Experimental Comparison of Face detection Techniques on the basis of Intrinsic and Extrinsic Parameters

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Abstract

Face detection is an important contributing factor to make computer vision applicable to problems of everyday life. Of the techniques used for face detection, two are more efficacious i.e. skin detection and viola-jones based face detection. These two techniques have limitations of their own. One of the most restricting factors to these techniques is the color cluster of the image. Face detection algorithms are trained on a set of images. Those images are sure to be occupying a particular color cluster of the color plane because it is not possible for the set to contain encompass the full color space. If an image occupying a color space other than that on which the algorithms is trained is an input to the algorithm, the result is not optimal then. This paper explores the effect of different color clusters on the performance of both techniques. Images of color clusters other than that on which the algorithms are trained are given to the algorithms and the results are analyzed to decide the optimality of the techniques in face of images on which the algorithms are not trained.

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**Index Terms**

Computer Science  |  Vision

**Keywords**

Viola-jones  |  Face detection  |  Color cluster  |  Color spaces