Computer Vision Assignment Part-II (Face Recognition)

Face recognition is the problem of identifying and verifying people in a photograph by their face. It is a task that is trivially performed by humans, even under varying light and when faces are changed by age or obstructed with accessories and facial hair. Face recognition has remained an active area of research in computer vision.

Face recognition is often described as a process that first involves four steps; they are face detection, face alignment, feature extraction, and finally face recognition.

1. **Face Detection**. Locate one or more faces in the image and mark with a bounding box.
2. **Face Alignment**. Normalize the face to be consistent with the database, such as geometry and photometrics.
3. **Feature Extraction**. Extract features from the face that can be used for the recognition task.
4. **Face Recognition**. Perform matching of the face against one or more known faces in a prepared database.
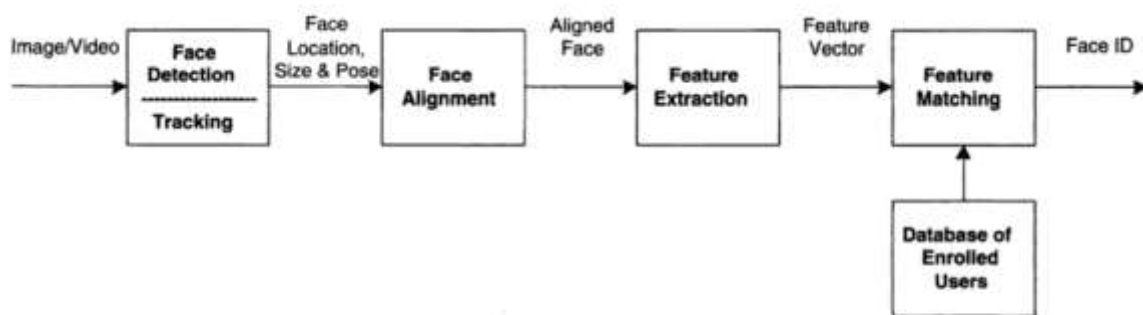

Fig. 1.2. Face recognition processing flow.

You are required to develop a face recognition model by collecting your own dataset and measure the performance of your model.