

A study on face detection and gender recognition

趙翊傑、林國祥

E-mail: 321866@mail.dyu.edu.tw

ABSTRACT

In this paper, we proposed a system to simultaneously achieve face detection and gender recognition based on color and geometrical features. The proposed face detection algorithm is composed of face candidate localization and face region verification. We first use a color feature, skin color, to coarsely localize these face candidate regions. Moreover, we detect eyes and calculate the geometrical properties among them to select the possible eye pairs. Therefore, we can detect face regions by combing the face regions and eye pairs. As for gender recognition, we extract useful features from the result of face detection. These features contain skin and lip color information. Based on the extracted features and a trained classifier, we can identify the gender information of each testee in an image. Experimental results show that our proposed system can achieve not only face detection but also gender recognition.

Keywords : Face detection、 Eye pair detection、 Skin color detection、 Gender recognition

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