# 2019103555 PRANAVA RAMAN B M S 13/09/2021

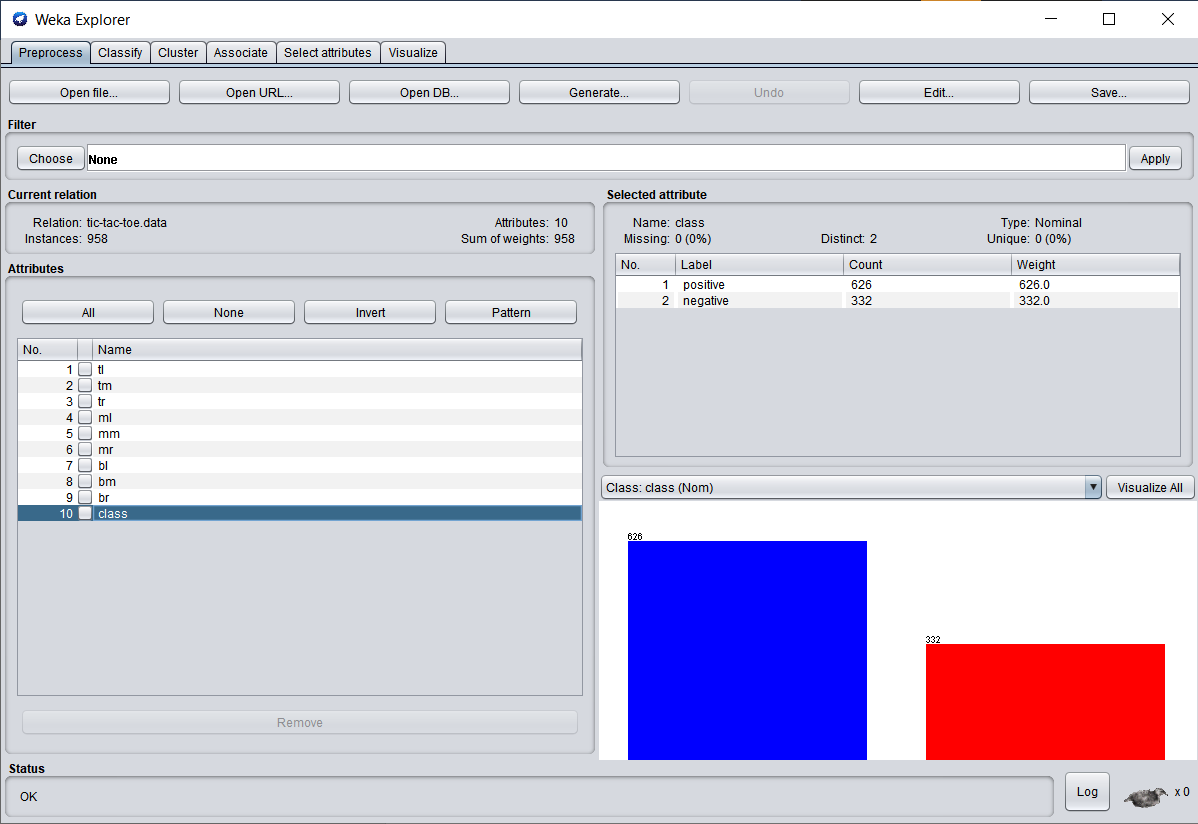
**LAB – 02**

Illustrate a classification algorithm, a clustering algorithm and a regression algorithm using Weka Tool. Evaluate suitable performance metrics.

**Dataset:-**

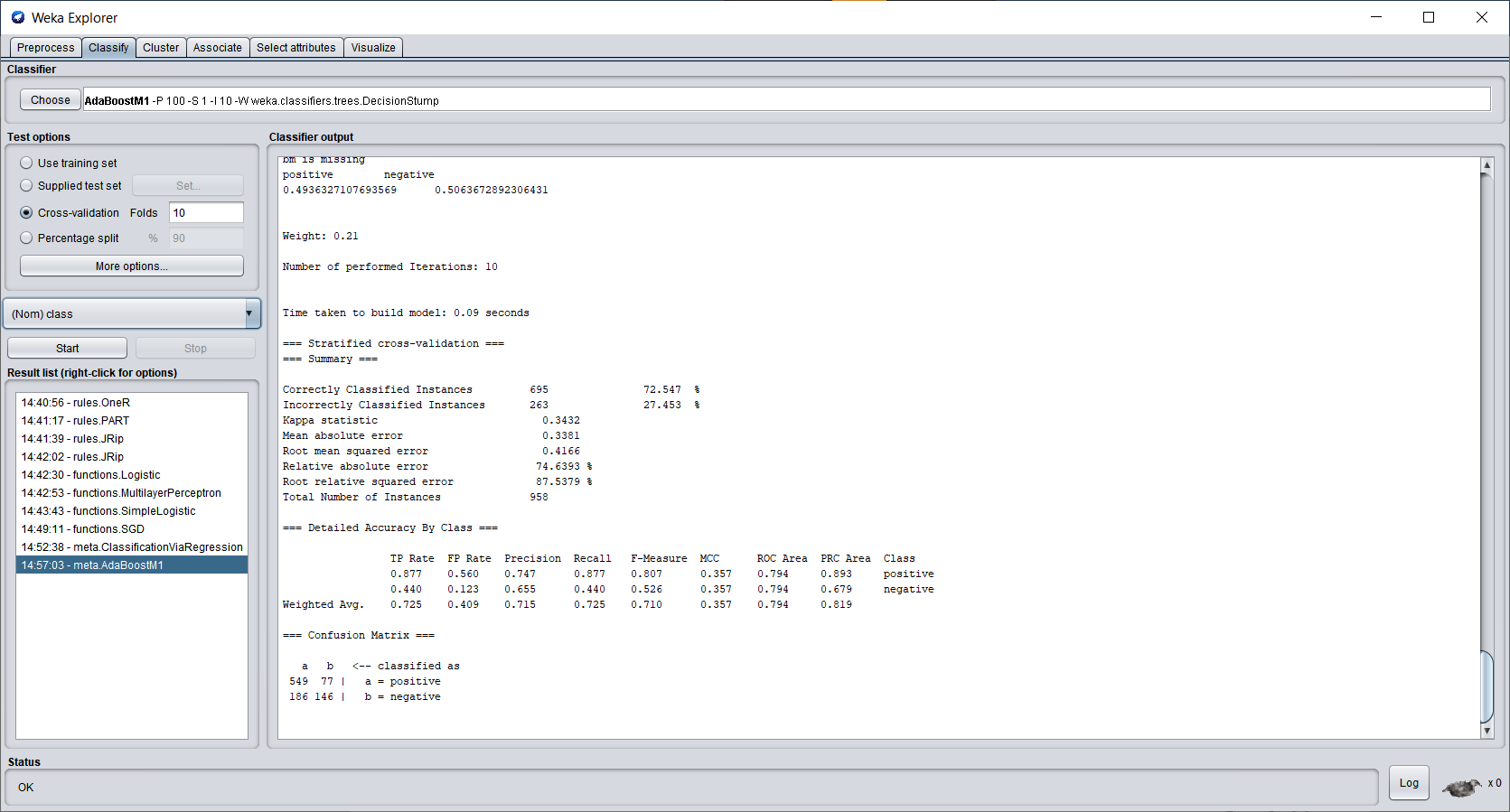
[Index of /ml/machine-learning-databases/tic-tac-toe (uci.edu)](https://archive.ics.uci.edu/ml/machine-learning-databases/tic-tac-toe/)

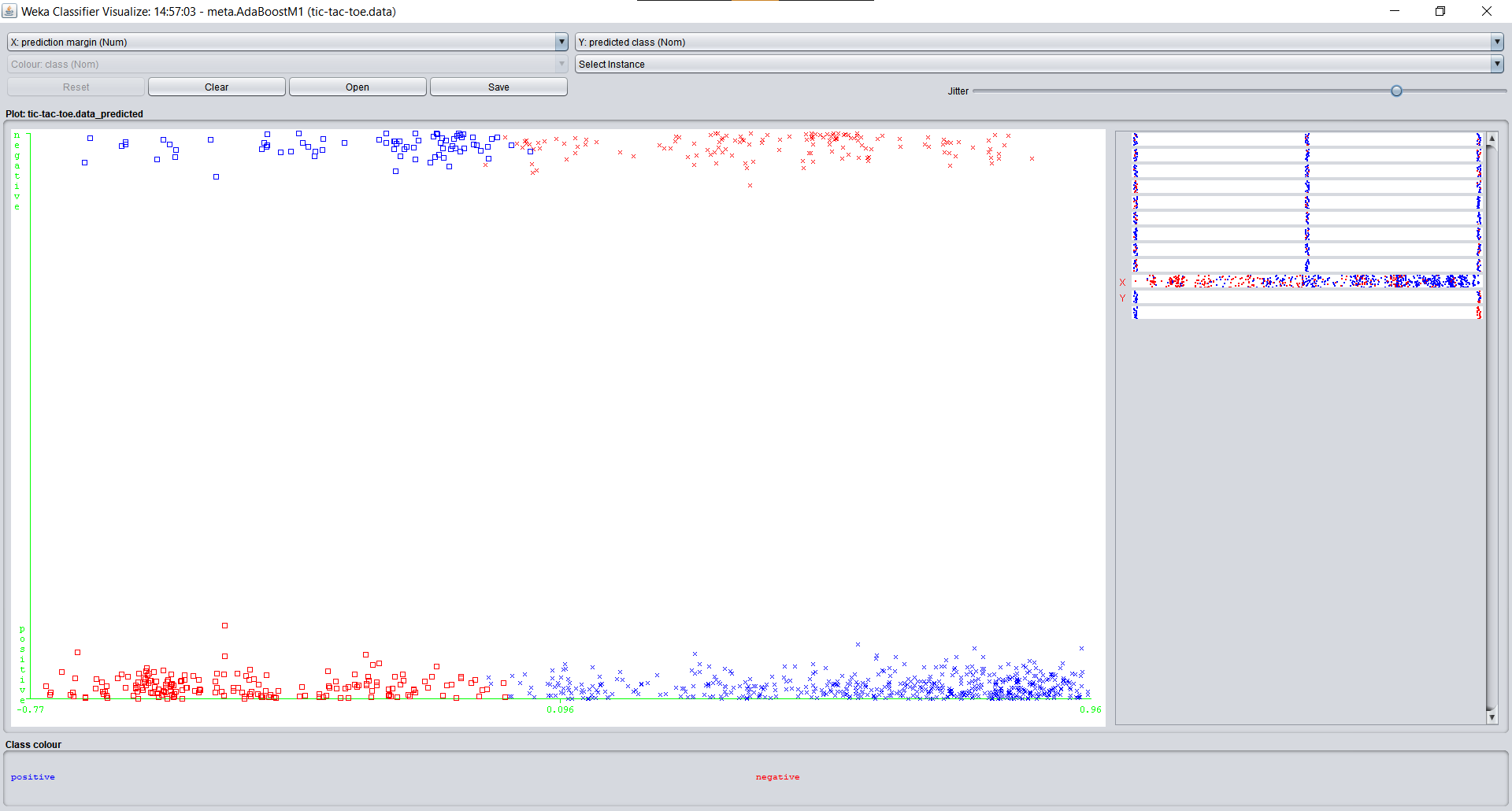
**Preprocess:-**



**Algorithms:-**

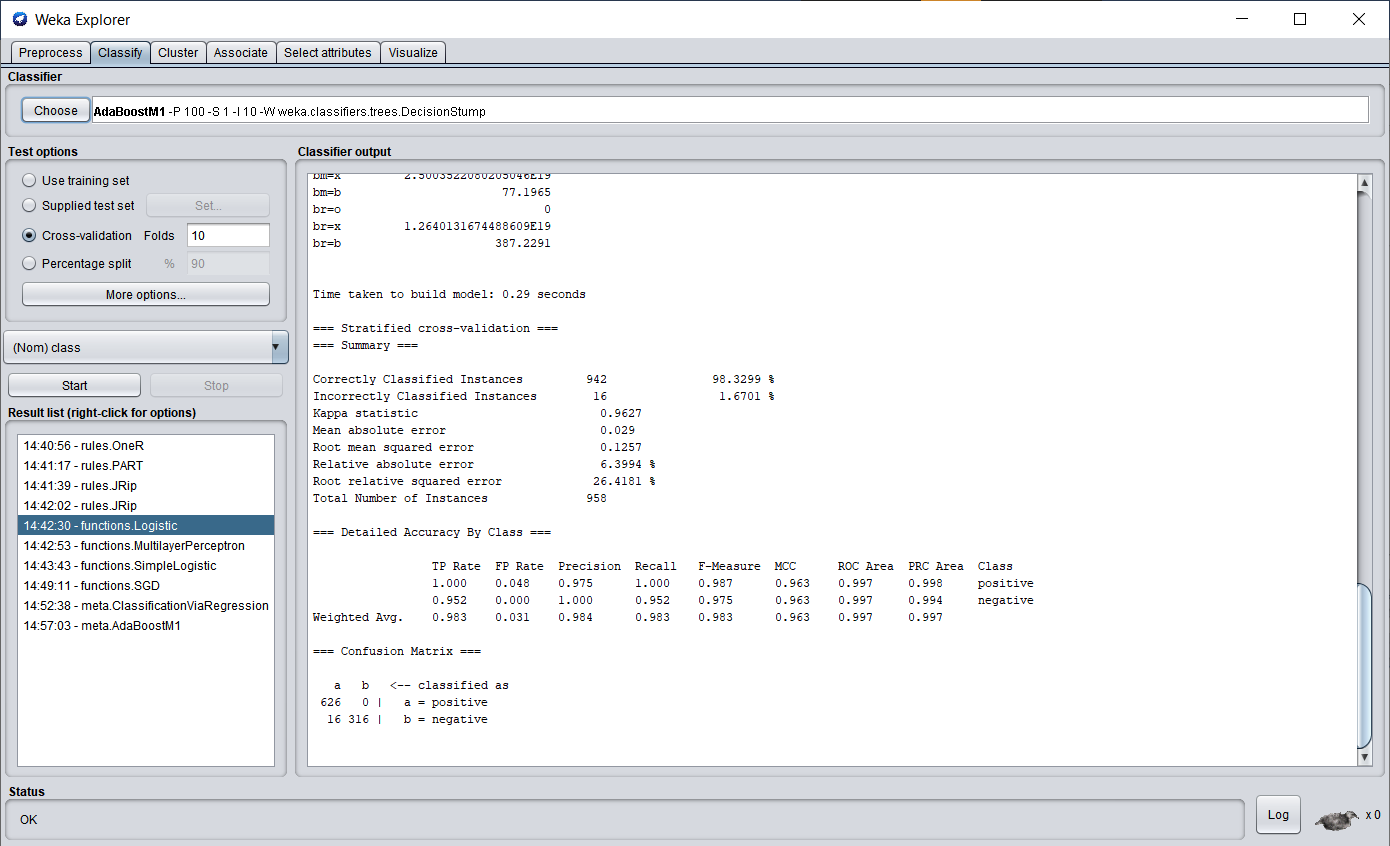
1. **AdaBoostM1 (Classifier)**

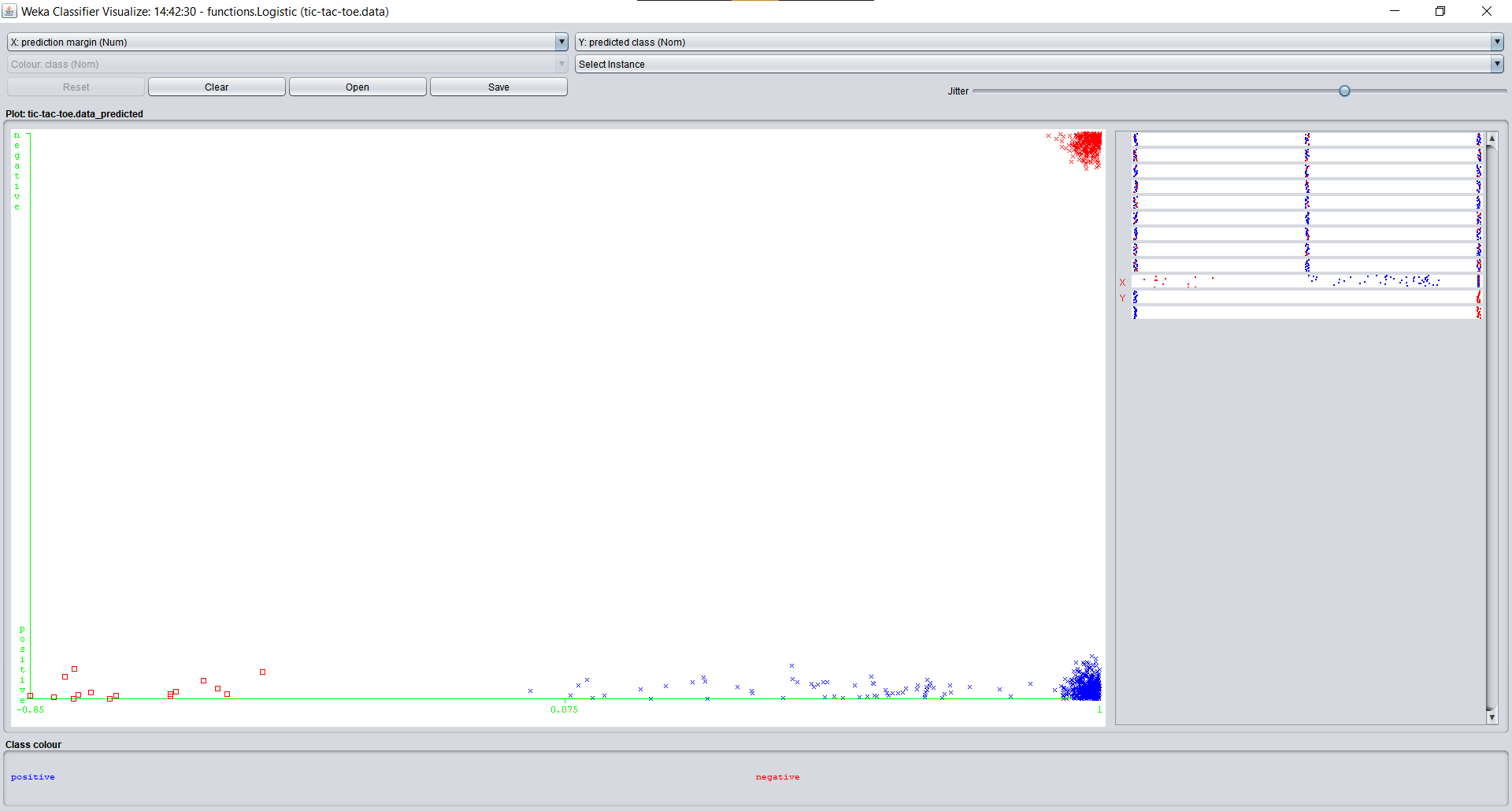




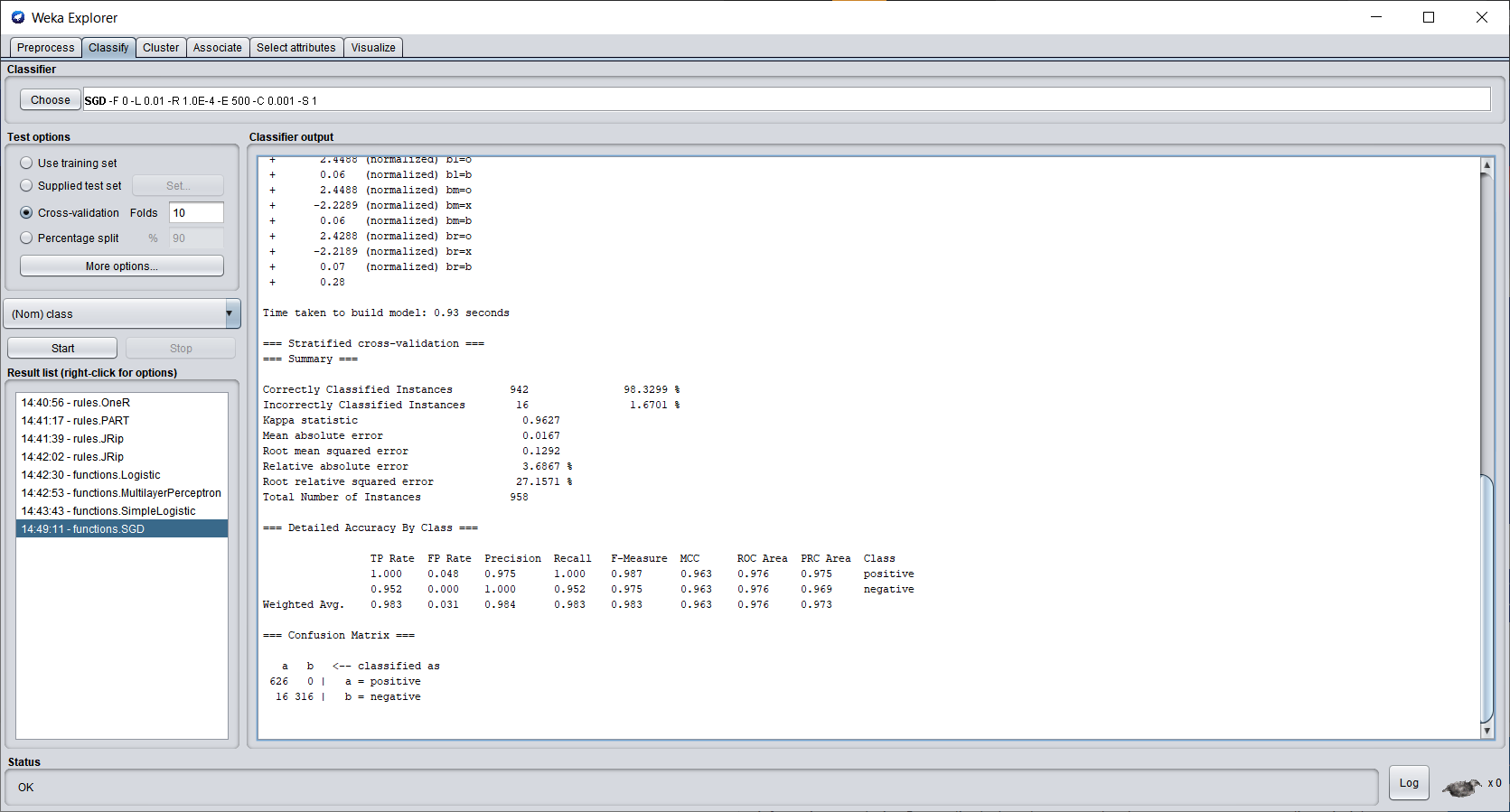
The model was quick to compile but very bad at the actual classification, as can be viewed from the confusion matrix.

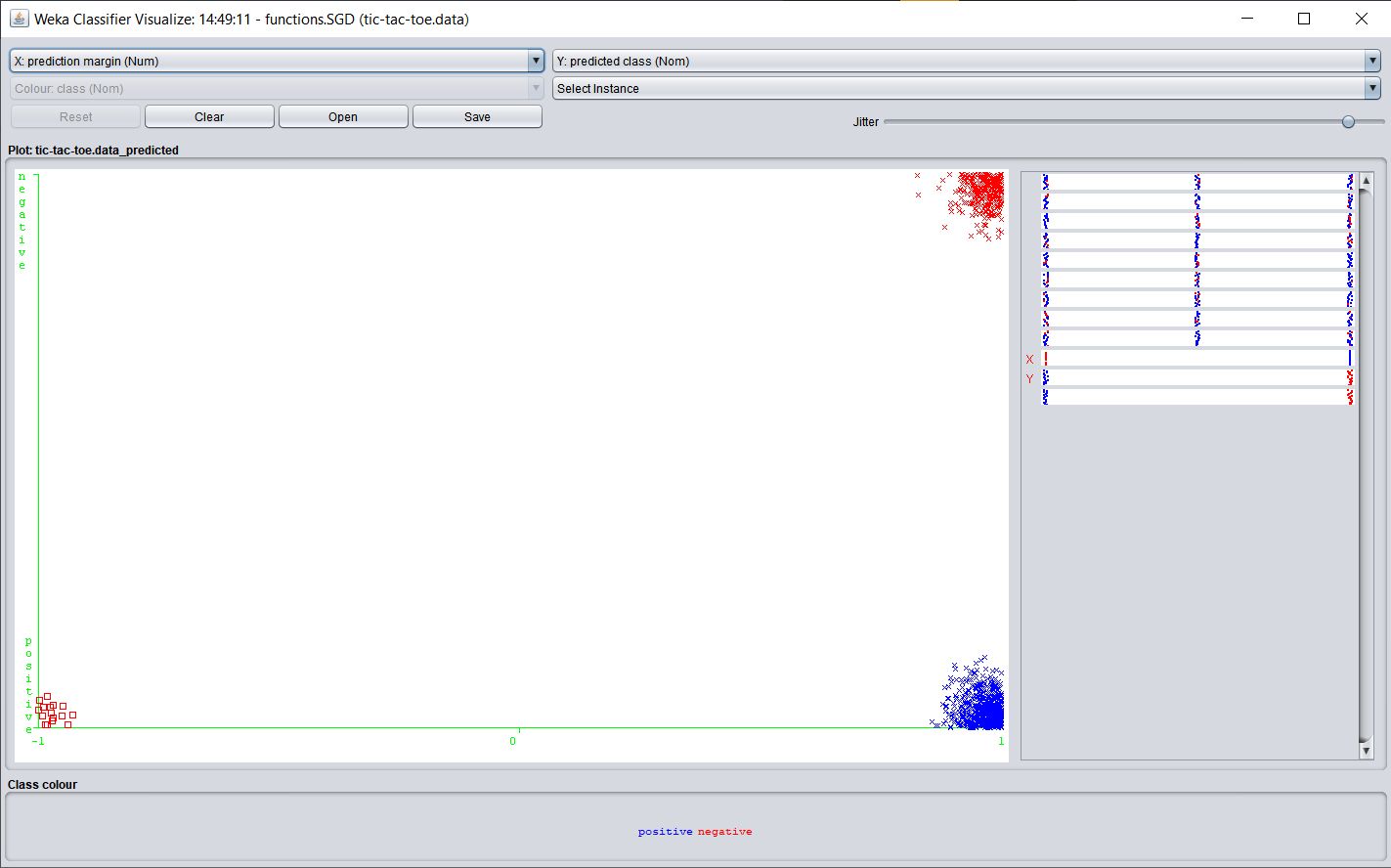
1. **Logistic (Regression)**



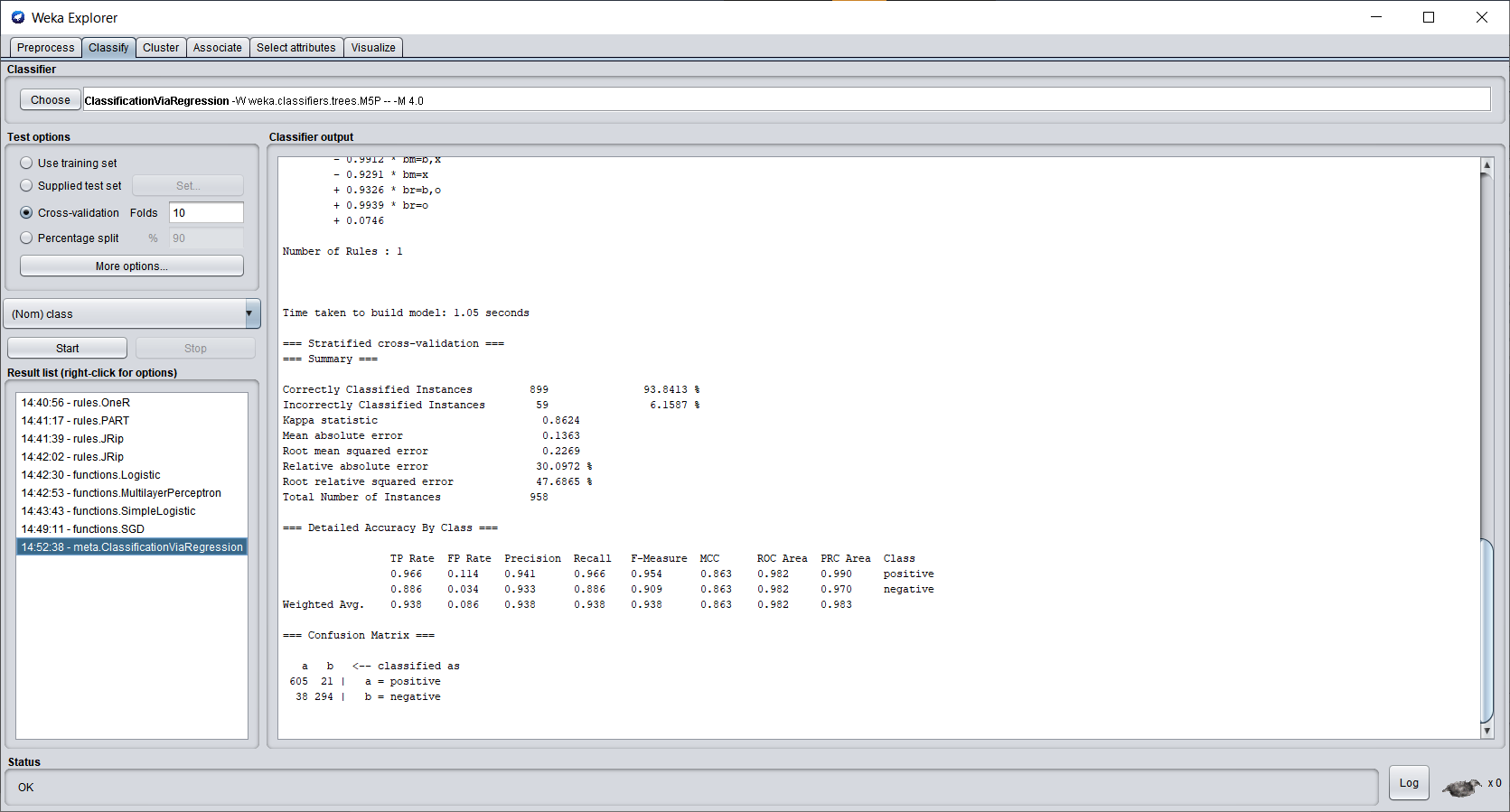


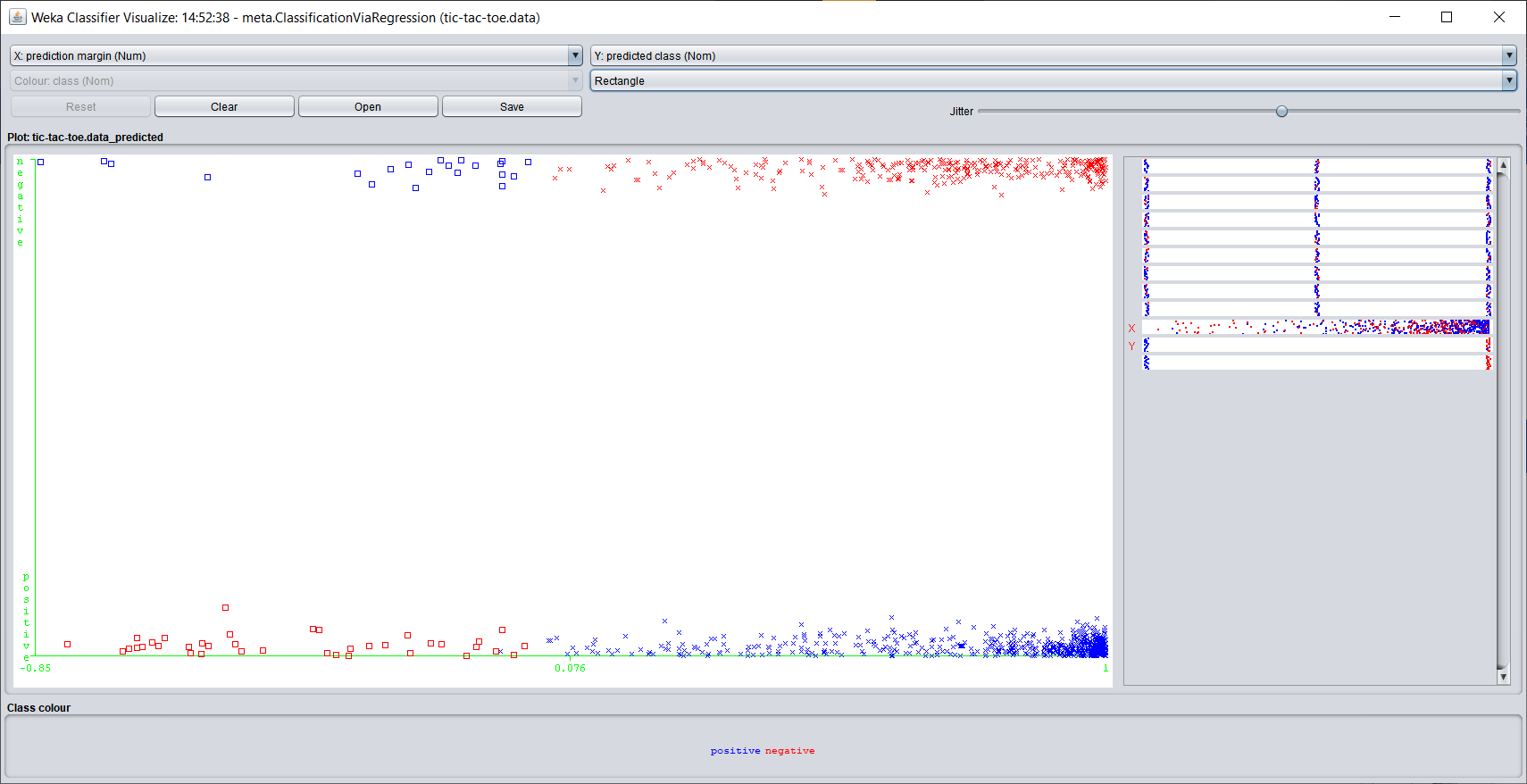
1. **Stochastic Gradient Descent**





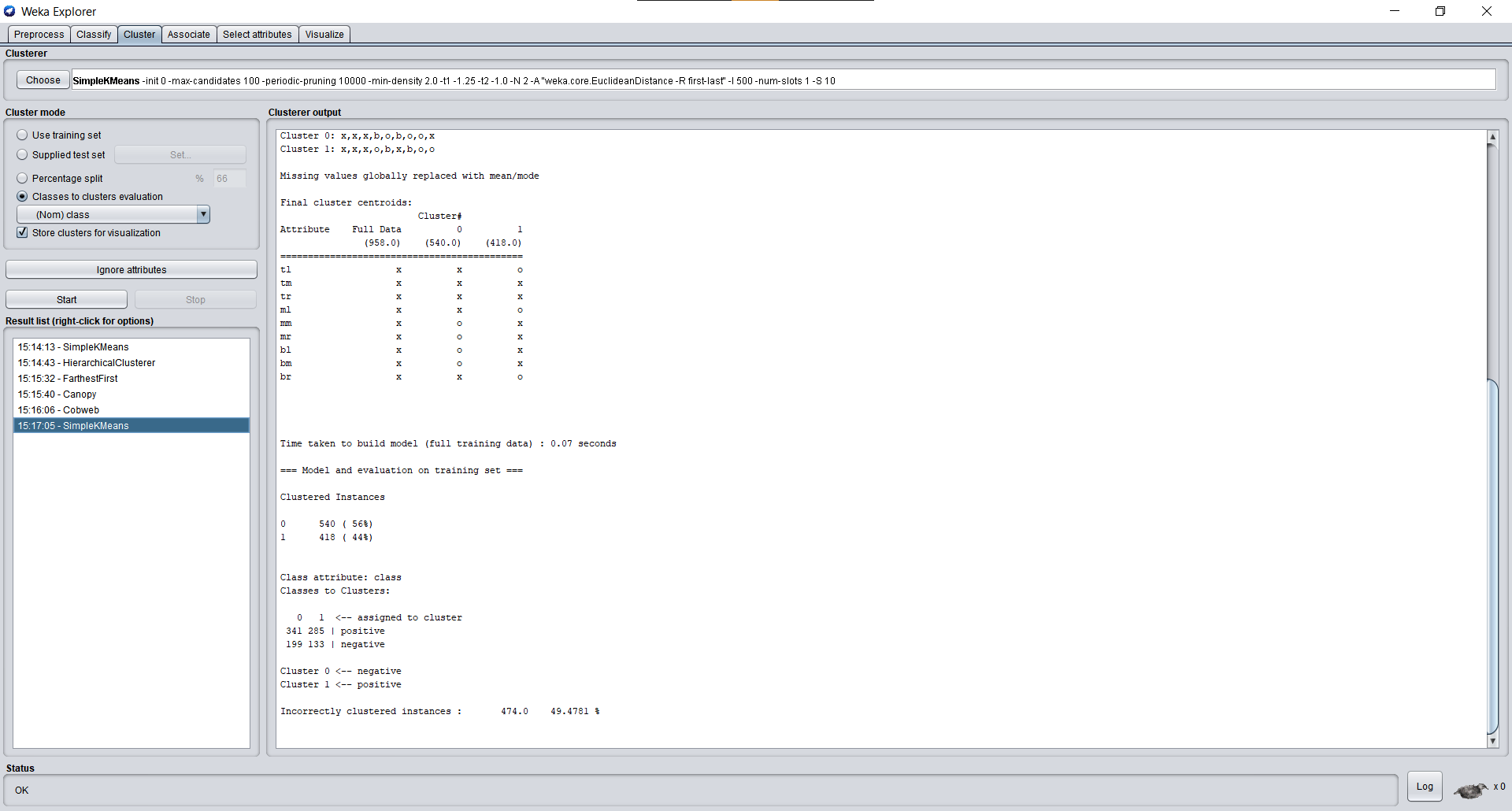
1. **Classification via Regression**



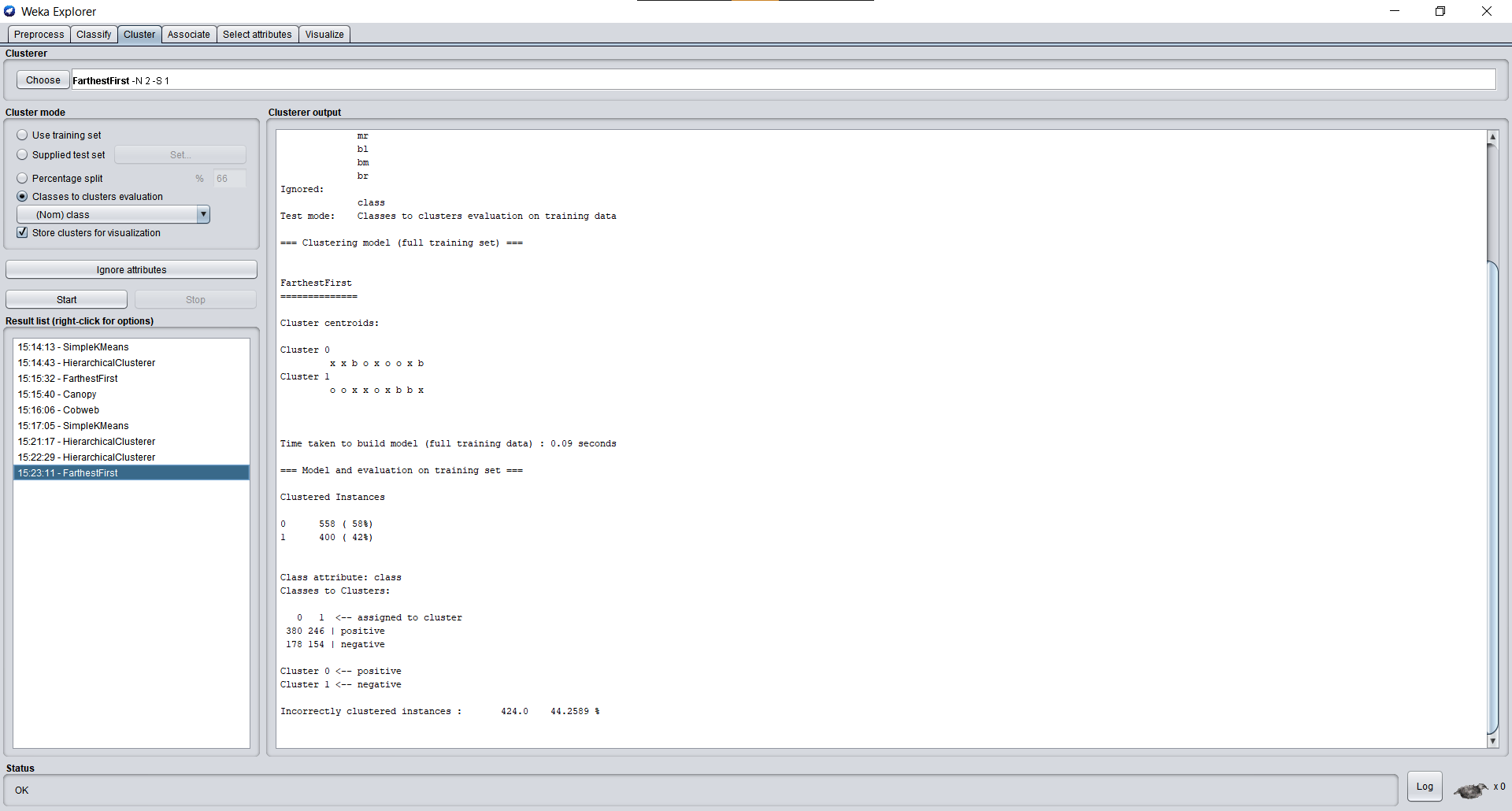


**Clustering:-**

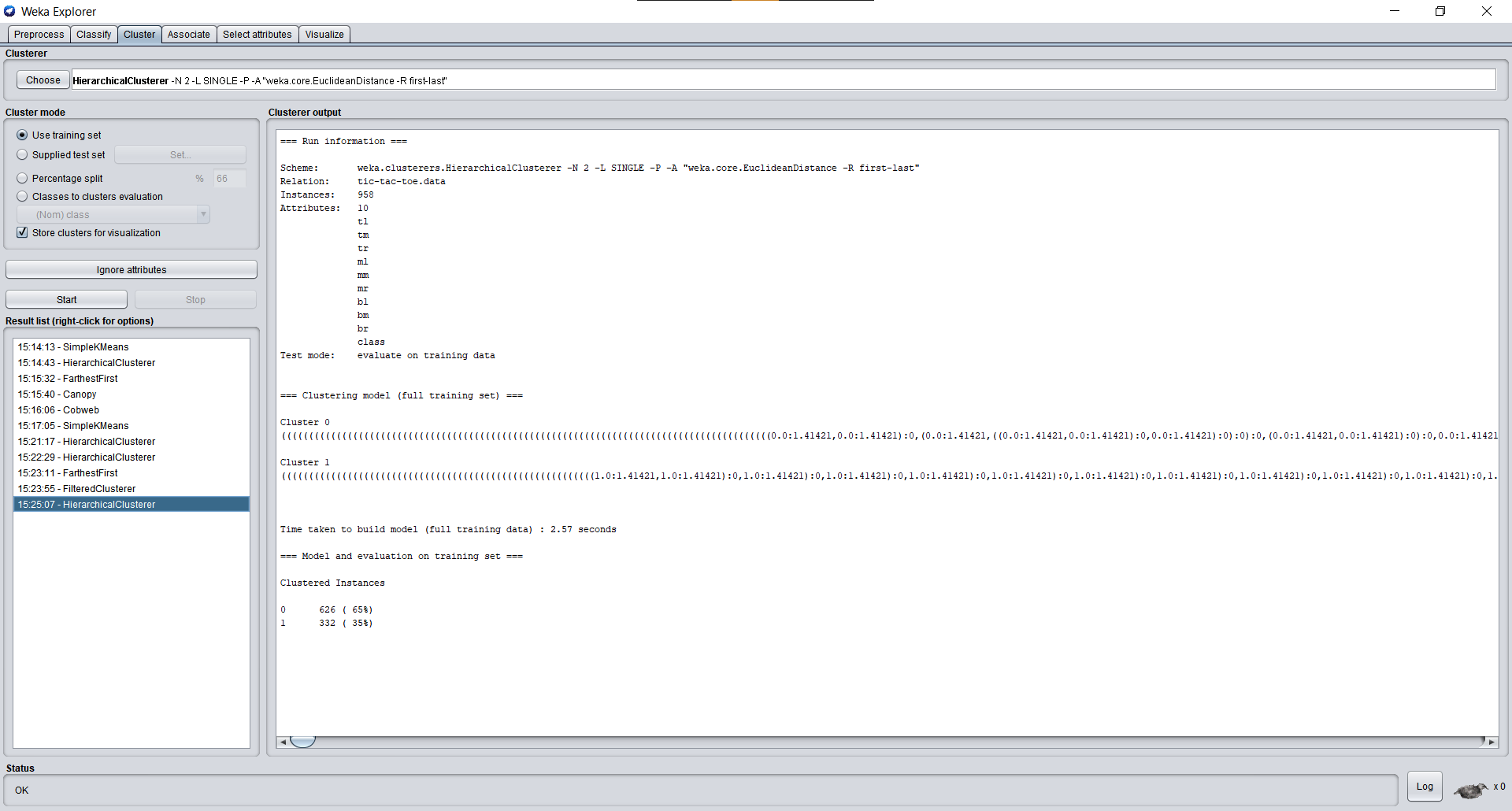
1. **Simple K-Means**



1. **Farthest First**



1. **Hierarchical Cluster**



1. **EM**

