

Assignment 1

Fingerprint Recognition System

You have to develop fingerprint recognition system using two approaches and then the results have to be compared on the basis of FRR and FAR.

Steps for the first recognition system:

1. Fingerprint Pre-processing
2. Finding fingerprint Orientation Fields- gradient based method
3. Minutiae Extraction
4. Aligning using Generalized Hough transformation
5. Minutiae Matching

Steps for the second recognition system:

1. Fingerprint Pre-processing
2. Minutiae Extraction
3. Fingerprint matching using Genetic Algorithm

Fingerprint Pre-processing involves: Segmentation, Normalization, Enhancement, Binarization, Thinning.

You can use FVC 2000 Database. Programming language may python or MATLAB or C/C++.

Last Date to submit: 24th Jan 2022 (midnight)