Abstract

This paper presents the score level fusion of multimodal biometrics using Hanman-Anirban entropy function. Entropy function captures the uncertainty in the scores. The experimental results ascertain that Entropy based score level fusion outperforms over existing methods of score level fusion such as t-norms, sum and max. We have validated our claim on finger-knuckle-print (FKP) dataset consisting of left index, left middle, right index and right middle FKP. The features of FKPs are extracted using the Gabor Wavelet. The implementation is done using MATLAB and the performance of the proposed technique is evaluated using Receiver Operating characteristics (ROC) curve. The proposed score level fusion approach achieves significant improvement in the performance over the individual FKP. We obtain Genuine acceptance rate of 99% with FAR of 0.001 %.

References

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Score Level Fusion of Multimodal Biometrics based on Entropy Function


Index Terms

Computer Science
Information Systems

Keywords

Finger Knuckle Print, Score Level Fusion, t-norms, Gabor Wavelet, Entropy Function, Biometric-Authentication.