

Fingerprint Recognition using Neural Network based Hybrid Approach

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Abstract – This paper presents a neural network (NN) architecture for a system of recognition of people through the biometric measurement of the fingerprint. In this system, a database of the fingerprint image is processed by means of morphological operations. The inputs to the neural network architecture are the processed fingerprint images and the output is the number of the person identified. This work proposes the hybridization of DWT (Discrete Wavelet Transform) and LBP (Local Binary Pattern) features of the images to train the neural network. The classification accuracy obtained with the hybrid approach on the images is 85% with 60:40 ratio of training and testing respectively.

Keywords – DWT, LBP, Morphological Operations, Neural Network.