Abstract

Artificial Neural Network (ANN) is a classification machine which has keen on accuracy towards classification matters. However, it doesn't have simbolic rule or other form of knowledge structure. ANN makes it decision by using activation of the nodes (input and hidden) combined with the weights of the connections beetwen these nodes. In this Final Project, we are going to extract the rule of ANN into IF…THEN form thus easily interpret by human experts. Extracting rule of ANN is accomplished by enumerating fitness value each cromosom constructed based on Neural Network's weights. Fitness value are enumerated by using Genetic Algorithm (AG). In case, cross-over, mutation, and generalisation are used in order to achieve statisfied fitness value. This method strong point is in it's ability to search rule in relatively short time (less than 0.2 seconds per 100 generation) on whichever ANN architecture it's implemented in. Therefore, this method is best implemented in case study which involve in relatively large dataset and attributes. But it flaws at accuracy, some case it need more than once experiments in order obtain accuracy close to optimum results.

Keywords : *Artificial Neural Network, weight, Genetic Algorithm, Fitness Value, Rule.*