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**Project Report on  
FACE DETECTION USING HSV ALGORITHM  
(Skin tone analysis)**

**Project submitted in partial fulfillment of the requirement for the degree of :  
BACHELOR OF ENGINEERING  
IN  
INFORMATION SCIENCE AND ENGINEERING**

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## ABSTRACT

The subject of face detection is as old as computer vision and both because of the practical importance of the topic and theoretical interest from cognitive science.. Even humans between each other use senses in order to recognize others. Machines have a wider range for recognition purposes, which use things such as fingerprints, or iris scans. Despite the fact that these methods of identification can be more accurate, face detection has always remained a major focus of research because of its non-invasive nature and because it is people's primary method of person identification.

A facial detection system is a computer-driven application for automatically identifying a person from a digital image. It does that by comparing selected facial features in the live image and a facial database. Face Detection is a necessary pre-requisite for face recognition to detect the presence of faces in a given image. It is typically used for security systems and can be compared to other biometrics such as fingerprint or eye iris recognition systems.

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Face detection is accomplished by first performing a skin search of the input image based on color segmentation. Although skin colors differ from person to person, it was found that the color remained distributed over a very small region on the chrominance plane.