A SOM–WAVELET NETWORKS FOR FACE IDENTIFICATION (ThuPmOR4)

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Abstract:
This paper describes a novel SOM–Wavelet Networks method for face recognition. We employed a SOM algorithm, which is based on the structure of a biological model, to extract shape feature of face. After the unsupervised learning, each face image will produce a shape–based vector named representative face. A Wavelet Network is applied to face identification to collect global information from a face image. Then we proposed a new approach to compute the similarity between two faces on both the global means and topological means. The experimental results are compared with other effective face identification methods and our proposed method showed a good performance.