DWM PARTICAL NO 6

Assignment No 6: Demonstration of clustering rule process on data-set iris.arff using simple k-means

iris.arff file

Note: This is the pre-installed data set file available in Weka

Path to file: C:\Program Files\Weka-3-8-6\data

Algorithm: In Cluster "Choose" → *clusterers* → *SimpleKMeans*

After Choosing the SimpleKMeans, right-click the SimpleKMeans, go to Show properties and search for numClusters and change it to 3. As iris.arff has 3 classes.

Output:

```
=== Run information ===

Scheme:       weka.clusterers.SimpleKMeans -init 0 -max-candidates 100 -periodic-pruning
Relation:     iris
Instances:    150
Attributes:   5
              sepallength
              sepalwidth
              petallength
              petalwidth
              class
Test mode:    evaluate on training data


=== Clustering model (full training set) ===


kMeans
======

Number of iterations: 3
Within cluster sum of squared errors: 7.817456892309574

Initial starting points (random):

Cluster 0: 6.1,2.9,4.7,1.4,Iris-versicolor
Cluster 1: 6.2,2.9,4.3,1.3,Iris-versicolor
Cluster 2: 6.9,3.1,5.1,2.3,Iris-virginica

Missing values globally replaced with mean/mode
```

```
Final cluster centroids:
                                        Cluster#
Attribute               Full Data             0              1              2
                          (150.0)          (50.0)         (50.0)         (50.0)
================================================================================
sepallength                5.8433           5.936          5.006          6.588
sepalwidth                  3.054            2.77          3.418          2.974
petallength                3.7587            4.26          1.464          5.552
petalwidth                 1.1987           1.326          0.244          2.026
class                 Iris-setosa Iris-versicolor     Iris-setosa  Iris-virginica




Time taken to build model (full training data) : 0 seconds

=== Model and evaluation on training set ===

Clustered Instances

0       50 ( 33%)
1       50 ( 33%)
2       50 ( 33%)
```