@relation labor-neg-data

@attribute duration numeric

@attribute wage-increase-first-year numeric

@attribute wage-increase-second-year numeric

@attribute wage-increase-third-year numeric

@attribute cost-of-living-adjustment {none,tcf,tc}

@attribute working-hours numeric

@attribute pension {none,ret\_allw,empl\_contr}

@attribute standby-pay numeric

@attribute shift-differential numeric

@attribute education-allowance {yes,no}

@attribute statutory-holidays numeric

@attribute vacation {below\_average,average,generous}

@attribute longterm-disability-assistance {yes,no}

@attribute contribution-to-dental-plan {none,half,full}

@attribute bereavement-assistance {yes,no}

@attribute contribution-to-health-plan {none,half,full}

@attribute class {bad,good}

@data

1,5,?,?,?,40,?,?,2,?,11,average,?,?,yes,?,good

2,4.5,5.8,?,?,35,ret\_allw,?,?,yes,11,below\_average,?,full,?,full,good

?,?,?,?,?,38,empl\_contr,?,5,?,11,generous,yes,half,yes,half,good

3,3.7,4,5,tc,?,?,?,?,yes,?,?,?,?,yes,?,good

3,4.5,4.5,5,?,40,?,?,?,?,12,average,?,half,yes,half,good

2,2,2.5,?,?,35,?,?,6,yes,12,average,?,?,?,?,good

3,4,5,5,tc,?,empl\_contr,?,?,?,12,generous,yes,none,yes,half,good

3,6.9,4.8,2.3,?,40,?,?,3,?,12,below\_average,?,?,?,?,good

2,3,7,?,?,38,?,12,25,yes,11,below\_average,yes,half,yes,?,good

1,5.7,?,?,none,40,empl\_contr,?,4,?,11,generous,yes,full,?,?,good

3,3.5,4,4.6,none,36,?,?,3,?,13,generous,?,?,yes,full,good

2,6.4,6.4,?,?,38,?,?,4,?,15,?,?,full,?,?,good

2,3.5,4,?,none,40,?,?,2,no,10,below\_average,no,half,?,half,bad

3,3.5,4,5.1,tcf,37,?,?,4,?,13,generous,?,full,yes,full,good

1,3,?,?,none,36,?,?,10,no,11,generous,?,?,?,?,good

2,4.5,4,?,none,37,empl\_contr,?,?,?,11,average,?,full,yes,?,good

1,2.8,?,?,?,35,?,?,2,?,12,below\_average,?,?,?,?,good

1,2.1,?,?,tc,40,ret\_allw,2,3,no,9,below\_average,yes,half,?,none,bad

1,2,?,?,none,38,none,?,?,yes,11,average,no,none,no,none,bad

2,4,5,?,tcf,35,?,13,5,?,15,generous,?,?,?,?,good

2,4.3,4.4,?,?,38,?,?,4,?,12,generous,?,full,?,full,good

2,2.5,3,?,?,40,none,?,?,?,11,below\_average,?,?,?,?,bad

3,3.5,4,4.6,tcf,27,?,?,?,?,?,?,?,?,?,?,good

2,4.5,4,?,?,40,?,?,4,?,10,generous,?,half,?,full,good

1,6,?,?,?,38,?,8,3,?,9,generous,?,?,?,?,good

3,2,2,2,none,40,none,?,?,?,10,below\_average,?,half,yes,full,bad

2,4.5,4.5,?,tcf,?,?,?,?,yes,10,below\_average,yes,none,?,half,good

2,3,3,?,none,33,?,?,?,yes,12,generous,?,?,yes,full,good

2,5,4,?,none,37,?,?,5,no,11,below\_average,yes,full,yes,full,good

3,2,2.5,?,?,35,none,?,?,?,10,average,?,?,yes,full,bad

3,4.5,4.5,5,none,40,?,?,?,no,11,average,?,half,?,?,good

3,3,2,2.5,tc,40,none,?,5,no,10,below\_average,yes,half,yes,full,bad

2,2.5,2.5,?,?,38,empl\_contr,?,?,?,10,average,?,?,?,?,bad

2,4,5,?,none,40,none,?,3,no,10,below\_average,no,none,?,none,bad

3,2,2.5,2.1,tc,40,none,2,1,no,10,below\_average,no,half,yes,full,bad

2,2,2,?,none,40,none,?,?,no,11,average,yes,none,yes,full,bad

1,2,?,?,tc,40,ret\_allw,4,0,no,11,generous,no,none,no,none,bad

1,2.8,?,?,none,38,empl\_contr,2,3,no,9,below\_average,yes,half,?,none,bad

3,2,2.5,2,?,37,empl\_contr,?,?,?,10,average,?,?,yes,none,bad

2,4.5,4,?,none,40,?,?,4,?,12,average,yes,full,yes,half,good

1,4,?,?,none,?,none,?,?,yes,11,average,no,none,no,none,bad

2,2,3,?,none,38,empl\_contr,?,?,yes,12,generous,yes,none,yes,full,bad

2,2.5,2.5,?,tc,39,empl\_contr,?,?,?,12,average,?,?,yes,?,bad

2,2.5,3,?,tcf,40,none,?,?,?,11,below\_average,?,?,yes,?,bad

2,4,4,?,none,40,none,?,3,?,10,below\_average,no,none,?,none,bad

2,4.5,4,?,?,40,?,?,2,no,10,below\_average,no,half,?,half,bad

2,4.5,4,?,none,40,?,?,5,?,11,average,?,full,yes,full,good

2,4.6,4.6,?,tcf,38,?,?,?,?,?,?,yes,half,?,half,good

2,5,4.5,?,none,38,?,14,5,?,11,below\_average,yes,?,?,full,good

2,5.7,4.5,?,none,40,ret\_allw,?,?,?,11,average,yes,full,yes,full,good

2,7,5.3,?,?,?,?,?,?,?,11,?,yes,full,?,?,good

3,2,3,?,tcf,?,empl\_contr,?,?,yes,?,?,yes,half,yes,?,good

3,3.5,4,4.5,tcf,35,?,?,?,?,13,generous,?,?,yes,full,good

3,4,3.5,?,none,40,empl\_contr,?,6,?,11,average,yes,full,?,full,good

3,5,4.4,?,none,38,empl\_contr,10,6,?,11,generous,yes,?,?,full,good

3,5,5,5,?,40,?,?,?,?,12,average,?,half,yes,half,good

3,6,6,4,?,35,?,?,14,?,9,generous,yes,full,yes,full,good

=== Run information ===

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

Relation: labor-neg-data

Instances: 57

Attributes: 17

duration

wage-increase-first-year

wage-increase-second-year

wage-increase-third-year

cost-of-living-adjustment

working-hours

pension

standby-pay

shift-differential

education-allowance

statutory-holidays

vacation

longterm-disability-assistance

contribution-to-dental-plan

bereavement-assistance

contribution-to-health-plan

class

Test mode: split 70.0% train, remainder test

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

J48 pruned tree

------------------

wage-increase-first-year <= 2.5: bad (15.27/2.27)

wage-increase-first-year > 2.5

| statutory-holidays <= 10: bad (10.77/4.77)

| statutory-holidays > 10: good (30.96/1.0)

Number of Leaves : 3

Size of the tree : 5

Time taken to build model: 0.02 seconds

=== Evaluation on test split ===

Time taken to test model on test split: 0.01 seconds

=== Summary ===

Correctly Classified Instances 14 82.3529 %

Incorrectly Classified Instances 3 17.6471 %

Kappa statistic 0.5984

Mean absolute error 0.2772

Root mean squared error 0.3832

Relative absolute error 60.5253 %

Root relative squared error 80.1901 %

Total Number of Instances 17

=== Detailed Accuracy By Class ===

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

0.667 0.091 0.800 0.667 0.727 0.604 0.788 0.651 bad

0.909 0.333 0.833 0.909 0.870 0.604 0.788 0.816 good

Weighted Avg. 0.824 0.248 0.822 0.824 0.819 0.604 0.788 0.758

=== Confusion Matrix ===

a b <-- classified as

4 2 | a = bad

1 10 | b = good

