Abstract

Texture pattern of finger back surface is highly unique consisting of creases and lines which can be used for biometric authentication system. Use of Finger Knuckle Print (FKP) for person identification has been attracting attention of researchers in last few years. Finger Knuckle Print is becoming an emerging biometric identifier. In this paper, we present a finger knuckle identification method that uses Dynamic programming (DP) for the alignment of Radon Like Features. The key idea is to use dynamic time warping (DTW) to match Radon Like features of two knuckle images. Experiment is carried out using IIT Delhi finger knuckle database version 1.0. Knuckle features are extracted using the Radon Like Feature technique is classified using DTW for the identification of finger knuckle print. Result obtained using RLF and DTW is promising as compared to subspace and Gabor filtering methods.

References

Finger Knuckle Identification using RLF and Dynamic Time Warping


- IIT Delhi Finger Knuckle Database (Version 1.0) http://www4.comp.polyu.edu.hk/~CSajaykr/IITD/iitd_knuckle.htm


Index Terms

Computer Science  Security

Keywords
Biometrics  Finger Knuckle Print (FKP)  Radon Like Feature (RLF)  Knuckle Dynamic Time Warping.