

AUTOMATIC EYE DETECTION

Motivation –

Face-based biometrics has been growing in importance and researchers continue to seek more advanced algorithms to improve face recognition performance. Most face recognition systems rely on the accurate detection of facial features either as input to the classifier directly or more commonly for the purpose of normalizing images. Symmetry of eyes and their consistent relationship with respect to other fiducial marks on faces make them extremely useful in face recognition systems for normalizing geometric features of the face. Eye separation does not change significantly with facial expression, nor with up and down movements of the face, therefore eye separation distance is often used for face normalization. Face alignment is usually conducted using the eye positions therefore an accurate eye localization algorithm is necessary for accurate face recognition.

Moreover eye detection is also very useful for gaze detection. Gaze determination has a lot of application in many fields like it can be used in building computer interfaces for helping the handicapped people, car driver's behavior understanding and many more.