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
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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Investigation of Probabilistic Graphical Model Algorithms for Palm print Verification

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Index Terms

Computer Science

Pattern Recognition

Key words

Biometrics

Palmprint

Discrete cosine transform

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Naïve Bayes

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