DECISION TREE:

DATA SET:diabetes

OUTPUT:
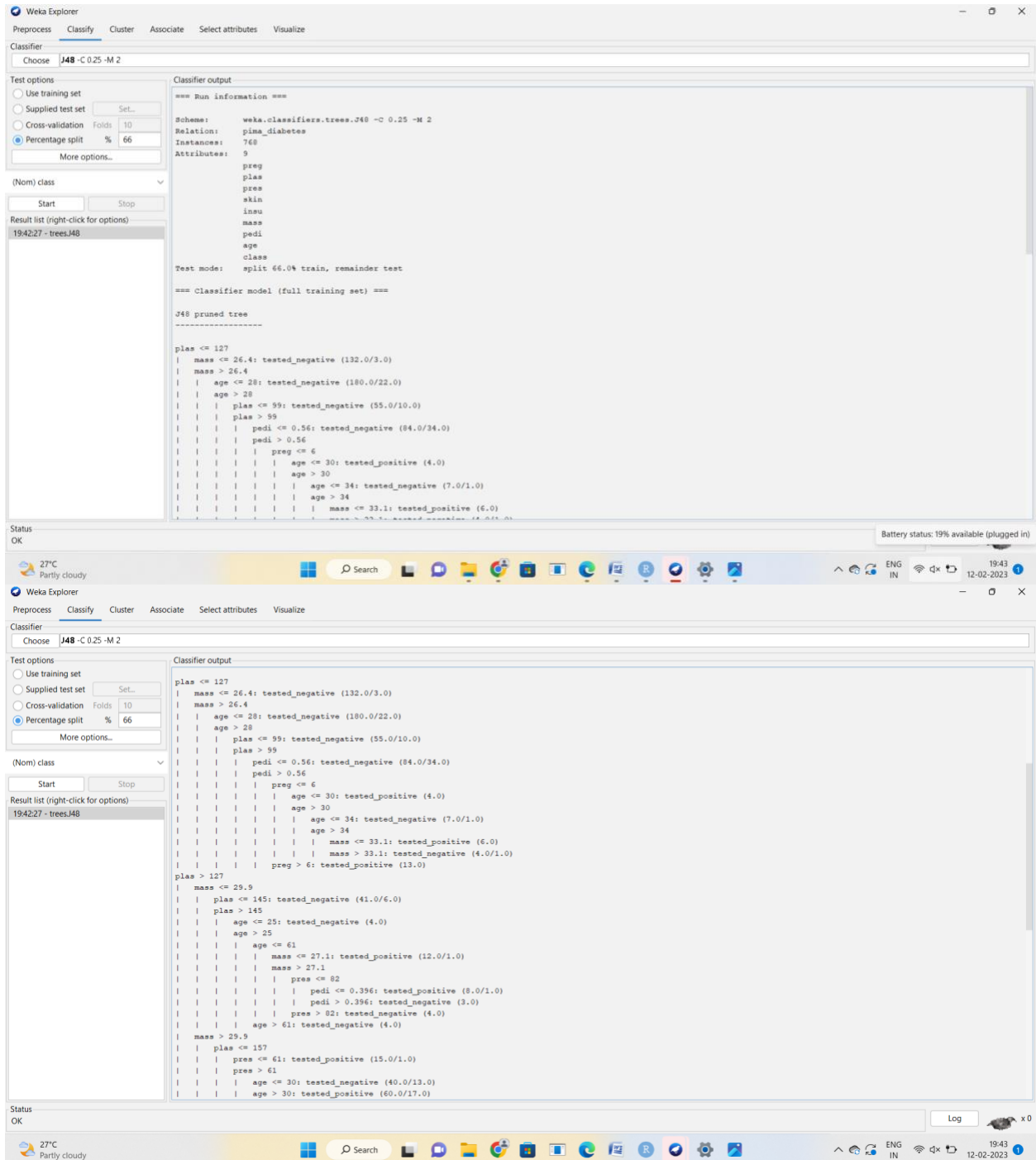
Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Classifier

Choose | J48 -C 0.25 -M 2

Test options
- Use training set
- Supplied test set | Set...
- Cross-validation | Folds | 10
- Percentage split | % | 66

More options...

(Nom) class

Start | Stop

Result list (right-click for options)
19:42:27 - trees.J48

Classifier output

```
|   |   |   age > 61: tested_negative (4.0)
|   mass > 29.9
|   |   plas <= 157
|   |   |   pres <= 61: tested_positive (15.0/1.0)
|   |   |   pres > 61
|   |   |   |   age <= 30: tested_negative (40.0/13.0)
|   |   |   |   age > 30: tested_positive (60.0/17.0)
|   |   plas > 157: tested_positive (92.0/12.0)

Number of Leaves  :     20

Size of the tree :      39


Time taken to build model: 0.01 seconds

=== Evaluation on test split ===

Time taken to test model on test split: 0 seconds

=== Summary ===

Correctly Classified Instances         199               76.2452 %
Incorrectly Classified Instances        62               23.7548 %
Kappa statistic                          0.4342
Mean absolute error                      0.3125
Root mean squared error                  0.4059
Relative absolute error                 69.2946 %
Root relative squared error             86.7189 %
Total Number of Instances              261

=== Detailed Accuracy By Class ===

                 TP Rate  FP Rate  Precision  Recall   F-Measure  MCC     ROC Area  PRC Area  Class
                 0.854    0.434    0.809      0.854    0.831      0.436   0.796     0.864     tested_negative
                 0.566    0.146    0.644      0.566    0.603      0.436   0.796     0.615     tested_positive
Weighted Avg.    0.762    0.342    0.756      0.762    0.758      0.436   0.796     0.785
```

Status
OK

Preprocess Classify Cluster Associate Select attributes Visualize

Classifier

Choose J48 -C 0.25 -M 2

Test options
- Use training set
- Supplied test set Set...
- Cross-validation Folds 10
- Percentage split % 66

More options...

(Nom) class

Start Stop

Result list (right-click for options)
19:42:27 - trees.J48

Classifier output

plas > 157: tested_positive (32.0/12.0)

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Time taken to test model on test split: 0 seconds

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Incorrectly Classified Instances   62   23.7548 %
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Weighted Avg.	0.762	0.342	0.756	0.762	0.758	0.436	0.796	0.785	

=== Confusion Matrix ===

  a   b   <-- classified as
152 26 | a = tested_negative
 36 47 | b = tested_positive

Status
OK

Log   x 0

27°C
Partly cloudy

ENG
IN

19:44
12-02-2023

Weka Classifier Tree Visualizer: 19:42:27 - trees.J48 (pima_diabetes)

Tree View

plas
<= 127   > 127
mass   mass
<= 26.4 > 26.4   <= 29.9 > 29.9
tested_negative (132.0/3.0)   age   plas   plas
<= 28 > 28   <= 145 > 145   <= 157 > 157
tested_negative (180.0/22.0) plas   tested_negative (41.0/6.0) age   pre tested_positive (92.0/12.0)
<= 99 > 99   <= 25 > 25   <= 61 > 61
tested_negative (55.0/10.0) pedi   tested_negative (4.0) age tested_positive (15.0/1.0) age
<= 0.56 > 0.56   <= 61 > 61   <= 30 > 30
tested_negative (84.0/34.0) preg   tested_neg tested_negative tested_positive (60.0/17.0)
<= 6 > 6   mass
age tested_positi tested_positive (12.0/1.0) <= 27.1 > 27.1 pres
<= 30 > 30   <= 82 > 82
tested_positive (4.0) age   pedi tested_negative (4.0)
<= 34 > 34   <= 0.396 > 0.396
tested_negative (7.0/1.0) mass tested_positive tested_negative (3.0)
<= 33.1 > 33.1
tested_posit tested_negative (4.0/1.0)

Number of Leaves

Size of the tree

Time taken to bui

=== Evaluation on

Time taken to tes

=== Summary ===

Correctly Classifi
Incorrectly Class
Kappa statistic
Mean absolute err
Root mean squared
Relative absolute
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Total Number of I

=== Detailed Accu

Weighted Avg.

=== Confusion Mat

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