

TEXT RECOGNITION USING MULTILAYER PERCEPTRON NEURAL NETWORK

Pranav KHUSHAL GUPTA

B.K. Birla Institute Of Engineering And Technology, Pilani, Rajasthan

This work focuses on development of a Offline Hand Written English Character Recognition algorithm based on Artificial Neural Network (ANN). The ANN implemented in this work has single output neuron which shows whether the tested character belongs to a particular cluster or not. The implementation is carried out completely in 'Java' language. Offline handwritten English character recognition is difficult due to variation in shape, slope and size of individual characters. Such variations in handwriting can be handled by better pre-processing and feature extraction techniques. Handwritten character recognition is more difficult process as compared to typed or printed characters. In this paper, we present a handwritten character recognition system in which first of all original image is converted into greyscale image. After that pre-processing steps are applied on that greyscale image. Then individual characters split from word using segmentation. Features are extracted for those characters and multilayer perceptron classifier is used for classification. At last handwritten character is recognized and converted into machine printable form, which will be easier to store and use in future. However, the result showed that the algorithm recognized English alphabet patterns with maximum accuracy of more than 80.00%.