

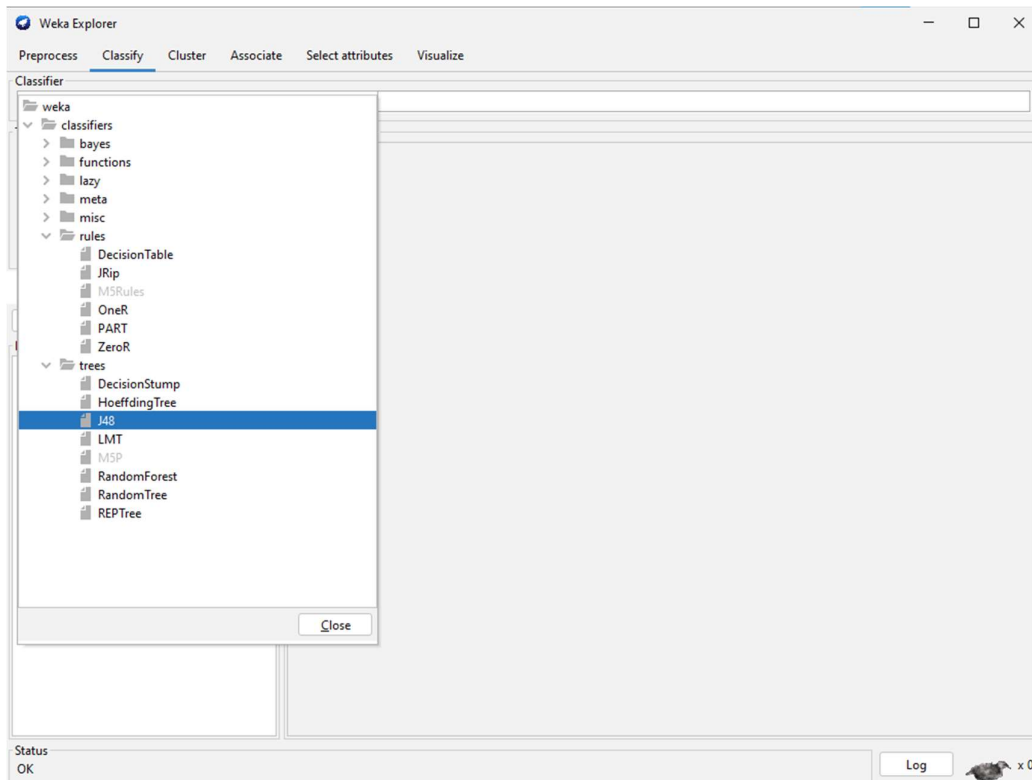
Practical No 4

23/02/23

Aim: Pre-process the given dataset and hence classify the resultant data set using tree classification technique. Interpret the result

Steps:

1. Open **Weka** >click **Explorer** > click **open file** > select file **iris.arff** file.
2. Click on **Classify** tab, click on **choose** >select **J48**.



3. Click on **Start**.

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)

09:50:08 - trees.J48

Classifier output

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

J48 pruned tree

```

petalwidth <= 0.6: Iris-setosa (50.0)
petalwidth > 0.6
|
| petalwidth <= 1.7
| |
| | petallength <= 4.9: Iris-versicolor (48.0/1.0)
| | petallength > 4.9
| | |
| | | petalwidth <= 1.5: Iris-virginica (3.0)
| | | petalwidth > 1.5: Iris-versicolor (3.0/1.0)
| | petalwidth > 1.7: Iris-virginica (46.0/1.0)

```

Number of Leaves : 5

Size of the tree : 9

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

	Correctly Classified Instances	Incorrectly Classified Instances	Kappa statistic	Mean absolute error	Root mean squared error	Relative absolute error	Root relative squared error	Total Number of Instances
	144	6	0.94	0.035	0.1586	7.8705 %	33.6353 %	150

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
0.980	0.000	1.000	0.980	0.990	0.985	0.990	0.987	Iris-setosa	
0.940	0.030	0.940	0.940	0.940	0.910	0.952	0.880	Iris-versicolor	
0.960	0.030	0.941	0.960	0.950	0.925	0.961	0.905	Iris-virginica	
Weighted Avg.	0.960	0.020	0.960	0.960	0.960	0.940	0.968	0.924	

=== Confusion Matrix ===

	a	b	c	-- classified as
49	1	0	0	a = Iris-setosa
0	47	3	0	b = Iris-versicolor
0	2	48	0	c = Iris-virginica

Status OK

Log x 0

4. Right click on **result list**>select **visualize tree**

