Abstract

Face recognition is one of the research areas which have always attracted the attention of the researchers and research community. Because it is a varied application in automation, authentication, medical diagnosis, access control, surveillance and security applications. Face recognition is one of the most successful applications of image analysis and understanding. It has gained much attention in recent years. Various algorithms were proposed and their own have some limitations and merits for end-user application. The aim of this paper is to select an optimum technique of face feature selection. That can be used for multiple face object detection because feature representation and classification are two key steps for face recognition systems. Therefore, in this paper, a comparison of six effective feature computation methods is performed. In this comparison PCA, LDA, and ICA, SIFT, SURF, and ORB are considered. After comparison of these features, a promising feature extraction technique is selected for further application development.


Index Terms

Computer Science  Pattern Recognition

Keywords

Face Recognition, Feature Extraction, PCA, ICA, LDA, ORB, SIFT, SURF