عنوان مقاله:

Evaluation of the Parameters Involved in the Iris Recognition System

محل انتشار:

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خلاصه مقاله:

Biometric recognition is an automatic identification method which is based on unique features or characteristics possessed by human beings and Iris recognition has proved itself as one of the most reliable biometric methods available owing to the accuracy provided by its unique epigenetic patterns. The main steps in any iris recognition system are image acquisition, iris segmentation, iris normalization, feature extraction and features matching. EER (Equal Error Rate) metric is considered the best metric for evaluating an iris recognition system.In this paper, different parameters viz. the scaling factor to speed up the CHT (Circle Hough Transform), the sigma for blurring with Gaussian filter while detecting edges, the radius for weak edge suppression for the edge detector used during segmentation and the gamma correction factor for gamma correction; the central wavelength for convolving with Log-Gabor filter and the sigma upon central frequency during feature extraction have been thoroughly tested and evaluated over the CASIA-IrisV1 database to get an improved parameter set. This paper demonstrates how the parameters must be set to have an optimized Iris Recognition System.

کلمات کلیدی:

Biometric Recognition, Canny Edge Detector, Circle Hough Transform, Equal Error Rate, Gamma Correction