Ear Recognition by Using Self Organizing Feature Map

Suad K. Mohammad
Department of Electrical Engineering, University of Technology/ Baghdad
Email: rawankh2006@yahoo.com

Received on: 22/5/2012 & Accepted on: 7/3/2013

ABSTRACT

A wide variety of systems requires reliable personal recognition schemes to either confirm or determine the identity of an individual requesting their services. The purpose of such schemes is to ensure that the rendered services are accessed only by a legitimate user and no one else.

The aim of the work presented within this paper is to develop an optimum image compression system using haar wavelet transform and a neural network. In this paper we have developed and illustrated a recognition system for human ears using a Kohonen self-organizing map (SOM) or Self-Organizing Feature Map (SOFM) based retrieval system. SOM has good feature extracting property due to its topological ordering. The ear Analytics results for the 4 images of database reflect that the ear recognition using one of the neural network algorithms SOM for 4 persons. MATLAB programs were used to complete this work.

Keywords: Image Compression, Two-Dimensional Wavelet Packet Analysis, Haar Wavelet, Vector Quantization, Self-Organizing Feature Map (SOFM), Neural Network and pattern recognition.