Abstract

The image intensity surface in an ideal fingerprint image contains a limited range of spatial frequencies, and mutually distinct textures differ significantly in their dominant frequencies. This paper presents a multiresolution feature based subspace technique for fingerprint recognition. The technique computes the core point of fingerprint and crops the image to predefined size. The multiresolution features of aligned fingerprint are computed using 2-D discrete wavelet transform. LL component in wavelet decomposition is concatenated to form the fingerprint feature. Principal component analysis is performed on these features to extract the features with reduced dimensionality. The algorithm is effective and efficient in extracting the features. It is also robust to noise. Experimental results using the FVC2002 and Bologna databases show the feasibility of the proposed method.

Reference

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Index Terms

Computer Science
Pattern Recognition

Key words

Radon transform
Wavelet Transform
Face recognition