Abstract

In this paper, a detailed experimental study of occlusion detection in the controlled environments based on skin color is proposed. The image is given as an input to the face detection algorithm to detect the faces. Some faces are not detected due to occlusion, so an occlusion detection technique is implemented to detect all the occluded faces. Those occlusions are detected using skin color of the faces. This is implemented by using circular Hough transform through plotting of circles on the faces present in the image. In order to overcome the illumination problem, extraction of local SMQT features is done. After completion of face detection, occlusions are detected based on skin color and the respective spatial locations of the image are returned. To differentiate the skin colors with other colors, SVM classifier is used. Huge datasets are collected for the purpose of training. From the image database, the occluded faces are recognized by retrieving it through spatial location. This implementation is suitable for all face detection applications in constrained environments.
Skin based Occlusion Detection and Face Recognition using Machine Learning Techniques

experiment using this technique have given 94% accuracy.

References

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Index Terms

Computer Science

Pattern Recognition

Keywords

SVM Classifier  Smq f Features