Abstract

This paper deals with 3 different techniques for feature extraction of image. Face detection is a necessary first-step in face recognition systems, with the purpose of localizing and extracting the face region from the background. The Self-Organizing Map (SOM) Neural Network has been used for training of database and simulation of FR system. The developed algorithm for the face recognition system formulates an image-based approach, using discrete wavelet transform (DWT), discrete cosine transform (DCT) and Sobel edge detection, simulated in MATLAB. Simulation results are very promising.
Face Recognition using SOM Neural Network with Different Facial Feature Extraction Techniques


Index Terms

Computer Science  Artificial Intelligence
Keywords
Face Recognition (FR); Discrete Cosine Transform (DCT); Discrete Wavelet Transform (DWT); Sobel Edge detection (SED); SOM Neural Network.