

Investigation of Data Mining Using Pruned Artificial Neural Network Tree

Abstract

A major drawback associated with the use of artificial neural networks for data mining is their lack of explanation capability. While they can achieve a high predictive accuracy rate, the knowledge captured is not transparent and cannot be verified by domain experts. In this paper, Artificial Neural Network Tree (ANNT), i.e. ANN training preceded by Decision Tree rules extraction method is presented to overcome the comprehensibility problem of ANN. Two pruning techniques are used with the ANNT algorithm; one is to prune the neural network and another to prune the tree. Both of these pruning methods are evaluated to see the effect on ANNT in terms of accuracy, comprehensibility and fidelity.