## DESIGN OF OPTIMAL MLP NEURAL NETWORK CLASSIFIER FOR INTELLIGENT IRIS RECOGNITION SYSTEM FOR PERSON IDENTIFICATION

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## Abstract

In this paper design and evaluation of Iris recognition system for person identification is discussed. As technology advances many unauthorized personnel want information and intellectual properties. As a result many organizations are searching ways for more secure authentication methods for the user access. In network security there is a vital emphasis on the automatic personal identification. Due to its inherent advantages biometric based verification especially iris identification is gaining a lot of attention. Iris recognition uses iris patterns for personnel identification. The system steps are capturing iris image, localizing iris and the iris pattern recognition. The iris is extracted from the eye image. Due to the high degree of freedom in iris pattern only part of the iris structure is selected for recognition. The proposed methods are Fast Fourier Transform (FFT) and Discrete Cosine Transform (DCT) coefficient based technique that extracts important features using transformed coefficients. Obtained features are fed to multiplayer perceptron neural network with different learning rules and activation functions for person identification. Experimental results show that the Fast Fourier Transform (FFT) has an encouraging performance compared to Discrete Cosine Transform (DCT) based feature extraction technique.

Keywords: Biometrics, Iris recognition, Personal identification, DCT, FFT, ANN, MLP.