=== Run information ===

Scheme: weka.classifiers.trees.J48 -C 0.25 -M 2

Relation: PorCleanedData-weka.filters.unsupervised.instance.Randomize-S42-weka.filters.unsupervised.instance.Randomize-S42-weka.filters.unsupervised.instance.Randomize-S42-weka.filters.unsupervised.instance.Randomize-S42-weka.filters.unsupervised.instance.Randomize-S42-weka.filters.unsupervised.instance.RemovePercentage-P20.0

Instances: 519

Attributes: 25

sex

age

address

famsize

Pstatus

Medu

Fedu

traveltime

studytime

failures

schoolsup

famsup

paid

activities

higher

internet

romantic

famrel

freetime

goout

Dalc

Walc

health

absences

G

Test mode: 10-fold cross-validation

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

J48 pruned tree

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failures <= 0

| higher = yes

| | schoolsup = yes

| | | Dalc = very low

| | | | famsup = no

| | | | | Pstatus = A: D (3.0)

| | | | | Pstatus = T: F (6.0/1.0)

| | | | famsup = yes

| | | | | traveltime = 15 to 30 min: D (6.0/2.0)

| | | | | traveltime = <15 min: C (18.0/8.0)

| | | | | traveltime = 30 min to 1 hr: B (1.0)

| | | | | traveltime = >1 hour: F (1.0)

| | | Dalc = low: C (7.0/3.0)

| | | Dalc = very high: F (1.0)

| | | Dalc = average: A (2.0/1.0)

| | | Dalc = high: C (0.0)

| | schoolsup = no

| | | Dalc = very low

| | | | internet = no

| | | | | Walc = very low

| | | | | | health = average

| | | | | | | traveltime = 15 to 30 min: A (3.0/1.0)

| | | | | | | traveltime = <15 min

| | | | | | | | activities = no: D (3.0/1.0)

| | | | | | | | activities = yes: C (3.0)

| | | | | | | traveltime = 30 min to 1 hr: C (0.0)

| | | | | | | traveltime = >1 hour: C (0.0)

| | | | | | health = very good

| | | | | | | Fedu = college: D (2.0/1.0)

| | | | | | | Fedu = elementary: C (2.0)

| | | | | | | Fedu = junior high: D (1.0)

| | | | | | | Fedu = high school: D (2.0)

| | | | | | | Fedu = none: C (1.0)

| | | | | | health = very bad: A (2.0)

| | | | | | health = bad: F (3.0/1.0)

| | | | | | health = good: B (4.0/1.0)

| | | | | Walc = average

| | | | | | sex = F: B (2.0)

| | | | | | sex = M: D (2.0/1.0)

| | | | | Walc = low

| | | | | | absences <= 1

| | | | | | | activities = no

| | | | | | | | freetime = average: C (2.0)

| | | | | | | | freetime = low: B (3.0/1.0)

| | | | | | | | freetime = high: C (0.0)

| | | | | | | | freetime = very low: C (0.0)

| | | | | | | | freetime = very high: A (1.0)

| | | | | | | activities = yes: D (2.0/1.0)

| | | | | | absences > 1: D (7.0)

| | | | | Walc = high: C (3.0/1.0)

| | | | | Walc = very high: F (1.0)

| | | | internet = yes

| | | | | Fedu = college

| | | | | | health = average: D (3.0/2.0)

| | | | | | health = very good

| | | | | | | age <= 16

| | | | | | | | famsup = no: B (2.0)

| | | | | | | | famsup = yes: C (12.0/4.0)

| | | | | | | age > 16

| | | | | | | | activities = no: B (4.0/1.0)

| | | | | | | | activities = yes

| | | | | | | | | famsup = no: A (4.0)

| | | | | | | | | famsup = yes: F (5.0/2.0)

| | | | | | health = very bad

| | | | | | | famrel = good: A (1.0)

| | | | | | | famrel = excellent: C (2.0/1.0)

| | | | | | | famrel = average: B (0.0)

| | | | | | | famrel = very bad: B (0.0)

| | | | | | | famrel = bad: B (2.0)

| | | | | | health = bad

| | | | | | | freetime = average: B (2.0)

| | | | | | | freetime = low: B (2.0/1.0)

| | | | | | | freetime = high: A (2.0)

| | | | | | | freetime = very low: B (0.0)

| | | | | | | freetime = very high: B (0.0)

| | | | | | health = good

| | | | | | | famsize = GT3

| | | | | | | | activities = no: B (2.0)

| | | | | | | | activities = yes: A (2.0)

| | | | | | | famsize = LE3: B (4.0)

| | | | | Fedu = elementary

| | | | | | Pstatus = A

| | | | | | | freetime = average: C (5.0)

| | | | | | | freetime = low: D (2.0/1.0)

| | | | | | | freetime = high: C (0.0)

| | | | | | | freetime = very low: C (0.0)

| | | | | | | freetime = very high: C (0.0)

| | | | | | Pstatus = T

| | | | | | | famsize = GT3

| | | | | | | | traveltime = 15 to 30 min

| | | | | | | | | famsup = no

| | | | | | | | | | sex = F: B (2.0)

| | | | | | | | | | sex = M: F (2.0)

| | | | | | | | | famsup = yes: D (6.0/1.0)

| | | | | | | | traveltime = <15 min

| | | | | | | | | Medu = college: B (1.0)

| | | | | | | | | Medu = elementary: C (3.0)

| | | | | | | | | Medu = high school: F (1.0)

| | | | | | | | | Medu = junior high: B (5.0/2.0)

| | | | | | | | | Medu = none: B (0.0)

| | | | | | | | traveltime = 30 min to 1 hr: C (3.0/1.0)

| | | | | | | | traveltime = >1 hour: C (1.0)

| | | | | | | famsize = LE3

| | | | | | | | famsup = no

| | | | | | | | | absences <= 1: A (3.0)

| | | | | | | | | absences > 1: B (2.0)

| | | | | | | | famsup = yes

| | | | | | | | | age <= 16: F (3.0)

| | | | | | | | | age > 16: D (2.0/1.0)

| | | | | Fedu = junior high

| | | | | | Medu = college: A (13.0/5.0)

| | | | | | Medu = elementary: B (7.0/4.0)

| | | | | | Medu = high school: A (10.0/5.0)

| | | | | | Medu = junior high: C (29.0/15.0)

| | | | | | Medu = none: C (0.0)

| | | | | Fedu = high school

| | | | | | studytime = 2 to 5 hours

| | | | | | | famrel = good: B (16.0/6.0)

| | | | | | | famrel = excellent

| | | | | | | | sex = F

| | | | | | | | | famsup = no: C (2.0/1.0)

| | | | | | | | | famsup = yes: A (2.0)

| | | | | | | | sex = M: C (5.0/1.0)

| | | | | | | famrel = average: D (3.0/2.0)

| | | | | | | famrel = very bad: B (1.0)

| | | | | | | famrel = bad: B (1.0)

| | | | | | studytime = 5 to 10 hours

| | | | | | | romantic = no: B (4.0/1.0)

| | | | | | | romantic = yes

| | | | | | | | age <= 17: C (3.0/1.0)

| | | | | | | | age > 17: A (2.0)

| | | | | | studytime = <2 hours

| | | | | | | freetime = average: F (1.0)

| | | | | | | freetime = low

| | | | | | | | age <= 17: C (2.0)

| | | | | | | | age > 17: D (3.0/1.0)

| | | | | | | freetime = high: B (4.0/1.0)

| | | | | | | freetime = very low: A (1.0)

| | | | | | | freetime = very high: C (2.0)

| | | | | | studytime = 10 hours: A (3.0)

| | | | | Fedu = none

| | | | | | romantic = no: D (2.0)

| | | | | | romantic = yes: A (2.0/1.0)

| | | Dalc = low

| | | | Fedu = college

| | | | | traveltime = 15 to 30 min: C (7.0/1.0)

| | | | | traveltime = <15 min

| | | | | | sex = F: A (3.0)

| | | | | | sex = M

| | | | | | | romantic = no: C (3.0)

| | | | | | | romantic = yes: D (2.0/1.0)

| | | | | traveltime = 30 min to 1 hr: F (1.0)

| | | | | traveltime = >1 hour: C (0.0)

| | | | Fedu = elementary

| | | | | sex = F: B (10.0/5.0)

| | | | | sex = M

| | | | | | absences <= 2: D (3.0/2.0)

| | | | | | absences > 2: F (3.0)

| | | | Fedu = junior high

| | | | | traveltime = 15 to 30 min

| | | | | | address = U: D (5.0/2.0)

| | | | | | address = R: F (2.0)

| | | | | traveltime = <15 min

| | | | | | health = average: D (0.0)

| | | | | | health = very good: D (6.0/2.0)

| | | | | | health = very bad

| | | | | | | age <= 16: D (2.0)

| | | | | | | age > 16: A (2.0)

| | | | | | health = bad: B (2.0/1.0)

| | | | | | health = good: D (0.0)

| | | | | traveltime = 30 min to 1 hr: C (2.0/1.0)

| | | | | traveltime = >1 hour: F (1.0)

| | | | Fedu = high school

| | | | | internet = no: A (2.0/1.0)

| | | | | internet = yes

| | | | | | romantic = no: D (5.0)

| | | | | | romantic = yes

| | | | | | | traveltime = 15 to 30 min: D (2.0/1.0)

| | | | | | | traveltime = <15 min: B (2.0)

| | | | | | | traveltime = 30 min to 1 hr: B (0.0)

| | | | | | | traveltime = >1 hour: B (0.0)

| | | | Fedu = none: D (0.0)

| | | Dalc = very high

| | | | age <= 16: C (2.0)

| | | | age > 16: D (7.0/2.0)

| | | Dalc = average

| | | | internet = no: F (4.0/1.0)

| | | | internet = yes

| | | | | famsup = no

| | | | | | activities = no: D (4.0/1.0)

| | | | | | activities = yes: B (3.0/1.0)

| | | | | famsup = yes

| | | | | | Walc = very low: D (0.0)

| | | | | | Walc = average: C (2.0)

| | | | | | Walc = low: D (0.0)

| | | | | | Walc = high

| | | | | | | Fedu = college: A (2.0/1.0)

| | | | | | | Fedu = elementary: D (0.0)

| | | | | | | Fedu = junior high: F (1.0)

| | | | | | | Fedu = high school: D (2.0)

| | | | | | | Fedu = none: D (0.0)

| | | | | | Walc = very high: D (3.0/1.0)

| | | Dalc = high

| | | | address = U: C (6.0/2.0)

| | | | address = R: B (3.0/1.0)

| higher = no

| | traveltime = 15 to 30 min

| | | studytime = 2 to 5 hours

| | | | absences <= 10: C (2.0)

| | | | absences > 10: F (2.0)

| | | studytime = 5 to 10 hours: F (1.0)

| | | studytime = <2 hours: D (9.0/3.0)

| | | studytime = 10 hours: F (1.0)

| | traveltime = <15 min

| | | activities = no: F (5.0/1.0)

| | | activities = yes: C (3.0/1.0)

| | traveltime = 30 min to 1 hr: D (5.0/2.0)

| | traveltime = >1 hour: F (1.0)

failures > 0

| age <= 19

| | Medu = college

| | | famsup = no: F (2.0)

| | | famsup = yes: D (2.0/1.0)

| | Medu = elementary: F (30.0/5.0)

| | Medu = high school: F (19.0/6.0)

| | Medu = junior high

| | | age <= 16: D (6.0/1.0)

| | | age > 16: F (18.0/4.0)

| | Medu = none: D (1.0)

| age > 19

| | Medu = college: C (1.0)

| | Medu = elementary: D (3.0)

| | Medu = high school: B (2.0/1.0)

| | Medu = junior high: D (0.0)

| | Medu = none: D (0.0)

Number of Leaves : 159

Size of the tree : 236

Time taken to build model: 0.03 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 149 28.7091 %

Incorrectly Classified Instances 370 71.2909 %

Kappa statistic 0.0999

Mean absolute error 0.2921

Root mean squared error 0.4742

Relative absolute error 91.9571 %

Root relative squared error 118.9927 %

Total Number of Instances 519

=== Detailed Accuracy By Class ===

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

0.278 0.257 0.235 0.278 0.255 0.020 0.530 0.246 D

0.237 0.242 0.224 0.237 0.230 -0.005 0.481 0.215 C

0.250 0.151 0.253 0.250 0.251 0.100 0.582 0.207 B

0.130 0.118 0.161 0.130 0.144 0.013 0.527 0.176 A

0.471 0.131 0.523 0.471 0.496 0.353 0.680 0.388 F

Weighted Avg. 0.287 0.186 0.292 0.287 0.288 0.105 0.562 0.255

=== Confusion Matrix ===

a b c d e <-- classified as

32 31 9 14 29 | a = D

36 28 24 20 10 | b = C

15 29 22 13 9 | c = B

22 19 22 10 4 | d = A

31 18 10 5 57 | e = F