Abstract

Palmprint is emerging as a popular biometric based personal identification technique and has been found to be more advantageous than fingerprint because of its larger area to capture more distinctive features. Most of the fingerprint discriminative features are also found in Palmprints. Palmprint feature extraction is one of the most important stages in the verification process. The
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robustness of the system depends on the feature extraction methodology and its ability to extract features from the palmprint. In this paper we propose a global feature extraction based on the Discrete Cosine Transform and investigate the efficiency of BayesNet algorithm for verification. This work also investigated the effect of feature reduction using information gain on the proposed methodology. This work utilized 50 palmprints of different users from the palmprint database provided by the Hong Kong Polytechnic University (HK-PolyU) to evaluate the proposed methodology.

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**Index Terms**

Computer Science
Pattern Recognition

**Key words**

Biometrics
Palmprint
Discrete cosine transform
Segmentation

Naïve Bayes
Decision Tree Induction