eight,five,four,six,three,twelve,two}

@attribute engine-size {'\'All\''}

@attribute fuel-system {1bbl,2bbl,4bbl,idi,mfi,mpfi,spdi,spfi}

@attribute bore {'\'(-inf-3.255]\'','\'(3.255-inf)\''}

@attribute stroke {'\'All\''}

@attribute compression-ratio {'\'All\''}

@attribute horsepower {'\'All\''}

@attribute peak-rpm {'\'All\''}

@attribute city-mpg {'\'All\''}

@attribute highway-mpg {'\'(-inf-33.5]\'','\'(33.5-inf)\''}

@attribute price {'\'(-inf-8883]\'','\'(8883-inf)\''}

@attribute symboling {-3,-2,-1,0,1,2,3}

@data

Classifier Model

JRIP rules:

===========

(height = '(56.15-56.25]') => symboling=-2 (2.0/0.0)

(wheel-base = '(101.6-inf)') and (normalized-losses = '(-inf-116.5]') => symboling=-1 (12.0/1.0)

(height = '(-inf-52.45]') and (price = '(8883-inf)') and (length = '(-inf-173.3]') => symboling=3 (13.0/2.0)

(make = saab) and (normalized-losses = '(116.5-inf)') => symboling=3 (2.0/0.0)

(curb-weight = '(-inf-1846.5]') => symboling=2 (3.0/0.0)

(fuel-system = mpfi) and (wheel-base = '(95.5-101.6]') => symboling=2 (14.0/5.0)

(wheel-base = '(-inf-95.5]') => symboling=1 (20.0/3.0)

(make = audi) => symboling=1 (2.0/0.0)

=> symboling=0 (35.0/8.0)

Number of Rules : 9

Time taken to build model: 0.01 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 59 57.2816 %

Incorrectly Classified Instances 44 42.7184 %

Kappa statistic 0.4427

Mean absolute error 0.1506

Root mean squared error 0.3087

Relative absolute error 67.4514 %

Root relative squared error 92.6899 %

Total Number of Instances 103

=== Detailed Accuracy By Class ===

TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class

0.000 0.000 0.000 0.000 0.000 0.000 ? ? -3

0.000 0.000 0.000 0.000 0.000 0.000 0.946 0.171 -2

0.818 0.054 0.643 0.818 0.720 0.688 0.874 0.475 -1

0.727 0.229 0.600 0.727 0.658 0.477 0.726 0.513 0

0.444 0.145 0.522 0.444 0.480 0.317 0.671 0.444 1

0.250 0.057 0.444 0.250 0.320 0.247 0.718 0.347 2

0.714 0.079 0.588 0.714 0.645 0.587 0.887 0.550 3

Weighted Avg. 0.573 0.137 0.547 0.573 0.551 0.428 0.752 0.463

=== Confusion Matrix ===

a b c d e f g <-- classified as

0 0 0 0 0 0 0 | a = -3

0 0 1 1 0 0 0 | b = -2

0 0 9 2 0 0 0 | c = -1

0 0 1 24 3 3 2 | d = 0

0 0 2 9 12 1 3 | e = 1

0 0 0 3 7 4 2 | f = 2

0 0 1 1 1 1 10 | g = 3

=== Run information ===

Scheme: weka.classifiers.meta.FilteredClassifier -F "weka.filters.supervised.attribute.Discretize -R first-last -precision 6" -W weka.classifiers.rules.JRip -- -F 3 -N 2.0 -O 2 -S 1

Relation: autos-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1

Instances: 103

Attributes: 26

normalized-losses

make

fuel-type

aspiration

num-of-doors

body-style

drive-wheels

engine-location

wheel-base

length

width

height

curb-weight

engine-type

num-of-cylinders

engine-size

fuel-system

bore

stroke

compression-ratio

horsepower

peak-rpm

city-mpg

highway-mpg

price

symboling

Test mode: 10-fold cross-validation

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

FilteredClassifier using weka.classifiers.rules.JRip -F 3 -N 2.0 -O 2 -S 1 on data filtered through weka.filters.supervised.attribute.Discretize -R first-last -precision 6

Filtered Header

@relation autos-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1-weka.filters.supervised.attribute.Discretize-Rfirst-last-precision6

@attribute normalized-losses {'\'(-inf-116.5]\'','\'(116.5-inf)\''}

@attribute make {alfa-romero,audi,bmw,chevrolet,dodge,honda,isuzu,jaguar,mazda,mercedes-benz,mercury,mitsubishi,nissan,peugot,plymouth,porsche,renault,saab,subaru,toyota,volkswagen,volvo}

@attribute fuel-type {diesel,gas}

@attribute aspiration {std,turbo}

@attribute num-of-doors {four,two}

@attribute body-style {hardtop,wagon,sedan,hatchback,convertible}

@attribute drive-wheels {4wd,fwd,rwd}

@attribute engine-location {front,rear}

@attribute wheel-base {'\'(-inf-95.5]\'','\'(95.5-101.6]\'','\'(101.6-inf)\''}

@attribute length {'\'(-inf-173.3]\'','\'(173.3-inf)\''}

@attribute width {'\'(-inf-64.3]\'','\'(64.3-inf)\''}

@attribute height {'\'(-inf-52.45]\'','\'(52.45-56.15]\'','\'(56.15-56.25]\'','\'(56.25-inf)\''}

@attribute curb-weight {'\'(-inf-1846.5]\'','\'(1846.5-2212.5]\'','\'(2212.5-inf)\''}

@attribute engine-type {dohc,dohcv,l,ohc,ohcf,ohcv,rotor}

@attribute num-of-cylinders {eight,five,four,six,three,twelve,two}

@attribute engine-size {'\'All\''}

@attribute fuel-system {1bbl,2bbl,4bbl,idi,mfi,mpfi,spdi,spfi}

@attribute bore {'\'(-inf-3.255]\'','\'(3.255-inf)\''}

@attribute stroke {'\'All\''}

@attribute compression-ratio {'\'All\''}

@attribute horsepower {'\'All\''}

@attribute peak-rpm {'\'All\''}

@attribute city-mpg {'\'All\''}

@attribute highway-mpg {'\'(-inf-33.5]\'','\'(33.5-inf)\''}

@attribute price {'\'(-inf-8883]\'','\'(8883-inf)\''}

@attribute symboling {-3,-2,-1,0,1,2,3}

@data

Classifier Model

JRIP rules:

===========

(height = '(56.15-56.25]') => symboling=-2 (2.0/0.0)

(wheel-base = '(101.6-inf)') and (normalized-losses = '(-inf-116.5]') => symboling=-1 (12.0/1.0)

(height = '(-inf-52.45]') and (price = '(8883-inf)') and (length = '(-inf-173.3]') => symboling=3 (13.0/2.0)

(make = saab) and (normalized-losses = '(116.5-inf)') => symboling=3 (2.0/0.0)

(curb-weight = '(-inf-1846.5]') => symboling=2 (3.0/0.0)

(fuel-system = mpfi) and (wheel-base = '(95.5-101.6]') => symboling=2 (14.0/5.0)

(wheel-base = '(-inf-95.5]') => symboling=1 (20.0/3.0)

(make = audi) => symboling=1 (2.0/0.0)

=> symboling=0 (35.0/8.0)

Number of Rules : 9

Time taken to build model: 0.01 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 60 58.2524 %

Incorrectly Classified Instances 43 41.7476 %

Kappa statistic 0.4537

Mean absolute error 0.1513

Root mean squared error 0.3161

Relative absolute error 67.7901 %

Root relative squared error 94.8667 %

Total Number of Instances 103

=== Detailed Accuracy By Class ===

TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class

0.000 0.000 0.000 0.000 0.000 0.000 ? ? -3

0.000 0.000 0.000 0.000 0.000 0.000 0.958 0.243 -2

0.727 0.043 0.667 0.727 0.696 0.658 0.872 0.493 -1

0.758 0.243 0.595 0.758 0.667 0.489 0.719 0.537 0

0.444 0.118 0.571 0.444 0.500 0.356 0.612 0.365 1

0.313 0.080 0.417 0.313 0.357 0.262 0.688 0.320 2

0.714 0.067 0.625 0.714 0.667 0.612 0.806 0.454 3

Weighted Avg. 0.583 0.135 0.561 0.583 0.565 0.444 0.719 0.436

=== Confusion Matrix ===

a b c d e f g <-- classified as

0 0 0 0 0 0 0 | a = -3

0 0 2 0 0 0 0 | b = -2

0 0 8 3 0 0 0 | c = -1

0 0 1 25 3 4 0 | d = 0

0 0 1 8 12 1 5 | e = 1

0 0 0 5 5 5 1 | f = 2

0 0 0 1 1 2 10 | g = 3

=== Run information ===

Scheme: weka.classifiers.meta.FilteredClassifier -F "weka.filters.supervised.attribute.Discretize -R first-last -precision 6" -W weka.classifiers.rules.JRip -- -F 3 -N 2.0 -O 2 -S 1

Relation: autos-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1

Instances: 103

Attributes: 26

normalized-losses

make

fuel-type

aspiration

num-of-doors

body-style

drive-wheels

engine-location

wheel-base

length

width

height

curb-weight

engine-type

num-of-cylinders

engine-size

fuel-system

bore

stroke

compression-ratio

horsepower

peak-rpm

city-mpg

highway-mpg

price

symboling

Test mode: 20-fold cross-validation

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

FilteredClassifier using weka.classifiers.rules.JRip -F 3 -N 2.0 -O 2 -S 1 on data filtered through weka.filters.supervised.attribute.Discretize -R first-last -precision 6

Filtered Header

@relation autos-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1-weka.filters.supervised.attribute.Discretize-Rfirst-last-precision6

@attribute normalized-losses {'\'(-inf-116.5]\'','\'(116.5-inf)\''}

@attribute make {alfa-romero,audi,bmw,chevrolet,dodge,honda,isuzu,jaguar,mazda,mercedes-benz,mercury,mitsubishi,nissan,peugot,plymouth,porsche,renault,saab,subaru,toyota,volkswagen,volvo}

@attribute fuel-type {diesel,gas}

@attribute aspiration {std,turbo}

@attribute num-of-doors {four,two}

@attribute body-style {hardtop,wagon,sedan,hatchback,convertible}

@attribute drive-wheels {4wd,fwd,rwd}

@attribute engine-location {front,rear}

@attribute wheel-base {'\'(-inf-95.5]\'','\'(95.5-101.6]\'','\'(101.6-inf)\''}

@attribute length {'\'(-inf-173.3]\'','\'(173.3-inf)\''}

@attribute width {'\'(-inf-64.3]\'','\'(64.3-inf)\''}

@attribute height {'\'(-inf-52.45]\'','\'(52.45-56.15]\'','\'(56.15-56.25]\'','\'(56.25-inf)\''}

@attribute curb-weight {'\'(-inf-1846.5]\'','\'(1846.5-2212.5]\'','\'(2212.5-inf)\''}

@attribute engine-type {dohc,dohcv,l,ohc,ohcf,ohcv,rotor}

@attribute num-of-cylinders {eight,five,four,six,three,twelve,two}

@attribute engine-size {'\'All\''}

@attribute fuel-system {1bbl,2bbl,4bbl,idi,mfi,mpfi,spdi,spfi}

@attribute bore {'\'(-inf-3.255]\'','\'(3.255-inf)\''}

@attribute stroke {'\'All\''}

@attribute compression-ratio {'\'All\''}

@attribute horsepower {'\'All\''}

@attribute peak-rpm {'\'All\''}

@attribute city-mpg {'\'All\''}

@attribute highway-mpg {'\'(-inf-33.5]\'','\'(33.5-inf)\''}

@attribute price {'\'(-inf-8883]\'','\'(8883-inf)\''}

@attribute symboling {-3,-2,-1,0,1,2,3}

@data

Classifier Model

JRIP rules:

===========

(height = '(56.15-56.25]') => symboling=-2 (2.0/0.0)

(wheel-base = '(101.6-inf)') and (normalized-losses = '(-inf-116.5]') => symboling=-1 (12.0/1.0)

(height = '(-inf-52.45]') and (price = '(8883-inf)') and (length = '(-inf-173.3]') => symboling=3 (13.0/2.0)

(make = saab) and (normalized-losses = '(116.5-inf)') => symboling=3 (2.0/0.0)

(curb-weight = '(-inf-1846.5]') => symboling=2 (3.0/0.0)

(fuel-system = mpfi) and (wheel-base = '(95.5-101.6]') => symboling=2 (14.0/5.0)

(wheel-base = '(-inf-95.5]') => symboling=1 (20.0/3.0)

(make = audi) => symboling=1 (2.0/0.0)

=> symboling=0 (35.0/8.0)

Number of Rules : 9

Time taken to build model: 0.01 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 50 48.5437 %

Incorrectly Classified Instances 53 51.4563 %

Kappa statistic 0.3275

Mean absolute error 0.1677

Root mean squared error 0.3373

Relative absolute error 75.0601 %

Root relative squared error 101.1147 %

Total Number of Instances 103

=== Detailed Accuracy By Class ===

TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class

0.000 0.000 0.000 0.000 0.000 0.000 ? ? -3

0.000 0.010 0.000 0.000 0.000 -0.014 0.941 0.250 -2

0.818 0.033 0.750 0.818 0.783 0.756 0.885 0.624 -1

0.545 0.286 0.474 0.545 0.507 0.251 0.675 0.448 0

0.519 0.171 0.519 0.519 0.519 0.347 0.672 0.419 1

0.188 0.103 0.250 0.188 0.214 0.095 0.603 0.223 2

0.429 0.079 0.462 0.429 0.444 0.361 0.753 0.348 3

Weighted Avg. 0.485 0.167 0.469 0.485 0.476 0.316 0.701 0.407

=== Confusion Matrix ===

a b c d e f g <-- classified as

0 0 0 0 0 0 0 | a = -3

0 0 2 0 0 0 0 | b = -2

0 1 9 1 0 0 0 | c = -1

0 0 1 18 8 5 1 | d = 0

0 0 0 7 14 2 4 | e = 1

0 0 0 6 5 3 2 | f = 2

0 0 0 6 0 2 6 | g = 3