Abstract

Due to the uniqueness and persistent properties of the biometric fingerprint characteristics, large scale in border control and governmental applications such as the Aadhaar project in India, the Visa Information System (VIS) in Europe and US-VISIT / IDENT system in the USA are based on fingerprint recognition and generally contain millions of fingerprint samples. The study of fingerprint indexing techniques is inevitable, to improve the effectiveness in searching for satisfactory candidate reference list in such large biometric databases. In systems using biometric identification, the identity associated with the input data is decided by its comparison against every single entry in the database. This matching process is exhaustive which leads to increase in the rate of erroneous identification and the response time of the system. This paper presents a survey on the fingerprint indexing methods that are currently available and some of them are presented. Fingerprint indexing is based on the local ridge line orientation, global feature, minutiae and other features.


Index Terms

Computer Science

Pattern Recognition

Keywords

Biometrics, Indexing, Fingerprint, minutiae