LAB – 02 - SPOT

Change atleast one parameter in each of the algorithms illustrated as part of lab exercise. Show the change in performance.

Dataset:-

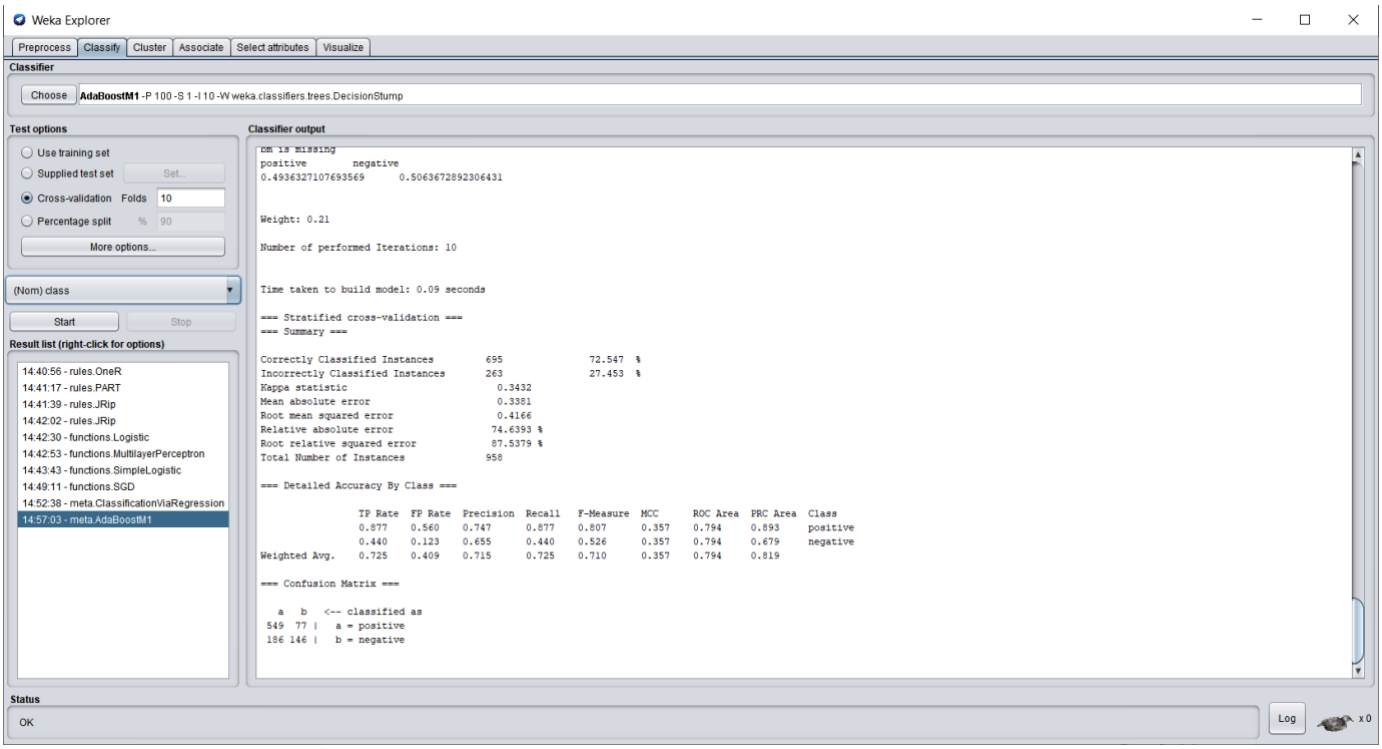
Index of /ml/machine-learning-databases/tic-tac-toe (uci.edu)

Algorithms:-

1. **AdaBoostM1**

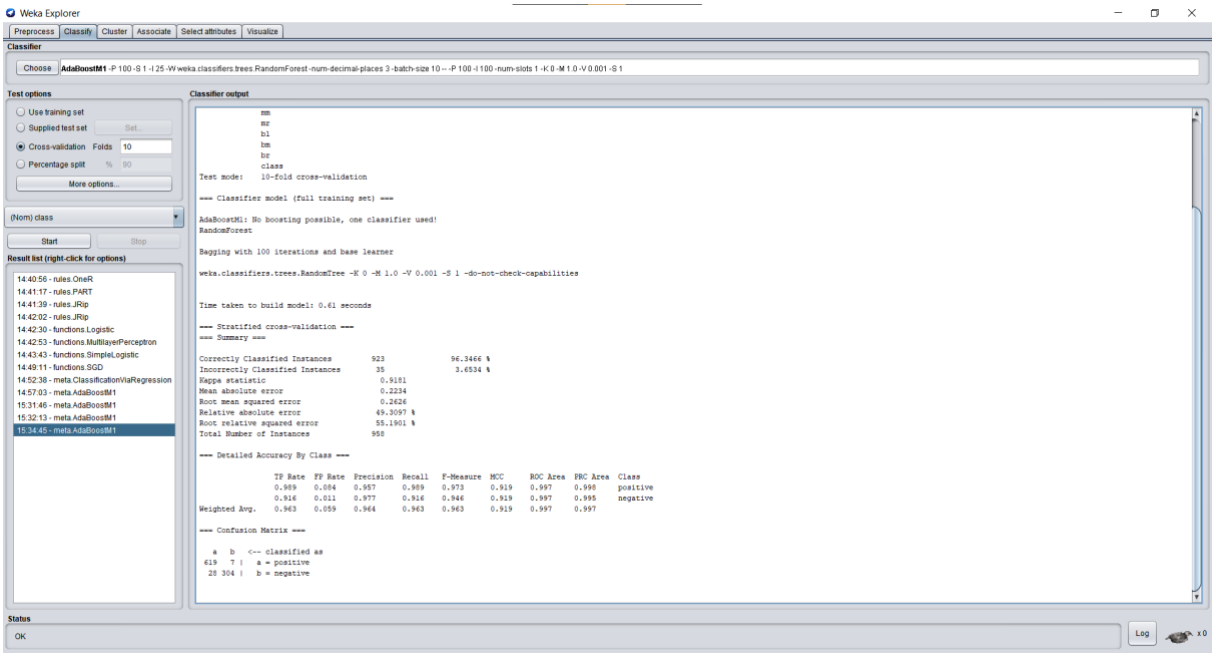
With default attributes:-

Batch size-100, num of iterations: 10, classifier: Decision stump

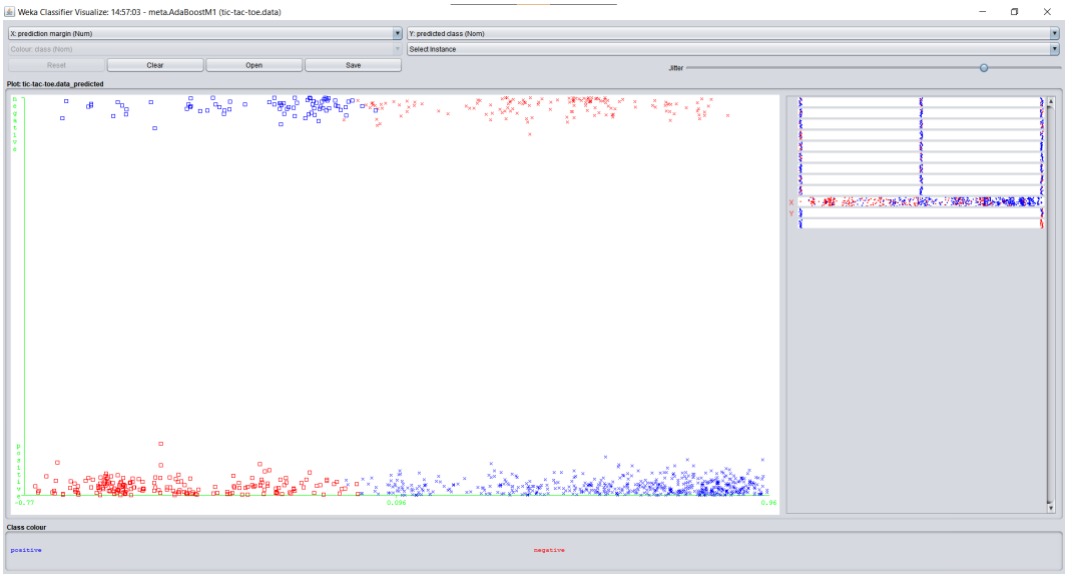


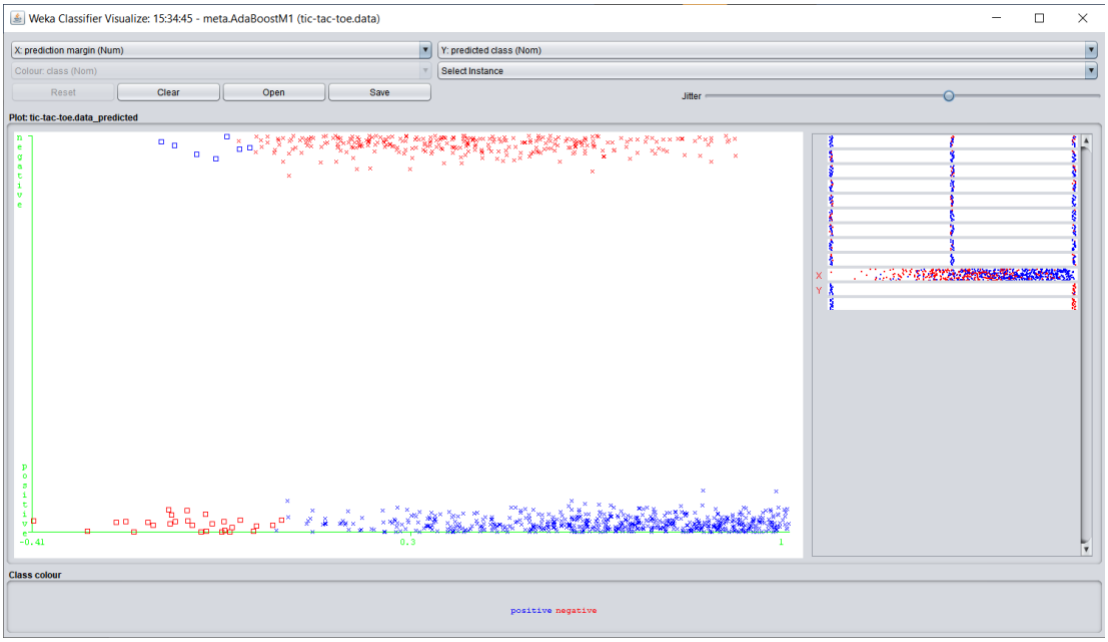
After changing parameters:

Batch size-10, number of iterations: 25, classifier: Random Forest



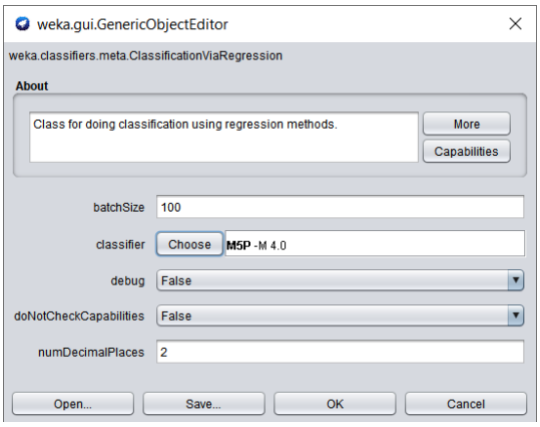
We can see that the confusion matrix has far less deviation and the error has reduced significantly.



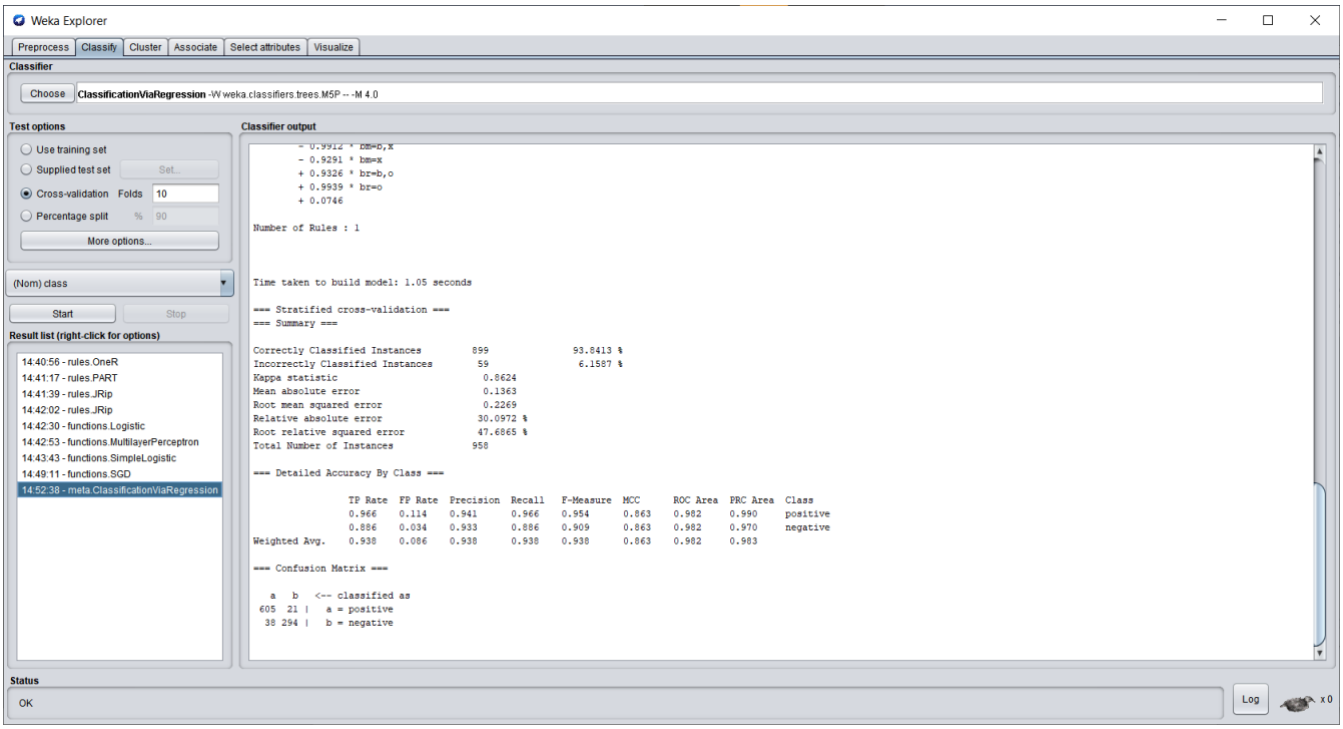


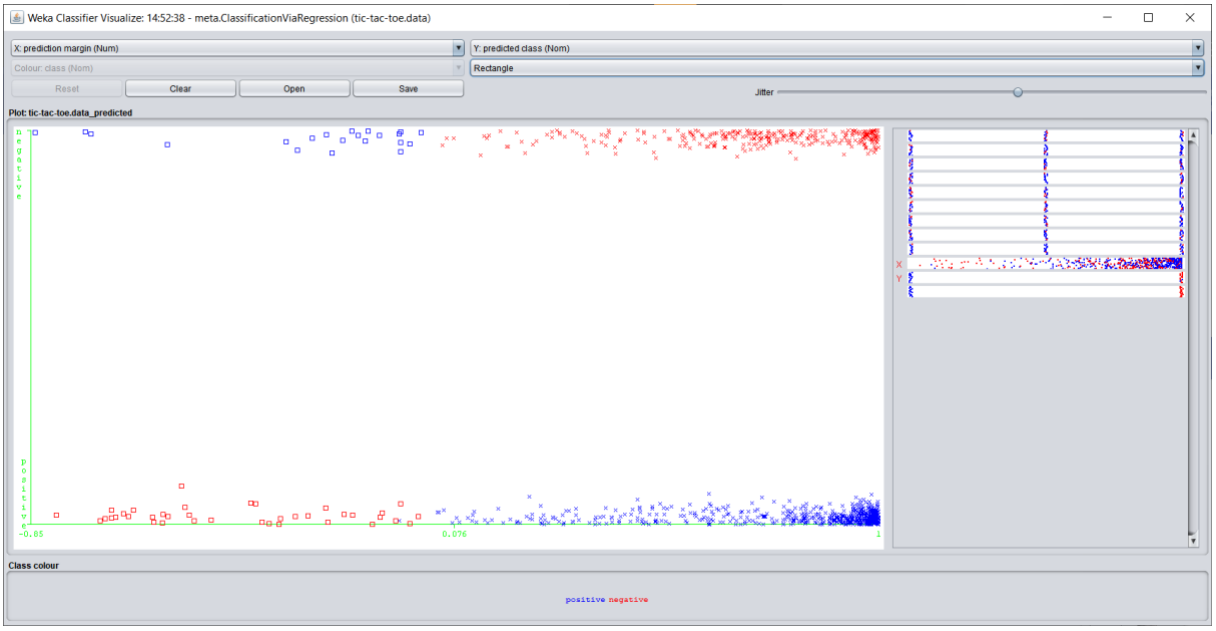
2. Classification via Regression

Using default attributes:-

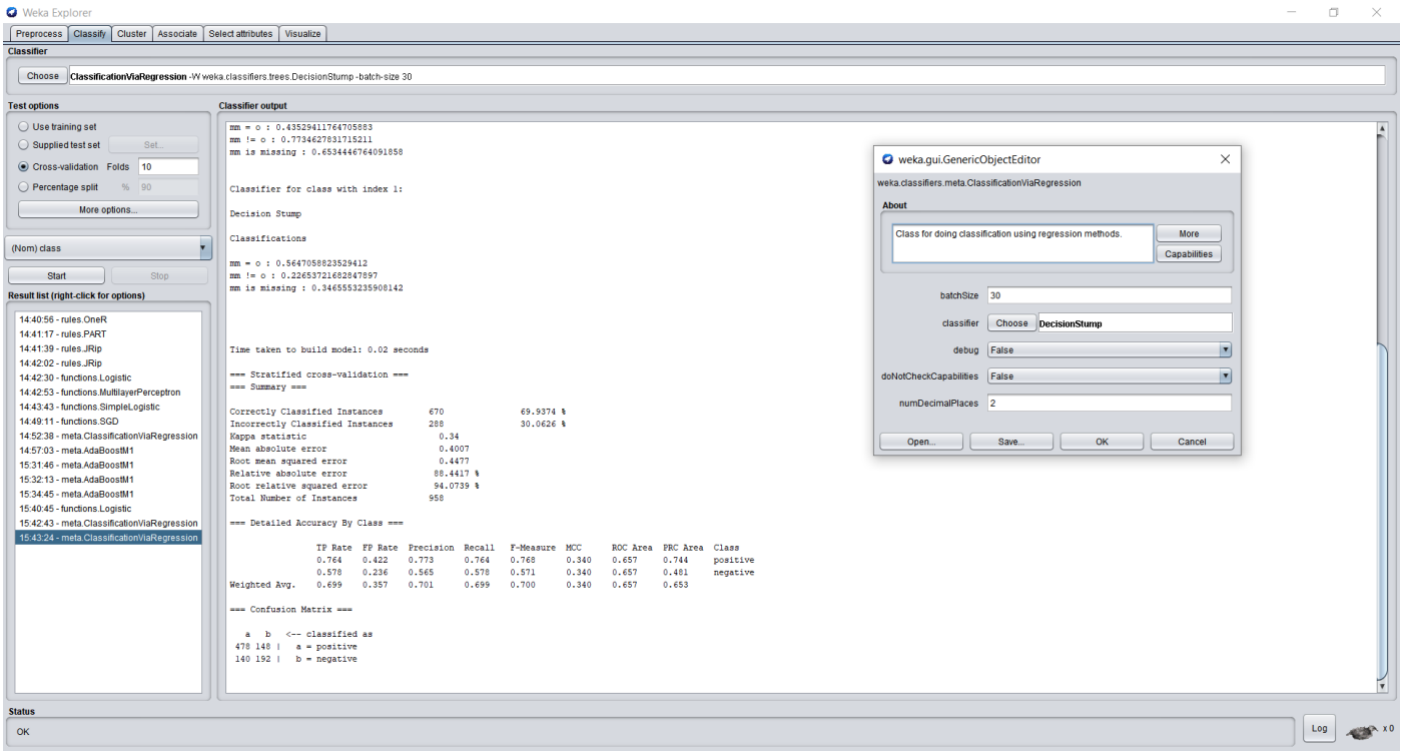


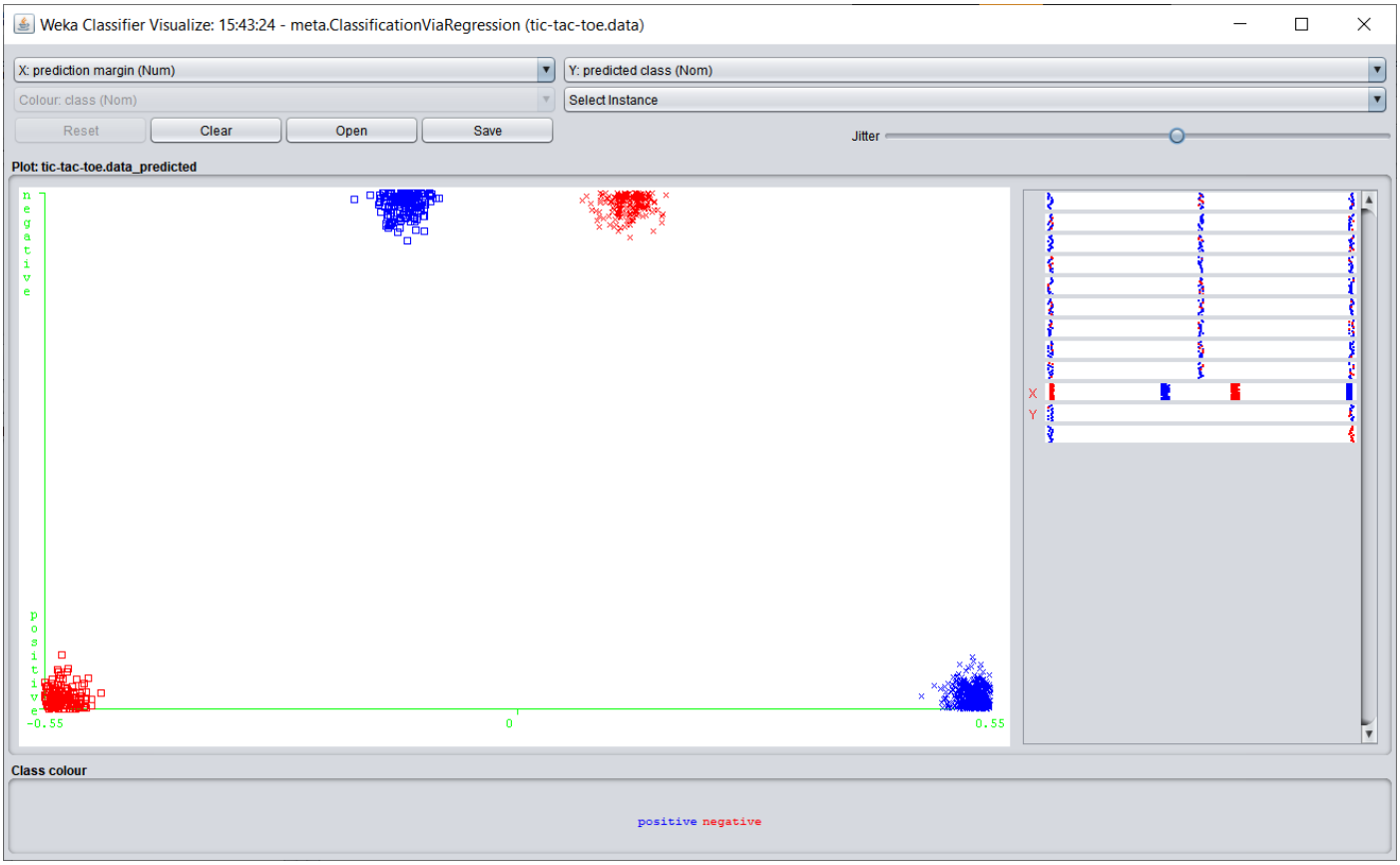
Performance metrics:-





Changing parameters to:-



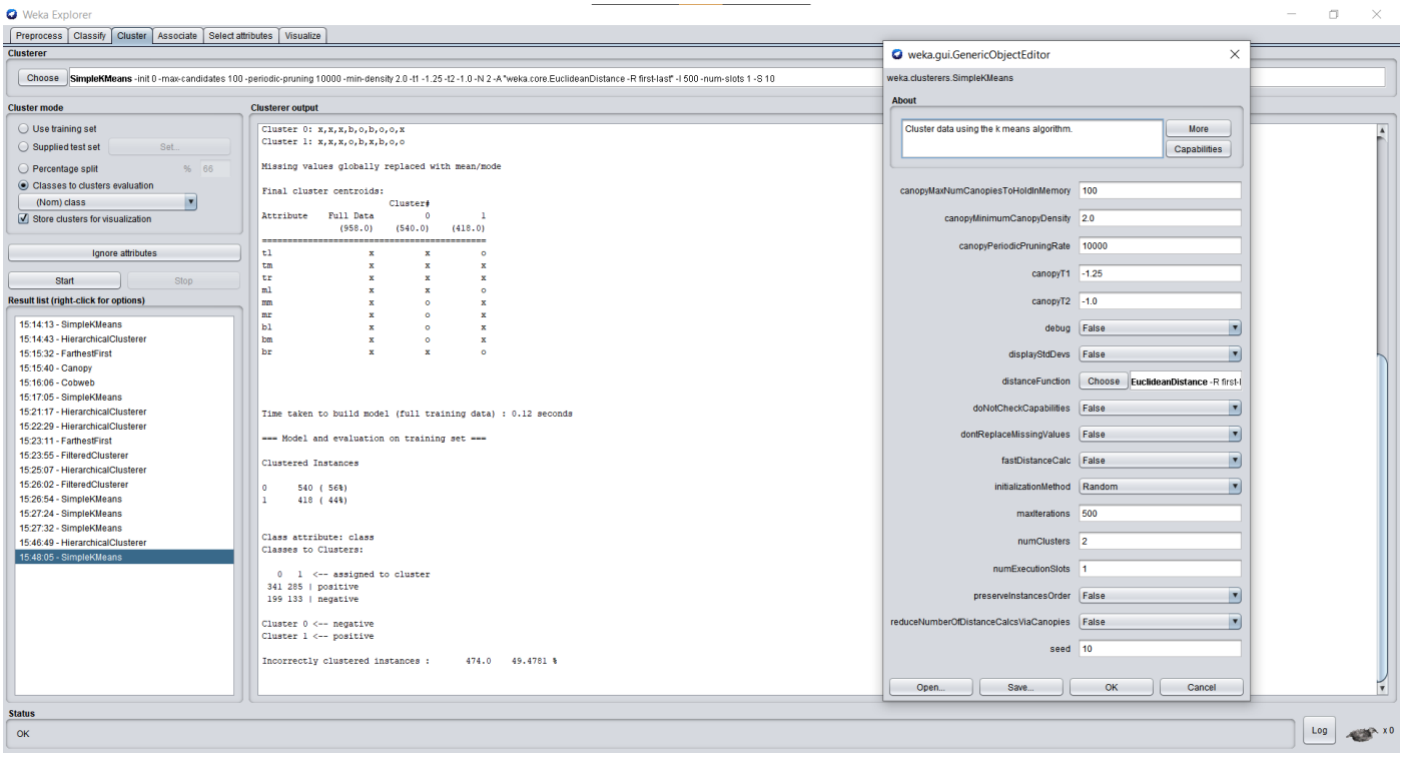


Changed classifier from M5P to Decision stump has decreased the accuracy of the model significantly. But the values are not spread out in the prediction margin vs class graph.

Clustering:-

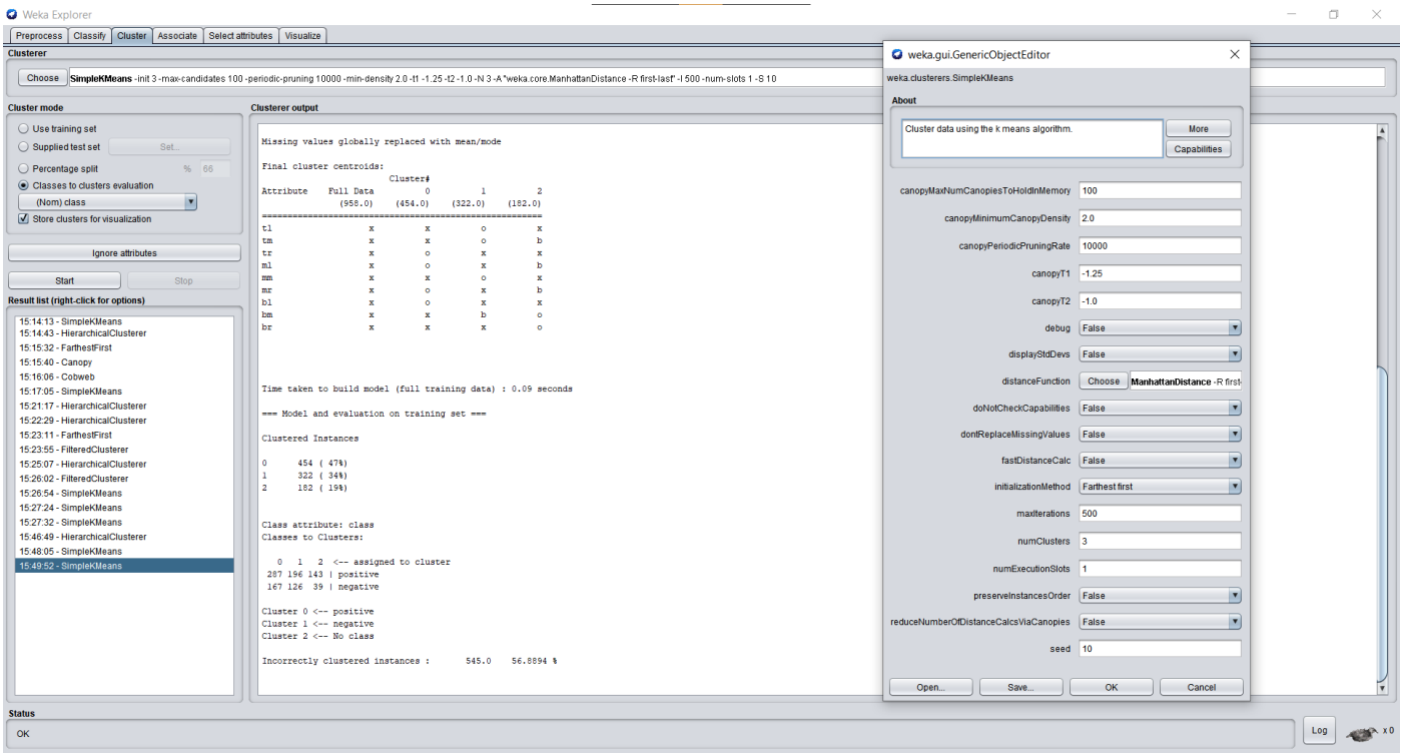
1. **Simple K-Means**

Default Attributes:-

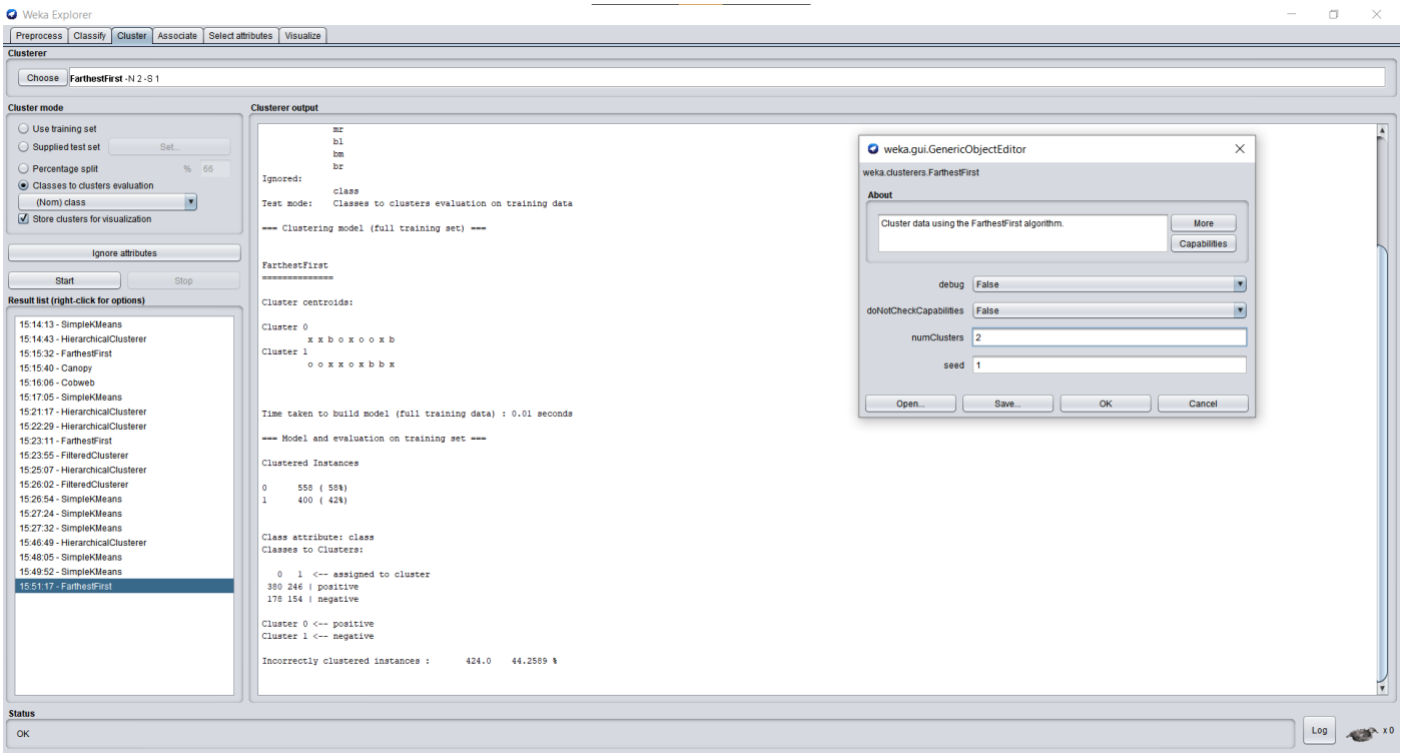


After changing attributes:-

Here I am forcing it to cluster into 3 clusters and distance function has been changed.



2. Farthest First



After changing attributes:-

On increasing number of clusters, the values are become increasingly random.