

ABSTRACT

Combining different problem solving methods is a very active research area in data mining. Associative classification is a recent and rewarding technique in data mining that applies the methodology of association rule mining into classification and achieves higher classification accuracy. It is a known fact that, associative classification typically yields a large number of rules. If all the generated class association rules are used in the classifier, then, accuracy of the classifier may be high but the classification process will be slow and time-consuming. Hence, generating high quality class association rules and constructing the accurate classifier are indeed a challenging task.

This research work aims to improve the performance of eager and lazy learning associative classification by generating minimal number of efficient class association rules, constructing the optimal associative classifier and introducing efficient lazy learning associative classification methods. Experiments are conducted with twelve datasets of different nature taken from the University of California at Irvine Repository (UCI Repository). The results of the proposed methods are compared based on classification accuracy, number of rules generated, number of rules used in the classifier, computation time, specificity, sensitivity, precision and recall. The experimental results show that the proposed methods improve the classification with respect to existing associative classifiers.