Quality assessment for online iris images

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Abstract

Iris recognition systems have attracted much attention for their uniqueness, stability and reliability. However, performance of this system depends on quality of iris image. Therefore there is a need to select good quality images before features can be extracted. In this paper, iris quality is done by assessing the effect of standard deviation, contrast, area ratio, occlusion, blur, dilation and sharpness on iris images. A fusion method based on principal component analysis (PCA) is proposed to determine the quality score. CASIA, IID and UBIRIS databases are used to test the proposed algorithm. SVM was used to evaluate the performance of the proposed quality algorithm. . The experimental results demonstrated that the proposed algorithm yields an efficiency of over 84 % and 90 % Correct Rate and Area under the Curve respectively. The use of character component to assess quality has been found to be sufficient for quality detection.