

Abstract:

The face recognition problem has been extensively studied by many researchers but accuracy is not satisfactory. This work presents analysis and performance evaluation of global methods (PCA, FLD, DCT, DWT), local methods (SIFT, LBP) and all possible fusions of two methods among them. The fusion is done by consolidating the output of multiple feature extraction algorithms at score levels using four fusion rules which are Mean, Maximum, Minimum, and product [1]. The hybrid methods are tested in terms of recognition rate under different working environment and conditions such as pose variation, illumination and facial expression change, adding effects as blur, motion, noise or combination of those effects. Finally, their robustness is tested by adding some objects as wearing a scarf, putting on a hat, background change, wearing glasses and beard.