1. MODIFIED BACK PROPAGATION ALGURITEM FOR LEARNING ARTIFICIAL NEURAL NETWORKS

Back Propagation is now the most widely used tool in the field of Artificial Neural Networks. Many attempts try to enhance this algorithm to get minimum mean square error, less training Time and small number of epochs. This paper first reviews the disadvantages of the Back Propagation algorithm. Next, the new modified Back Propagation is explained. Finally, Comparison between the two algorithms is made through many examples.

The modified back propagation enhances the behaviour of back propagation. It reduces the heuristic in choosing the learning rate by specifying the near optimum learning rate. Within the specified range for each training input by using the second modification technique. In case of classification another modification technique may be added to the modified back Propagation Algorithm which is called rounding, that technique results in reaching to minimum error.

2. Review of Back-propagation Algorithms for Defect Elimination with proposed DMASIC Methodology

In this paper, a new approach for defect detection and classification based on neural network decision tree classifier is presented. Based on the research, the proposed system uses neural network for classifying the defects. To obtain the best algorithm we have compared the four types of back propagation algorithm. All the four algorithms are described in following sections.

In our paper we have presented hundreds of defects at each level of textile manufacturing process and at the same time we have also given the Six Sigma DMAIC technique to eliminate those defects. The novel DMASIC SORT process has been proposed in this paper to sort the defects into three levels minor, major and critical which will surely enhance the elimination and classification for fabric texture defects in textile industry.

By- Abhishek Sharma
Roll No.- 15MI435