

A hybrid face detection system using combination of appearance-based and feature-based methods

ABSTRACT

Human face detection is preliminary required step of face recognition systems as well as a very important task in many applications, such as security access control systems, video surveillance, human computer interface and image database management. This paper intends to combine Viola and Jones face detection method with a color-based method to propose an improved face detection method. Experimental results show that our method efficiently decreased false positive rate and subsequently increased accuracy of the face detection system especially in complex background images. Also our proposed method considerably increased face detection speed.

Keyword: Face detection; Feature-based; Appearance-based; Skin color classification