=== 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: abalone-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1

Instances: 2089

Attributes: 9

Sex

Length

Diameter

Height

Whole weight

Shucked weight

Viscera weight

Shell weight

Class\_Rings

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 abalone-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1-weka.filters.supervised.attribute.Discretize-Rfirst-last-precision6

@attribute Sex {M,F,I}

@attribute Length {'\'(-inf-0.2575]\'','\'(0.2575-0.3075]\'','\'(0.3075-0.4425]\'','\'(0.4425-0.5375]\'','\'(0.5375-inf)\''}

@attribute Diameter {'\'(-inf-0.1675]\'','\'(0.1675-0.2225]\'','\'(0.2225-0.3375]\'','\'(0.3375-0.4075]\'','\'(0.4075-inf)\''}

@attribute Height {'\'(-inf-0.0625]\'','\'(0.0625-0.0775]\'','\'(0.0775-0.1025]\'','\'(0.1025-0.1225]\'','\'(0.1225-0.1525]\'','\'(0.1525-inf)\''}

@attribute 'Whole weight' {'\'(-inf-0.07325]\'','\'(0.07325-0.162]\'','\'(0.162-0.46675]\'','\'(0.46675-0.95225]\'','\'(0.95225-inf)\''}

@attribute 'Shucked weight' {'\'(-inf-0.03025]\'','\'(0.03025-0.05175]\'','\'(0.05175-0.18125]\'','\'(0.18125-0.424]\'','\'(0.424-inf)\''}

@attribute 'Viscera weight' {'\'(-inf-0.01025]\'','\'(0.01025-0.029]\'','\'(0.029-0.07275]\'','\'(0.07275-0.11725]\'','\'(0.11725-0.22075]\'','\'(0.22075-inf)\''}

@attribute 'Shell weight' {'\'(-inf-0.0275]\'','\'(0.0275-0.05825]\'','\'(0.05825-0.11975]\'','\'(0.11975-0.16775]\'','\'(0.16775-0.32375]\'','\'(0.32375-inf)\''}

@attribute Class\_Rings {1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,29}

@data

Classifier Model

JRIP rules:

===========

(Length = '(-inf-0.2575]') and (Sex = M) => Class\_Rings=4 (9.0/4.0)

(Diameter = '(0.1675-0.2225]') and (Length = '(0.2575-0.3075]') and (Height = '(-inf-0.0625]') => Class\_Rings=5 (6.0/1.0)

(Viscera weight = '(0.01025-0.029]') and (Shell weight = '(-inf-0.0275]') and (Height = '(0.0625-0.0775]') => Class\_Rings=5 (7.0/2.0)

(Viscera weight = '(0.01025-0.029]') and (Length = '(0.2575-0.3075]') and (Diameter = '(0.1675-0.2225]') and (Height = '(0.0775-0.1025]') => Class\_Rings=5 (6.0/2.0)

(Length = '(-inf-0.2575]') and (Height = '(0.0775-0.1025]') => Class\_Rings=5 (3.0/1.0)

(Diameter = '(0.2225-0.3375]') and (Sex = I) and (Shell weight = '(0.0275-0.05825]') and (Length = '(0.3075-0.4425]') => Class\_Rings=6 (45.0/21.0)

(Shell weight = '(0.05825-0.11975]') and (Sex = I) and (Height = '(0.0625-0.0775]') => Class\_Rings=6 (6.0/2.0)

(Diameter = '(0.2225-0.3375]') and (Sex = I) and (Viscera weight = '(0.07275-0.11725]') and (Shucked weight = '(0.18125-0.424]') => Class\_Rings=7 (16.0/7.0)

=> Class\_Rings=9 (1991.0/1647.0)

Number of Rules : 9

Time taken to build model: 0.14 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0.01 seconds

=== Summary ===

Correctly Classified Instances 402 19.2437 %

Incorrectly Classified Instances 1687 80.7563 %

Kappa statistic 0.0386

Mean absolute error 0.0625

Root mean squared error 0.1768

Relative absolute error 97.6224 %

Root relative squared error 98.8535 %

Total Number of Instances 2089

=== 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 0.523 0.001 1

0.000 0.000 0.000 0.000 0.000 0.000 ? ? 2

0.000 0.000 0.000 0.000 0.000 0.000 0.588 0.019 3

0.172 0.002 0.556 0.172 0.263 0.305 0.633 0.140 4

0.276 0.003 0.727 0.276 0.400 0.439 0.701 0.289 5

0.217 0.012 0.549 0.217 0.311 0.320 0.634 0.201 6

0.046 0.004 0.563 0.046 0.085 0.142 0.549 0.131 7

0.000 0.000 0.000 0.000 0.000 0.000 0.516 0.140 8

0.997 0.944 0.173 0.997 0.295 0.093 0.526 0.173 9

0.000 0.000 0.000 0.000 0.000 0.000 0.528 0.159 10

0.000 0.000 0.000 0.000 0.000 0.000 0.527 0.122 11

0.000 0.000 0.000 0.000 0.000 0.000 0.525 0.067 12

0.000 0.000 0.000 0.000 0.000 0.000 0.525 0.051 13

0.000 0.000 0.000 0.000 0.000 0.000 0.524 0.032 14

0.000 0.000 0.000 0.000 0.000 0.000 0.524 0.026 15

0.000 0.000 0.000 0.000 0.000 0.000 0.524 0.017 16

0.000 0.000 0.000 0.000 0.000 0.000 0.524 0.015 17

0.000 0.000 0.000 0.000 0.000 0.000 0.524 0.011 18

0.000 0.000 0.000 0.000 0.000 0.000 0.524 0.008 19

0.000 0.000 0.000 0.000 0.000 0.000 0.524 0.007 20

0.000 0.000 0.000 0.000 0.000 0.000 0.524 0.004 21

0.000 0.000 0.000 0.000 0.000 0.000 0.523 0.002 22

0.000 0.000 0.000 0.000 0.000 0.000 0.524 0.003 23

0.000 0.000 0.000 0.000 0.000 0.000 0.523 0.001 24

0.000 0.000 0.000 0.000 0.000 0.000 ? ? 25

0.000 0.000 0.000 0.000 0.000 0.000 0.523 0.001 26

0.000 0.000 0.000 0.000 0.000 0.000 0.523 0.001 27

0.000 0.000 0.000 0.000 0.000 0.000 0.523 0.001 29

Weighted Avg. 0.192 0.157 0.143 0.192 0.091 0.065 0.540 0.130

=== Confusion Matrix ===

a b c d e f g h i j k l m n o p q r s t u v w x y z aa ab <-- classified as

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | a = 1

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

0 0 0 1 0 0 0 0 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | c = 3

0 0 0 5 2 1 0 0 21 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | d = 4

0 0 0 3 16 5 0 0 34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | e = 5

0 0 0 0 4 28 5 0 92 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | f = 6

0 0 0 0 0 12 9 0 174 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | g = 7

0 0 0 0 0 4 2 0 278 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | h = 8

0 0 0 0 0 1 0 0 344 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | i = 9

0 0 0 0 0 0 0 0 317 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | j = 10

0 0 0 0 0 0 0 0 243 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | k = 11

0 0 0 0 0 0 0 0 133 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | l = 12

0 0 0 0 0 0 0 0 102 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | m = 13

0 0 0 0 0 0 0 0 63 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | n = 14

0 0 0 0 0 0 0 0 52 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | o = 15

0 0 0 0 0 0 0 0 33 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | p = 16

0 0 0 0 0 0 0 0 29 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | q = 17

0 0 0 0 0 0 0 0 21 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | r = 18

0 0 0 0 0 0 0 0 16 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | s = 19

0 0 0 0 0 0 0 0 13 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | t = 20

0 0 0 0 0 0 0 0 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | u = 21

0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | v = 22

0 0 0 0 0 0 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | w = 23

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | x = 24

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | y = 25

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | z = 26

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | aa = 27

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | ab = 29

=== 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: abalone-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1

Instances: 2089

Attributes: 9

Sex

Length

Diameter

Height

Whole weight

Shucked weight

Viscera weight

Shell weight

Class\_Rings

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 abalone-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1-weka.filters.supervised.attribute.Discretize-Rfirst-last-precision6

@attribute Sex {M,F,I}

@attribute Length {'\'(-inf-0.2575]\'','\'(0.2575-0.3075]\'','\'(0.3075-0.4425]\'','\'(0.4425-0.5375]\'','\'(0.5375-inf)\''}

@attribute Diameter {'\'(-inf-0.1675]\'','\'(0.1675-0.2225]\'','\'(0.2225-0.3375]\'','\'(0.3375-0.4075]\'','\'(0.4075-inf)\''}

@attribute Height {'\'(-inf-0.0625]\'','\'(0.0625-0.0775]\'','\'(0.0775-0.1025]\'','\'(0.1025-0.1225]\'','\'(0.1225-0.1525]\'','\'(0.1525-inf)\''}

@attribute 'Whole weight' {'\'(-inf-0.07325]\'','\'(0.07325-0.162]\'','\'(0.162-0.46675]\'','\'(0.46675-0.95225]\'','\'(0.95225-inf)\''}

@attribute 'Shucked weight' {'\'(-inf-0.03025]\'','\'(0.03025-0.05175]\'','\'(0.05175-0.18125]\'','\'(0.18125-0.424]\'','\'(0.424-inf)\''}

@attribute 'Viscera weight' {'\'(-inf-0.01025]\'','\'(0.01025-0.029]\'','\'(0.029-0.07275]\'','\'(0.07275-0.11725]\'','\'(0.11725-0.22075]\'','\'(0.22075-inf)\''}

@attribute 'Shell weight' {'\'(-inf-0.0275]\'','\'(0.0275-0.05825]\'','\'(0.05825-0.11975]\'','\'(0.11975-0.16775]\'','\'(0.16775-0.32375]\'','\'(0.32375-inf)\''}

@attribute Class\_Rings {1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,29}

@data

Classifier Model

JRIP rules:

===========

(Length = '(-inf-0.2575]') and (Sex = M) => Class\_Rings=4 (9.0/4.0)

(Diameter = '(0.1675-0.2225]') and (Length = '(0.2575-0.3075]') and (Height = '(-inf-0.0625]') => Class\_Rings=5 (6.0/1.0)

(Viscera weight = '(0.01025-0.029]') and (Shell weight = '(-inf-0.0275]') and (Height = '(0.0625-0.0775]') => Class\_Rings=5 (7.0/2.0)

(Viscera weight = '(0.01025-0.029]') and (Length = '(0.2575-0.3075]') and (Diameter = '(0.1675-0.2225]') and (Height = '(0.0775-0.1025]') => Class\_Rings=5 (6.0/2.0)

(Length = '(-inf-0.2575]') and (Height = '(0.0775-0.1025]') => Class\_Rings=5 (3.0/1.0)

(Diameter = '(0.2225-0.3375]') and (Sex = I) and (Shell weight = '(0.0275-0.05825]') and (Length = '(0.3075-0.4425]') => Class\_Rings=6 (45.0/21.0)

(Shell weight = '(0.05825-0.11975]') and (Sex = I) and (Height = '(0.0625-0.0775]') => Class\_Rings=6 (6.0/2.0)

(Diameter = '(0.2225-0.3375]') and (Sex = I) and (Viscera weight = '(0.07275-0.11725]') and (Shucked weight = '(0.18125-0.424]') => Class\_Rings=7 (16.0/7.0)

=> Class\_Rings=9 (1991.0/1647.0)

Number of Rules : 9

Time taken to build model: 0.1 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 374 17.9033 %

Incorrectly Classified Instances 1715 82.0967 %

Kappa statistic 0.0224

Mean absolute error 0.0631

Root mean squared error 0.1786

Relative absolute error 98.5875 %

Root relative squared error 99.8513 %

Total Number of Instances 2089

=== 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 0.213 0.000 1

0.000 0.000 0.000 0.000 0.000 0.000 ? ? 2

0.000 0.001 0.000 0.000 0.000 -0.002 0.447 0.023 3

0.034 0.003 0.125 0.034 0.054 0.059 0.643 0.092 4

0.121 0.009 0.280 0.121 0.169 0.169 0.637 0.141 5

0.085 0.013 0.306 0.085 0.133 0.134 0.567 0.099 6

0.010 0.001 0.667 0.010 0.020 0.075 0.529 0.116 7

0.042 0.006 0.545 0.042 0.078 0.123 0.535 0.163 8

0.988 0.944 0.172 0.988 0.292 0.076 0.523 0.171 9

0.000 0.000 0.000 0.000 0.000 0.000 0.519 0.157 10

0.000 0.000 0.000 0.000 0.000 0.000 0.526 0.122 11

0.000 0.000 0.000 0.000 0.000 0.000 0.520 0.066 12

0.000 0.000 0.000 0.000 0.000 0.000 0.525 0.051 13

0.000 0.002 0.000 0.000 0.000 -0.009 0.512 0.031 14

0.000 0.000 0.000 0.000 0.000 0.000 0.513 0.025 15

0.000 0.000 0.000 0.000 0.000 0.000 0.509 0.016 16

0.000 0.000 0.000 0.000 0.000 0.000 0.512 0.014 17

0.000 0.000 0.000 0.000 0.000 0.000 0.505 0.010 18

0.000 0.000 0.000 0.000 0.000 0.000 0.493 0.008 19

0.000 0.000 0.000 0.000 0.000 0.000 0.542 0.022 20

0.000 0.000 0.000 0.000 0.000 0.000 0.442 0.003 21

0.000 0.000 0.000 0.000 0.000 0.000 0.333 0.001 22

0.000 0.000 0.000 0.000 0.000 0.000 0.524 0.003 23

0.000 0.000 0.000 0.000 0.000 0.000 0.119 0.000 24

0.000 0.000 0.000 0.000 0.000 0.000 ? ? 25

0.000 0.000 0.000 0.000 0.000 0.000 0.119 0.000 26

0.000 0.000 0.000 0.000 0.000 0.000 0.119 0.000 27

0.000 0.000 0.000 0.000 0.000 0.000 0.121 0.000 29

Weighted Avg. 0.179 0.158 0.193 0.179 0.074 0.050 0.530 0.120

=== Confusion Matrix ===

a b c d e f g h i j k l m n o p q r s t u v w x y z aa ab <-- classified as

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | a = 1

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

0 0 0 2 1 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | c = 3

0 0 2 1 6 2 0 0 18 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | d = 4

0 0 0 5 7 5 0 0 41 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | e = 5

0 0 0 0 8 11 0 1 108 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | f = 6

0 0 0 0 2 9 2 3 179 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | g = 7

0 0 0 0 1 5 0 12 266 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | h = 8

0 0 0 0 0 2 1 1 341 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | i = 9

0 0 0 0 0 2 0 3 311 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | j = 10

0 0 0 0 0 0 0 2 241 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | k = 11

0 0 0 0 0 0 0 0 132 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | l = 12

0 0 0 0 0 0 0 0 102 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | m = 13

0 0 0 0 0 0 0 0 63 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | n = 14

0 0 0 0 0 0 0 0 52 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | o = 15

0 0 0 0 0 0 0 0 33 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | p = 16

0 0 0 0 0 0 0 0 29 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | q = 17

0 0 0 0 0 0 0 0 21 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | r = 18

0 0 0 0 0 0 0 0 15 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | s = 19

0 0 0 0 0 0 0 0 12 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | t = 20

0 0 0 0 0 0 0 0 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | u = 21

0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | v = 22

0 0 0 0 0 0 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | w = 23

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | x = 24

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | y = 25

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | z = 26

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | aa = 27

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | ab = 29

=== 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: abalone-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1

Instances: 2089

Attributes: 9

Sex

Length

Diameter

Height

Whole weight

Shucked weight

Viscera weight

Shell weight

Class\_Rings

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 abalone-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1-weka.filters.supervised.attribute.Discretize-Rfirst-last-precision6

@attribute Sex {M,F,I}

@attribute Length {'\'(-inf-0.2575]\'','\'(0.2575-0.3075]\'','\'(0.3075-0.4425]\'','\'(0.4425-0.5375]\'','\'(0.5375-inf)\''}

@attribute Diameter {'\'(-inf-0.1675]\'','\'(0.1675-0.2225]\'','\'(0.2225-0.3375]\'','\'(0.3375-0.4075]\'','\'(0.4075-inf)\''}

@attribute Height {'\'(-inf-0.0625]\'','\'(0.0625-0.0775]\'','\'(0.0775-0.1025]\'','\'(0.1025-0.1225]\'','\'(0.1225-0.1525]\'','\'(0.1525-inf)\''}

@attribute 'Whole weight' {'\'(-inf-0.07325]\'','\'(0.07325-0.162]\'','\'(0.162-0.46675]\'','\'(0.46675-0.95225]\'','\'(0.95225-inf)\''}

@attribute 'Shucked weight' {'\'(-inf-0.03025]\'','\'(0.03025-0.05175]\'','\'(0.05175-0.18125]\'','\'(0.18125-0.424]\'','\'(0.424-inf)\''}

@attribute 'Viscera weight' {'\'(-inf-0.01025]\'','\'(0.01025-0.029]\'','\'(0.029-0.07275]\'','\'(0.07275-0.11725]\'','\'(0.11725-0.22075]\'','\'(0.22075-inf)\''}

@attribute 'Shell weight' {'\'(-inf-0.0275]\'','\'(0.0275-0.05825]\'','\'(0.05825-0.11975]\'','\'(0.11975-0.16775]\'','\'(0.16775-0.32375]\'','\'(0.32375-inf)\''}

@attribute Class\_Rings {1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,29}

@data

Classifier Model

JRIP rules:

===========

(Length = '(-inf-0.2575]') and (Sex = M) => Class\_Rings=4 (9.0/4.0)

(Diameter = '(0.1675-0.2225]') and (Length = '(0.2575-0.3075]') and (Height = '(-inf-0.0625]') => Class\_Rings=5 (6.0/1.0)

(Viscera weight = '(0.01025-0.029]') and (Shell weight = '(-inf-0.0275]') and (Height = '(0.0625-0.0775]') => Class\_Rings=5 (7.0/2.0)

(Viscera weight = '(0.01025-0.029]') and (Length = '(0.2575-0.3075]') and (Diameter = '(0.1675-0.2225]') and (Height = '(0.0775-0.1025]') => Class\_Rings=5 (6.0/2.0)

(Length = '(-inf-0.2575]') and (Height = '(0.0775-0.1025]') => Class\_Rings=5 (3.0/1.0)

(Diameter = '(0.2225-0.3375]') and (Sex = I) and (Shell weight = '(0.0275-0.05825]') and (Length = '(0.3075-0.4425]') => Class\_Rings=6 (45.0/21.0)

(Shell weight = '(0.05825-0.11975]') and (Sex = I) and (Height = '(0.0625-0.0775]') => Class\_Rings=6 (6.0/2.0)

(Diameter = '(0.2225-0.3375]') and (Sex = I) and (Viscera weight = '(0.07275-0.11725]') and (Shucked weight = '(0.18125-0.424]') => Class\_Rings=7 (16.0/7.0)

=> Class\_Rings=9 (1991.0/1647.0)

Number of Rules : 9

Time taken to build model: 0.1 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 382 18.2863 %

Incorrectly Classified Instances 1707 81.7137 %

Kappa statistic 0.0267

Mean absolute error 0.0631

Root mean squared error 0.1782

Relative absolute error 98.4563 %

Root relative squared error 99.6643 %

Total Number of Instances 2089

=== 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 0.070 0.000 1

0.000 0.000 0.000 0.000 0.000 0.000 ? ? 2

0.000 0.001 0.000 0.000 0.000 -0.002 0.580 0.019 3

0.069 0.005 0.167 0.069 0.098 0.099 0.603 0.061 4

0.155 0.007 0.391 0.155 0.222 0.233 0.676 0.172 5

0.085 0.008 0.423 0.085 0.142 0.169 0.581 0.116 6

0.005 0.003 0.143 0.005 0.010 0.010 0.542 0.119 7

0.060 0.011 0.472 0.060 0.106 0.130 0.548 0.182 8

0.991 0.940 0.173 0.991 0.294 0.086 0.530 0.173 9

0.000 0.000 0.000 0.000 0.000 0.000 0.530 0.162 10

0.000 0.000 0.000 0.000 0.000 0.000 0.530 0.124 11

0.000 0.001 0.000 0.000 0.000 -0.006 0.524 0.067 12

0.000 0.000 0.000 0.000 0.000 0.000 0.525 0.051 13

0.000 0.000 0.000 0.000 0.000 -0.004 0.524 0.032 14

0.000 0.000 0.000 0.000 0.000 0.000 0.504 0.025 15

0.000 0.000 0.000 0.000 0.000 0.000 0.506 0.016 16

0.000 0.000 0.000 0.000 0.000 0.000 0.522 0.015 17

0.000 0.000 0.000 0.000 0.000 0.000 0.491 0.010 18

0.000 0.000 0.000 0.000 0.000 0.000 0.457 0.007 19

0.000 0.000 0.000 0.000 0.000 0.000 0.454 0.006 20

0.000 0.000 0.000 0.000 0.000 0.000 0.385 0.003 21

0.000 0.000 0.000 0.000 0.000 0.000 0.171 0.001 22

0.000 0.000 0.000 0.000 0.000 0.000 0.240 0.002 23

0.000 0.000 0.000 0.000 0.000 0.000 0.074 0.000 24

0.000 0.000 0.000 0.000 0.000 0.000 ? ? 25

0.000 0.000 0.000 0.000 0.000 0.000 0.073 0.000 26

0.000 0.000 0.000 0.000 0.000 0.000 0.072 0.000 27

0.000 0.000 0.000 0.000 0.000 0.000 0.075 0.000 29

Weighted Avg. 0.183 0.158 0.145 0.183 0.080 0.051 0.536 0.125

=== Confusion Matrix ===

a b c d e f g h i j k l m n o p q r s t u v w x y z aa ab <-- classified as

0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | a = 1

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

0 0 0 2 0 0 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | c = 3

0 0 2 2 6 1 0 0 18 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | d = 4

0 0 0 7 9 2 0 0 40 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | e = 5

0 0 0 0 5 11 2 0 111 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | f = 6

0 0 0 0 2 9 1 8 175 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | g = 7

0 0 0 0 1 2 3 17 261 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | h = 8

0 0 0 0 0 0 0 3 342 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | i = 9

0 0 0 0 0 1 1 1 314 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | j = 10

0 0 0 0 0 0 0 2 241 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | k = 11

0 0 0 0 0 0 0 1 132 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | l = 12

0 0 0 0 0 0 0 1 101 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | m = 13

0 0 0 0 0 0 0 1 62 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | n = 14

0 0 0 0 0 0 0 1 51 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | o = 15

0 0 0 0 0 0 0 0 33 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | p = 16

0 0 0 0 0 0 0 0 29 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | q = 17

0 0 0 0 0 0 0 1 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | r = 18

0 0 0 0 0 0 0 0 16 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | s = 19

0 0 0 0 0 0 0 0 13 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | t = 20

0 0 0 0 0 0 0 0 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | u = 21

0 0 0 0 0 0 0 0 2 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | v = 22

0 0 0 0 0 0 0 0 4 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | w = 23

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | x = 24

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | y = 25

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | z = 26

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | aa = 27

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | ab = 29

=== 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: abalone-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1

Instances: 2089

Attributes: 9

Sex

Length

Diameter

Height

Whole weight

Shucked weight

Viscera weight

Shell weight

Class\_Rings

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 abalone-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.AllFilter-weka.filters.supervised.instance.StratifiedRemoveFolds-S0-N2-F1-weka.filters.supervised.attribute.Discretize-Rfirst-last-precision6

@attribute Sex {M,F,I}

@attribute Length {'\'(-inf-0.2575]\'','\'(0.2575-0.3075]\'','\'(0.3075-0.4425]\'','\'(0.4425-0.5375]\'','\'(0.5375-inf)\''}

@attribute Diameter {'\'(-inf-0.1675]\'','\'(0.1675-0.2225]\'','\'(0.2225-0.3375]\'','\'(0.3375-0.4075]\'','\'(0.4075-inf)\''}

@attribute Height {'\'(-inf-0.0625]\'','\'(0.0625-0.0775]\'','\'(0.0775-0.1025]\'','\'(0.1025-0.1225]\'','\'(0.1225-0.1525]\'','\'(0.1525-inf)\''}

@attribute 'Whole weight' {'\'(-inf-0.07325]\'','\'(0.07325-0.162]\'','\'(0.162-0.46675]\'','\'(0.46675-0.95225]\'','\'(0.95225-inf)\''}

@attribute 'Shucked weight' {'\'(-inf-0.03025]\'','\'(0.03025-0.05175]\'','\'(0.05175-0.18125]\'','\'(0.18125-0.424]\'','\'(0.424-inf)\''}

@attribute 'Viscera weight' {'\'(-inf-0.01025]\'','\'(0.01025-0.029]\'','\'(0.029-0.07275]\'','\'(0.07275-0.11725]\'','\'(0.11725-0.22075]\'','\'(0.22075-inf)\''}

@attribute 'Shell weight' {'\'(-inf-0.0275]\'','\'(0.0275-0.05825]\'','\'(0.05825-0.11975]\'','\'(0.11975-0.16775]\'','\'(0.16775-0.32375]\'','\'(0.32375-inf)\''}

@attribute Class\_Rings {1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,29}

@data

Classifier Model

JRIP rules:

===========

(Length = '(-inf-0.2575]') and (Sex = M) => Class\_Rings=4 (9.0/4.0)

(Diameter = '(0.1675-0.2225]') and (Length = '(0.2575-0.3075]') and (Height = '(-inf-0.0625]') => Class\_Rings=5 (6.0/1.0)

(Viscera weight = '(0.01025-0.029]') and (Shell weight = '(-inf-0.0275]') and (Height = '(0.0625-0.0775]') => Class\_Rings=5 (7.0/2.0)

(Viscera weight = '(0.01025-0.029]') and (Length = '(0.2575-0.3075]') and (Diameter = '(0.1675-0.2225]') and (Height = '(0.0775-0.1025]') => Class\_Rings=5 (6.0/2.0)

(Length = '(-inf-0.2575]') and (Height = '(0.0775-0.1025]') => Class\_Rings=5 (3.0/1.0)

(Diameter = '(0.2225-0.3375]') and (Sex = I) and (Shell weight = '(0.0275-0.05825]') and (Length = '(0.3075-0.4425]') => Class\_Rings=6 (45.0/21.0)

(Shell weight = '(0.05825-0.11975]') and (Sex = I) and (Height = '(0.0625-0.0775]') => Class\_Rings=6 (6.0/2.0)

(Diameter = '(0.2225-0.3375]') and (Sex = I) and (Viscera weight = '(0.07275-0.11725]') and (Shucked weight = '(0.18125-0.424]') => Class\_Rings=7 (16.0/7.0)

=> Class\_Rings=9 (1991.0/1647.0)

Number of Rules : 9

Time taken to build model: 0.14 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 366 17.5203 %

Incorrectly Classified Instances 1723 82.4797 %

Kappa statistic 0.0155

Mean absolute error 0.0634

Root mean squared error 0.1785

Relative absolute error 98.9416 %

Root relative squared error 99.8137 %

Total Number of Instances 2089

=== 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 0.042 0.000 1

0.000 0.000 0.000 0.000 0.000 0.000 ? ? 2

0.000 0.000 0.000 0.000 0.000 0.000 0.362 0.003 3

0.000 0.001 0.000 0.000 0.000 -0.004 0.562 0.060 4

0.121 0.005 0.412 0.121 0.187 0.212 0.610 0.124 5

0.062 0.008 0.333 0.062 0.105 0.122 0.550 0.091 6

0.000 0.001 0.000 0.000 0.000 -0.010 0.509 0.108 7

0.046 0.009 0.448 0.046 0.083 0.108 0.531 0.162 8

0.980 0.962 0.168 0.980 0.286 0.036 0.513 0.168 9

0.000 0.000 0.000 0.000 0.000 0.000 0.515 0.155 10

0.000 0.000 0.000 0.000 0.000 0.000 0.516 0.120 11

0.000 0.000 0.000 0.000 0.000 0.000 0.520 0.066 12

0.000 0.000 0.000 0.000 0.000 0.000 0.525 0.051 13

0.000 0.000 0.000 0.000 0.000 0.000 0.505 0.030 14

0.000 0.000 0.000 0.000 0.000 0.000 0.484 0.024 15

0.000 0.000 0.000 0.000 0.000 0.000 0.457 0.014 16

0.000 0.000 0.000 0.000 0.000 0.000 0.447 0.012 17

0.000 0.000 0.000 0.000 0.000 0.000 0.500 0.010 18

0.000 0.000 0.000 0.000 0.000 0.000 0.426 0.006 19

0.000 0.000 0.000 0.000 0.000 0.000 0.354 0.005 20

0.000 0.000 0.000 0.000 0.000 0.000 0.200 0.002 21

0.000 0.000 0.000 0.000 0.000 0.000 0.105 0.001 22

0.000 0.000 0.000 0.000 0.000 0.000 0.157 0.002 23

0.000 0.000 0.000 0.000 0.000 0.000 0.042 0.000 24

0.000 0.000 0.000 0.000 0.000 0.000 ? ? 25

0.000 0.000 0.000 0.000 0.000 0.000 0.042 0.000 26

0.000 0.000 0.000 0.000 0.000 0.000 0.042 0.000 27

0.000 0.000 0.000 0.000 0.000 0.000 0.042 0.000 29

Weighted Avg. 0.175 0.161 0.121 0.175 0.070 0.033 0.514 0.116

=== Confusion Matrix ===

a b c d e f g h i j k l m n o p q r s t u v w x y z aa ab <-- classified as

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | a = 1

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

0 0 0 0 0 0 0 0 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | c = 3

0 0 0 0 3 1 0 0 25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | d = 4

0 0 0 1 7 4 0 0 46 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | e = 5

0 0 0 1 3 8 0 0 117 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | f = 6

0 0 0 0 3 7 0 7 178 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | g = 7

0 0 0 0 1 3 0 13 267 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | h = 8

0 0 0 0 0 1 1 5 338 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | i = 9

0 0 0 0 0 0 1 1 315 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | j = 10

0 0 0 0 0 0 0 2 241 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | k = 11

0 0 0 0 0 0 0 0 133 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | l = 12

0 0 0 0 0 0 0 0 102 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | m = 13

0 0 0 0 0 0 0 0 63 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | n = 14

0 0 0 0 0 0 0 1 51 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | o = 15

0 0 0 0 0 0 0 0 33 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | p = 16

0 0 0 0 0 0 0 0 29 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | q = 17

0 0 0 0 0 0 0 0 21 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | r = 18

0 0 0 0 0 0 0 0 16 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | s = 19

0 0 0 0 0 0 0 0 13 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | t = 20

0 0 0 0 0 0 0 0 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | u = 21

0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | v = 22

0 0 0 0 0 0 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | w = 23

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | x = 24

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | y = 25

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | z = 26

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | aa = 27

0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | ab = 29