Abstract

Strong and efficient algorithm in real time eye tracking system has been an ultimate and
thought-provoking problem for computer vision. This so because most studies have tried to
categorized eye using mainly pupil and iris. These features need the full cooperation of the
individual making computing information impractical. Secondly, computing information using
these features is subjective and also depends on the race. All these methods do not consider
the individual making it general as the individual has blink cycle and for that matter different
levels of fatigue rendering previous works inaccurate, hence this study. In this paper, a
methodology for establishing the blink cycle of the eye is presented. The paper employs a
method, where individual’s face is captured by a camera by receiving video sequence which are
streamed into frames and then transformed into RGB. Haar classifiers are used to detect eyes
region and eyelid feature. The eyes are detected to be either open or closed at a particular
period by using thresholding and equations regarding the symmetry of human face. The eye
region is processed to ascertain certain attributes of eyelid movement.
Establishing the Blink Cycle of the Eye using OTSU Method and Gaussian Filter

References


Index Terms

Computer Science  Image Processing
Keywords

Blink Cycle, Haar Classifiers, Eyelid movement, Gaussian Filters, Otsu Method