

CHARACTER AND NUMERICAL RECOGNITION SYSTEM USING FEED FORWARD AND BACK PROPAGATION NEURAL NETWORK

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ABSTRACT

In this proposed system, a neural network for characters and digits recognition is proposed by using algorithms to the neural network. The neural network can effectively recognize various characters of different languages such as Tamil, Hindi, English Malayalam and other language characters and even digits with higher rate of accuracy of recognition can be built using the Neural Network. A Back Propagation (BP), Feed forward (FF) and classifying algorithm is capable of reducing the number of neurons correspondingly and increasing recognition rates for the fixed number of output. Neural Network (NN) is a computational model or mathematical model based on biological neural networks. There are various research are going on the recognition system using neural network bionic man is one of the best example for the application of the neural network. NN consists of an interconnected cluster of artificial neurons and which processes information using a connectionist approach to computation of the results. In certain cases NN is an adaptive system that changes its structure based on the internal and external information that flows through the network during the beginning phase (learning). They can be used to model complex relationships between number of outputs and inputs or it can able to find patterns in the given data. The simulations result has been provided for the verification and to see the performance of the recognition.

KEYWORDS: Neural Network (NN), Digital Recognition, Character Recognition, Feed Forward & Back Propagation Algorithm, Classifying Algorithm