Abstract

Fingerprint authentication has been considered as the most complex and the matchlessly the most unchangeable form of all the biometric techniques, a procedure that has been established through various applications. A person's face or signature can change with time and may be fabricated or imitated, but a fingerprint occurs uniquely to an individual and remains unchanged for lifetime. Human fingerprints are known to be rich in details, otherwise known as minutiae which can be used as identification marks for fingerprint verification. There are two main applications involving fingerprints: fingerprint verification and fingerprint identification. The purpose of fingerprint verification is to authenticate a person’s claimed identity, while the goal of fingerprint identification is to establish the identity of a person. Minutiae matching essentially consist of finding the best alignment between the template (set of minutiae in the database) and a subset of minutiae in the input fingerprint, through a geometric transformation. This paper is to establish an enhanced fingerprint recognition system based on minutiae matching by improved image segmentation and matching algorithms.
References


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Index Terms

Computer Science

Algorithms

Keywords

Biometric, Fingerprints, Minutiae Matching, False Acceptance Rate, False Rejection Rate