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
Investigation of Probabilistic Graphical Model Algorithms for Palmprint Verification

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.

Reference

- David Zhang, Wai-Kin Kong, Jane You and Michael Wong "Online Palmprint Identification" IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE, VOL. 25, NO. 9, SEPTEMBER 2003
- Jifeng Dai and Jie Zhou " Multifeature-Based High-Resolution Palmprint Recognition".IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE, VOL. 33, NO. 5, MAY 2011
Investigation of Probabilistic Graphical Model Algorithms for Palm print Verification

- Biometric Research Center (BRC) - The Hong Kong Polytechnic University, http://www.comp.polyu.edu.hk/~biometrics/

Index Terms

Computer Science  Pattern Recognition

Key words

Biometrics  Palmprint  Discrete cosine transform
Segmentation

Naïve Bayes

Decision Tree Induction