Finger Print Recognition using Discrete Wavelet Transform

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ABSTRACT

The most common approach for fingerprint analysis is using minutiae that identifies corresponding features and evaluates the resemblance between two fingerprint impressions. Although many minutiae point pattern matching algorithms have been proposed, reliable automatic fingerprint verification remains as a challenging problem. Finger print recognition can be done effectively using texture classification approach. Important aspect here is appropriate selection of features that recognize the finger print. We propose an effective combination of features for multi-scale and multi-directional recognition of fingerprints. The features include standard deviation, kurtosis, and skewness . We apply the method by analyzing the finger prints with discrete wavelet transform (DWT) . We used Canberra distance metric for similarity comparison between the texture classes. We trained 30 images and obtained an overall performance up to 95%.

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