Abstract

Fingerprints offer an infallible means of personal identification. They are the most common and extensive form of biometric identification used at present. The use of fingerprint identification systems has become prevalent. The enormously growing size of fingerprint samples for identification systems has really become an issue these days. Fingerprint classification for the grouping of fingerprints which may further play as the pre processing of identification system has gained research momentum. The task of assigning the fingerprint to one of the considered classes is difficult. In this paper a novel technique based on Vector Quantization for fingerprint classification using Kekre's Error Vector Rotation (KEVR) is proposed. Also the
comparison of the proposed method is done with the earlier presented fingerprint classification using KFCG. Here fingerprint classification is done on fingerprint images using KEVR codebook of size 8. The result obtained shows that this technique provides accuracy of 84% using KEVR codebook of size 8. Though this proposed method using KEVR takes little longer computations compared to existing method based on KFCG, it yields efficient results.

References

Fingerprint Classification using KEVR Algorithm


Ruyi Zheng, Chao Zhang, Shihua He, Pengwei Hao, "A Novel Composite Framework for Large-Scale Fingerprint Database Indexing and Fast Retrieval", Hand-Based Biometrics (ICHB), International Conference on, pp. 1 – 6, 2011


Index Terms

Computer Science
Pattern Recognition

Keywords
Vector Quantization  Kevr  Fingerprint Classes  Kfcg.