1. DATA: [ take any topic and speak..! ]

The data: images of fingerprints are provided as part of FVC2002: the Second International Competition for Fingerprint Verification Algorithms and can be find on this link. There are 4 available datasets. Here, we choose to work with the second dataset: DB2, which consists of 80 images of fingerprints that belong to 10 different individuals (or classes), which gives 8 images per person.

1. PREPROCESSING:

Firstly, we read the files and we prepare the dataset. Each image is converted to grayscale version and then enhancement is applied by using the following library for fingerprints enhancement in Python: Fingerprint-Enhancement-Python. This library Uses oriented gabor filter bank to enhance the fingerprint image. The orientation of the gabor filters is decided by the orientation of ridges in the input image.Main purpose of oriented Gabor filter is that (a linear filter in image processing used for texture analysis) to enhance the fingerprint image.

The dataset is split into training and test set, with ratio 80:20.

1. orb:

Ill do little bit of feature extraction..

1. This is where biometric template / fingerprint is authenticated . meaning that by comparing ridges / valley points using ORB descriptor . as we can see that near around 88% of the patterns are matching , indicating 88% chances that the person will be correctly authenticated.
2. Conclusion….