UNIVERSITY OF JAMMU, BHADERWAH CAMPUS

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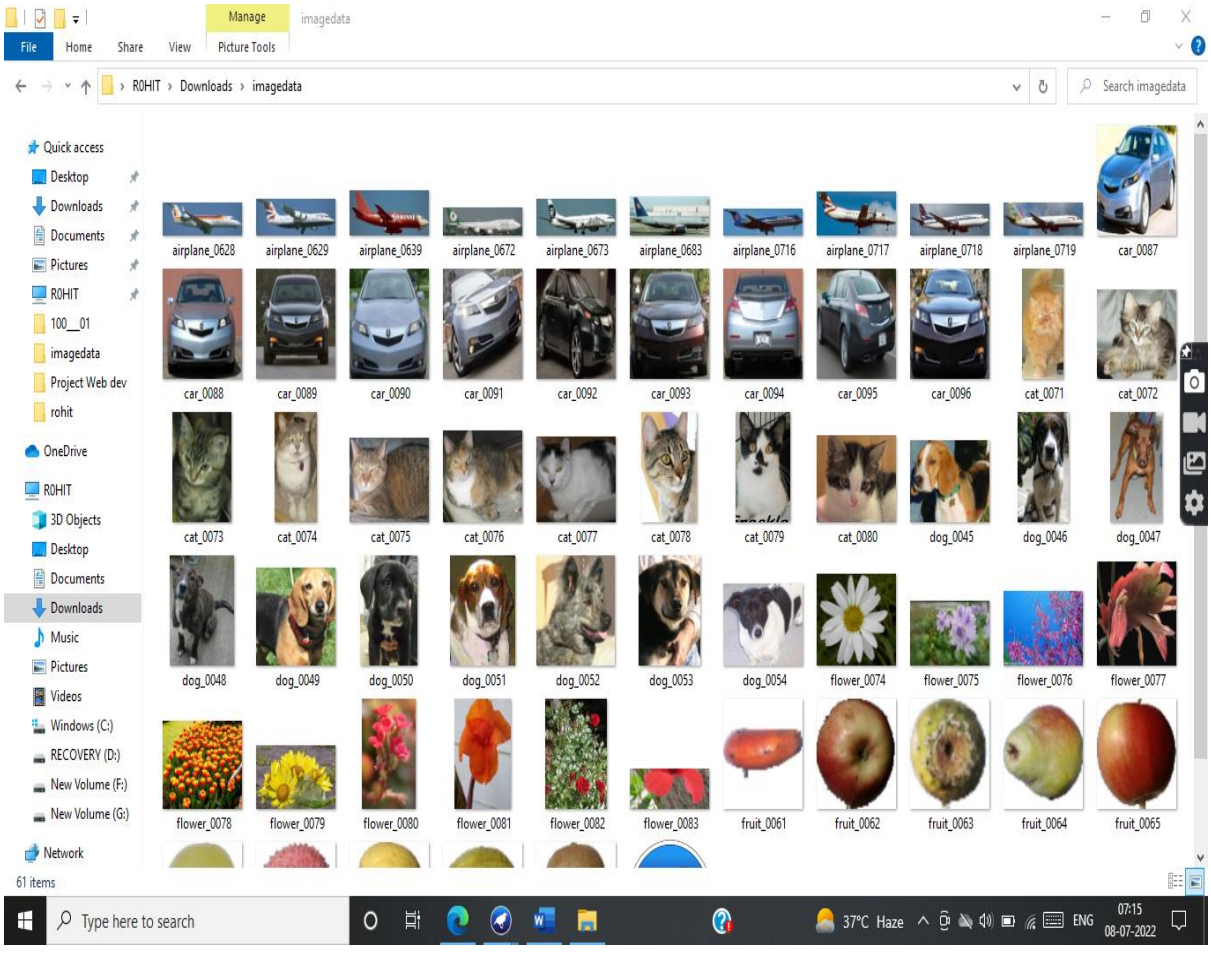
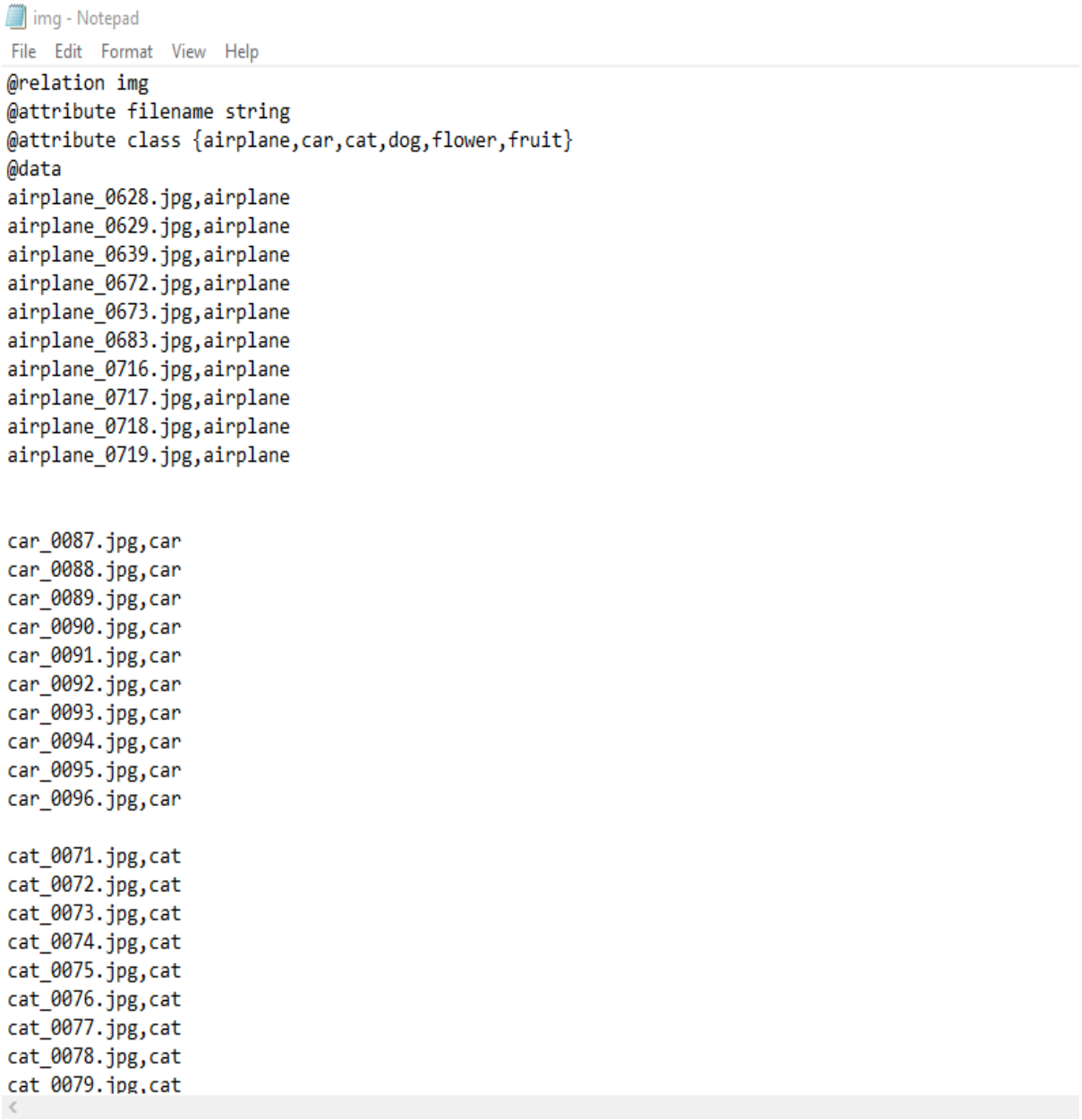
MCA SEM 4TH

Image Classification Using Weka

- Collect dataset of images

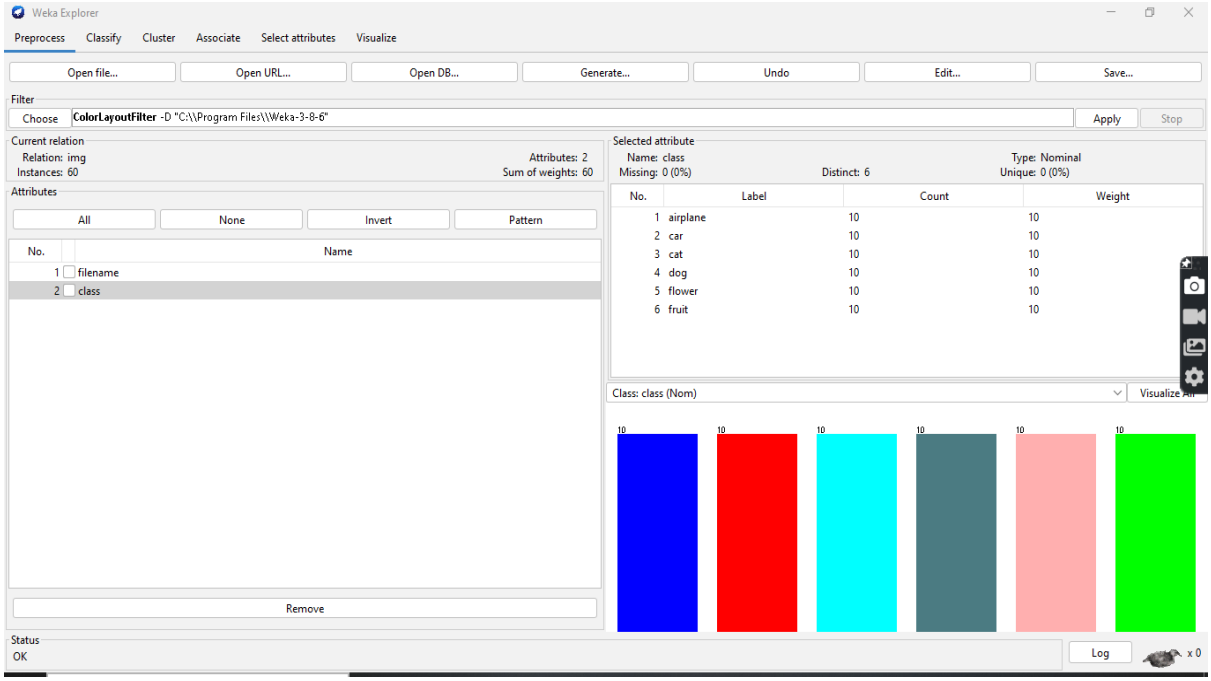


Prepare dataset file

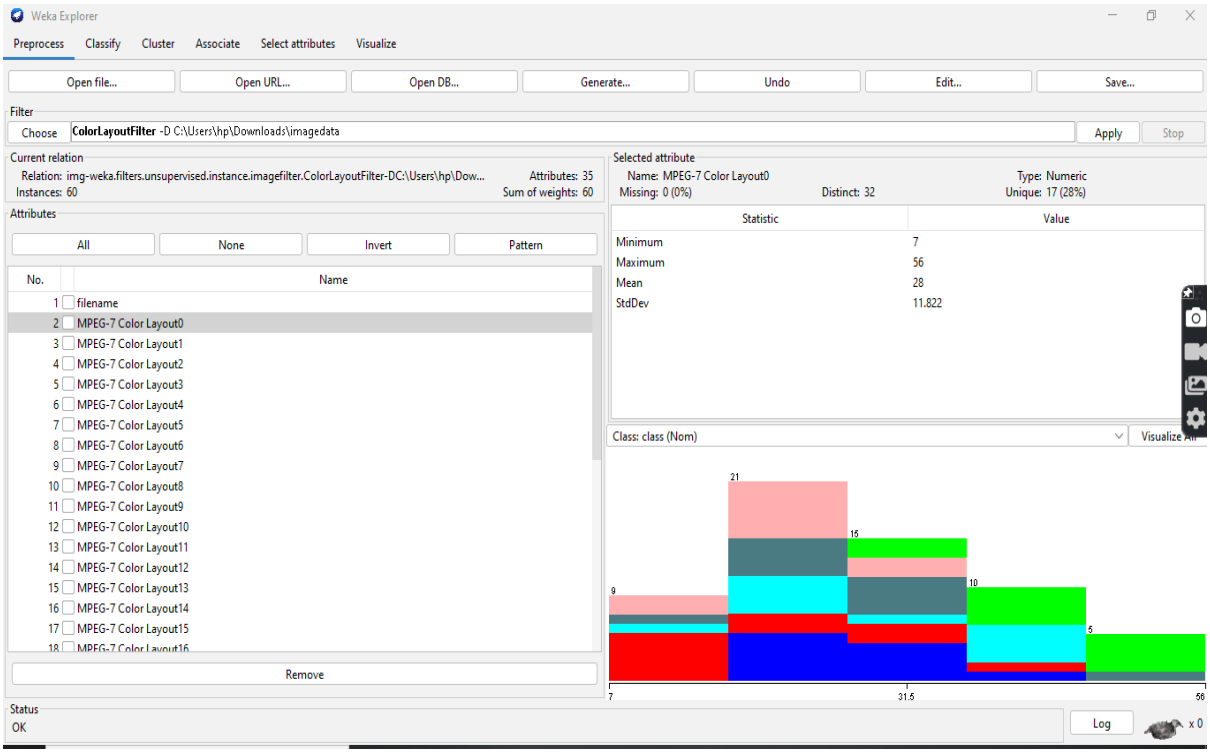


- file name save as '.arff' file e.g img.arff

Open file in Weka

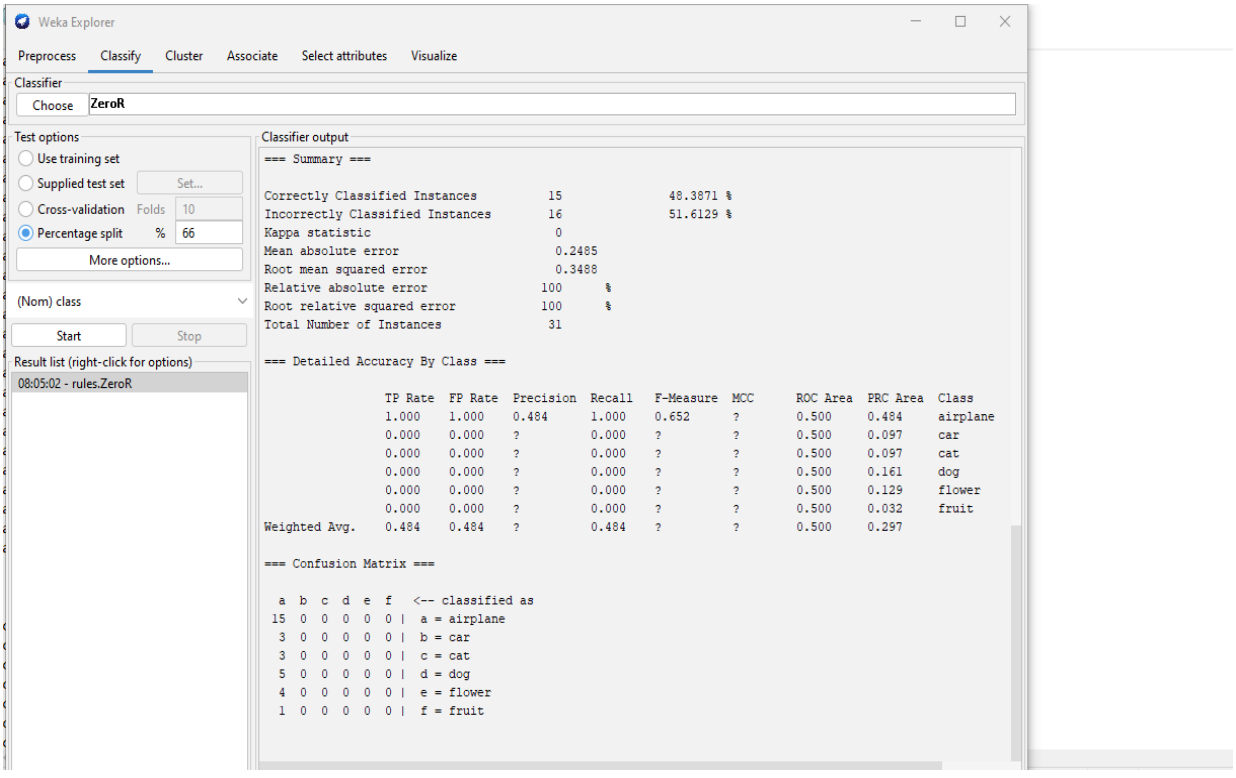


Choose imagefilter(colorlayout filter) and apply

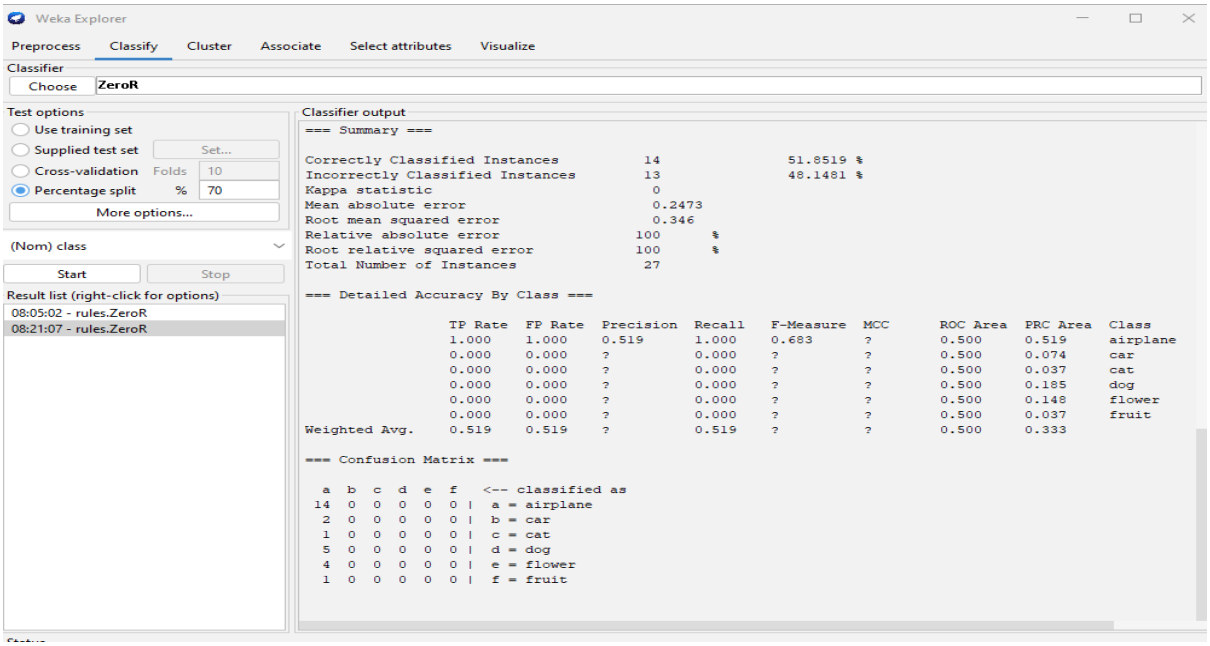


Classification

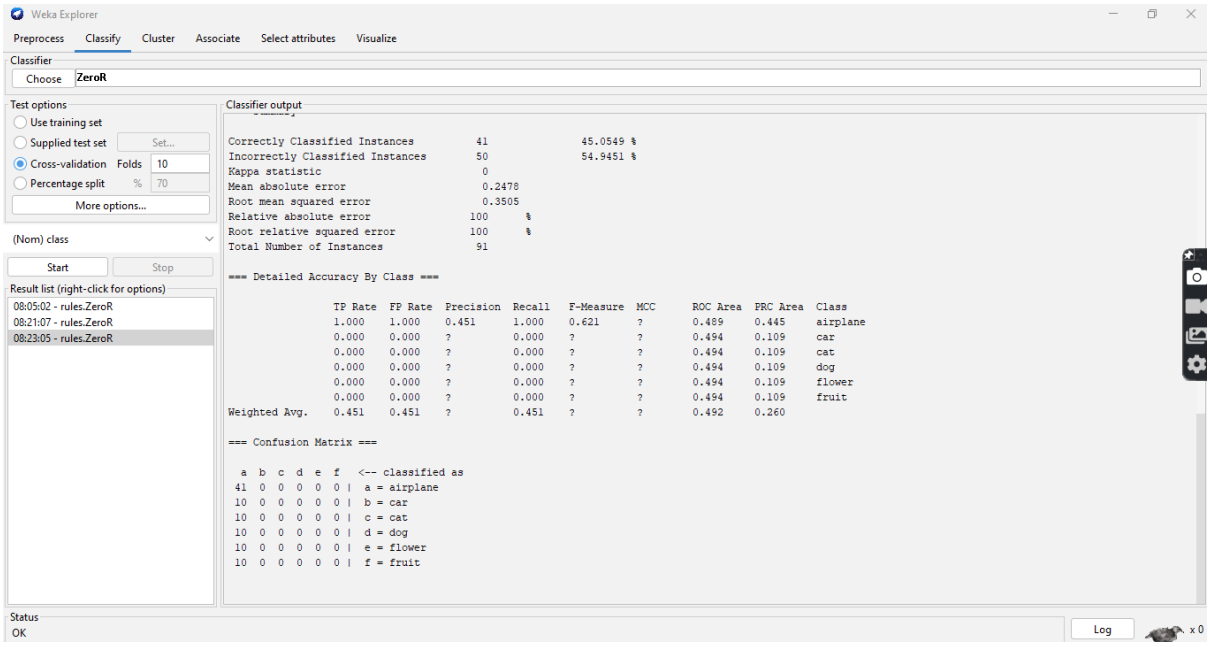
- Test mode: split 66.0% train, remainder test



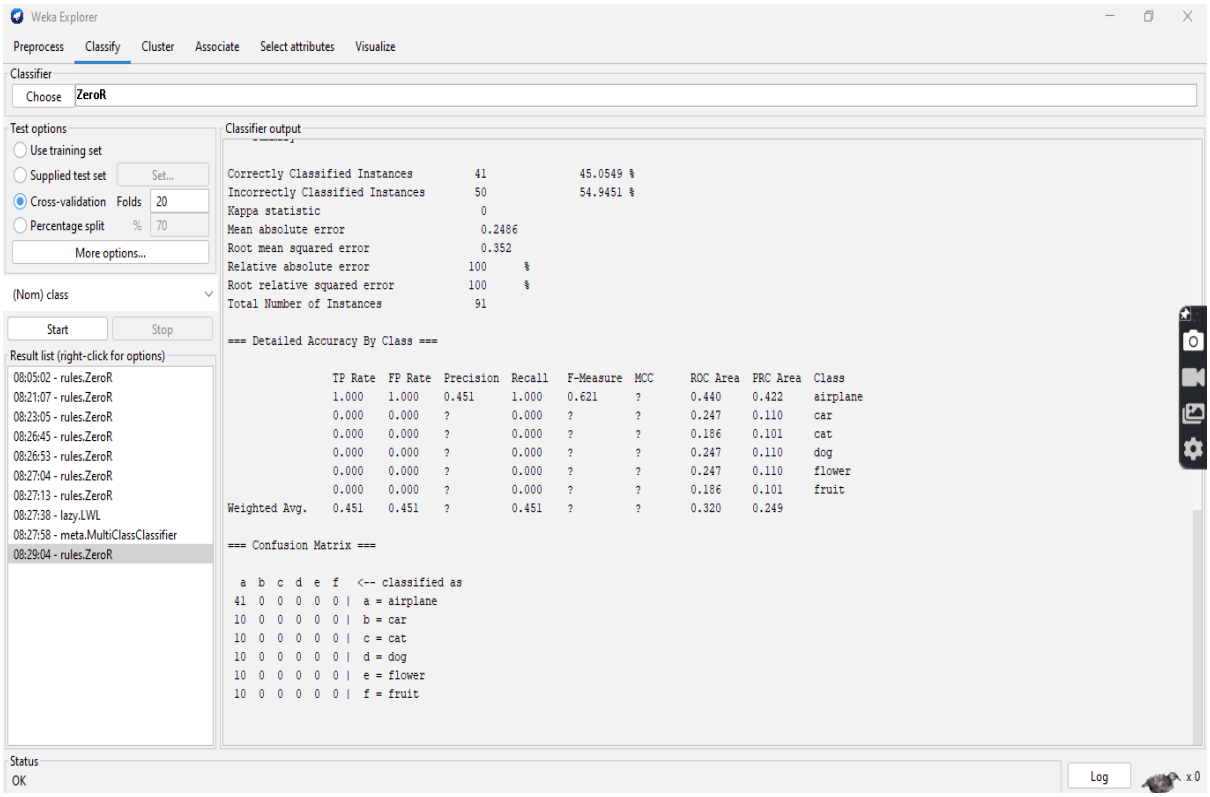
- **Test mode: split 70.0% train, remainder test**



- Test mode: 10-fold cross-validation



- Test mode: 20-fold cross-validation


Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Classifier
Choose
ZeroR
Test options
Use training set
Supplied test set
Set...
Cross-validation
Folds
20
Percentage split
%
70
More options...
(Nom) class
Start
Stop
Result list (right-click for options)
08:05:02 - rules.ZeroR
08:21:07 - rules.ZeroR
08:23:05 - rules.ZeroR
08:26:45 - rules.ZeroR
08:26:53 - rules.ZeroR
08:27:04 - rules.ZeroR
08:27:13 - rules.ZeroR
08:27:38 - lazy.LWL
08:27:58 - meta.MultiClassClassifier
08:29:04 - rules.ZeroR
Classifier output
Correctly Classified Instances 41 45.0549 %
Incorrectly Classified Instances 50 54.9451 %
Kappa statistic 0
Mean absolute error 0.2486
Root mean squared error 0.352
Relative absolute error 100 %
Root relative squared error 100 %
Total Number of Instances 91
=== Detailed Accuracy By Class ===
TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class
1.000 1.000 0.451 1.000 0.621 ? 0.440 0.422 airplane
0.000 0.000 ? 0.000 ? ? 0.247 0.110 car
0.000 0.000 ? 0.000 ? ? 0.186 0.101 cat
0.000 0.000 ? 0.000 ? ? 0.247 0.110 dog
0.000 0.000 ? 0.000 ? ? 0.247 0.110 flower
0.000 0.000 ? 0.000 ? ? 0.186 0.101 fruit
Weighted Avg. 0.451 0.451 ? 0.451 ? ? 0.320 0.249
=== Confusion Matrix ===
a b c d e f <-- classified as
41 0 0 0 0 0 | a = airplane
10 0 0 0 0 0 | b = car
10 0 0 0 0 0 | c = cat
10 0 0 0 0 0 | d = dog
10 0 0 0 0 0 | e = flower
10 0 0 0 0 0 | f = fruit
Status
OK
Log
x 0