Efficient Feature Fusion for Noise Iris in Unconstrained Environment

Authors : Yao-Hong Tsai

Abstract : This paper presents an efficient fusion algorithm for iris images to generate stable feature for recognition in unconstrained environment. Recently, iris recognition systems are focused on real scenarios in our daily life without the subject's cooperation. Under large variation in the environment, the objective of this paper is to combine information from multiple images of the same iris. The result of image fusion is a new image which is more stable for further iris recognition than each original noise iris image. A wavelet-based approach for multi-resolution image fusion is applied in the fusion process. The detection of the iris image is based on Adaboost algorithm and then local binary pattern (LBP) histogram is then applied to texture classification with the weighting scheme. Experiment showed that the generated features from the proposed fusion algorithm can improve the performance for verification system through iris recognition.