

=== Run information ===
Scheme: weka.classifiers.trees.J48 -C 0.25 -M 2
Relation: pima_diabetes
Instances: 526
Attributes: 9
preg
plas
pres
skin
insu
mass
pedi
age
class
Test mode: evaluate on training data
=== Classifier model (full training set) ===

Problem 9a

Problem 9b

J48 pruned tree

Max Leaf Node
tested_negative

plas <= 127
| age <= 30: tested_negative (210.0/20.0) **210 Instances**
| **age > 30**
| | mass <= 27: tested_negative (23.0/1.0) **23 Instances**
| | **mass > 27**
| | | **pedi <= 0.514**
| | | | **plas <= 106: tested_negative (37.0/5.0) 37 Instances**
| | | | plas > 106
| | | | | pres <= 66: tested_positive (7.0/1.0) **7 Instances**
| | | | | pres > 66: tested_negative (23.0/8.0) **23 Instances**
| | | | pedi > 0.514: tested_positive (36.0/13.0) **36 Instances**
plas > 127
| **mass <= 29.8**
| | **plas <= 164**
| | | pres <= 55: tested_positive (2.0) **2 Instances**
| | | **pres > 55**
| | | | **age <= 41: tested_negative (19.0) 19 Instances**
| | | | age > 41
| | | | | age <= 53: tested_positive (3.0) **3 Instances**
| | | | | age > 53: tested_negative (11.0/1.0) **11 Instances**
| | | plas > 164
| | | | mass <= 25.8: tested_positive (4.0) **4 Instances**
| | | | mass > 25.8
| | | | | preg <= 5
| | | | | plas <= 186: tested_positive (2.0) **2 Instances**
| | | | | plas > 186: tested_negative (2.0) **2 Instances**
| | | | | preg > 5: tested_negative (2.0) **2 Instances**
| | mass > 29.8
| | | preg <= 7
| | | | plas <= 157
| | | | | pres <= 86
| | | | | pres <= 60: tested_positive (9.0/1.0) **9 Instances**
| | | | | pres > 60
| | | | | | preg <= 2
| | | | | | mass <= 41.8: tested_negative (16.0) **16 Instances**
| | | | | | mass > 41.8: tested_positive (4.0/1.0) **4 Instances**
| | | | | | preg > 2
| | | | | | | pedi <= 0.233: tested_negative (6.0) **6 Instances**
| | | | | | | pedi > 0.233
| | | | | | | | pres <= 66: tested_negative (3.0) **3 Instances**
| | | | | | | | pres > 66
| | | | | | | | | age <= 41
| | | | | | | | | age <= 33: tested_positive (4.0) **4 Instances**
| | | | | | | | | age > 33: tested_negative (4.0/1.0) **4 Instances**
| | | | | | | | | age > 41: tested_positive (7.0) **7 Instances**
| | | | | | | pres > 86: tested_positive (10.0/1.0) **10 Instances**
| | | | plas > 157: tested_positive (52.0/10.0) **52 Instances**
| | | | | preg > 7: tested_positive (30.0/2.0) **30 Instances**
Number of Leaves : 25
Size of the tree : 49
Time taken to build model: 0.04 seconds
=== Predictions on training set ===

Predictions for dataset pima_diabetes

Actual of first 5		Predicted of first 5		stances	
inst#	actual	predicted	error	prediction	
1	2:tested_positive	2:tested_positive		1	
2	1:tested_negative	1:tested_negative		0.957	
3	2:tested_positive	2:tested_positive		1	
4	1:tested_negative	1:tested_negative		0.905	
5	2:tested_positive	2:tested_positive		0.889	

=== Evaluation on training set ===
Time taken to test model on training data: 0.00 seconds
=== Summary ===
Correctly Classified Instances 461
Incorrectly Classified Instances 65
Kappa statistic 0.7205
Mean absolute error 0.0000
Root mean squared error 0.0000
Relative absolute error 0.0000
Root relative squared error 0.0000
Total Number of Instances 526
=== Detailed Accuracy By Class ===
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class
0.917 0.203 0.899 0.917 0.908 0.721 0.906 0.928 tested_negative
0.797 0.083 0.829 0.797 0.813 0.721 0.906 0.838 tested_positive
0.876 0.163 0.876 0.876 0.876 0.721 0.906 0.898
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
True(320) False(29) matrix ===
a b c classified as
320 29 | a = tested_negative
36 141 | b = tested_positive
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
Negatives
Positives
False(36) True(141)

Information Gain Report

=== Run information ===
Evaluator: weka.attributeSelection.InfoGainAttributeEval
Search: weka.attributeSelection.Ranker -T -1.7976931348623157E308 -N -1
Relation: pima_diabetes
Instances: 526
Attributes: 9
preg
plas
pres
skin
insu
mass
pedi
age
class
Evaluation mode: evaluate on all training data
=== Attribute Selection on all input data ===
Search Method: Attribute ranking.
Attribute Evaluated: plas (nominal): 9 class): Info Gain: 0.1841
Ranked attributes:
0.1841 2 plas 1st Best
0.0812 8 age 2nd Best
0.0753 6 mass 3rd Best
0.0578 5 insu
0.0563 1 preg
0.0377 7 pedi
0 3 pres
0 4 skin
Selected attributes: 2,8,6,5,1,7,3,4 : 8

UnPruned=true

The Difference
2 incorrectly classified instances were fixed
320 29 | a = tested_negative
34 143 | b = tested_positive