A Context-aware Approach for Detecting Skin Colored Pixels in Images

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Abstract

Detecting the human skin and its analysis has number of important applications. This is a challenging task as, in images, the skin color is quite sensitive to the chrominance and intensity of the pixels. So the techniques with a single model for skin fail to cope up with the variation in skin colors because of ethnicity, age, lighting etc. This paper proposes a novel technique for skin detection in color images. The proposed technique has two steps; (i) first the faces of humans are detected in the color images (ii) then based on the statistics captured from the sampling of the face area, the rest of the skin is detected. For face detection purpose, we train a binary classifier using machine learning approach. After face detection, the sampled pixels are matched to find the other exposed skin areas using an approach based on Gaussian model for skin.

References


**Index Terms**

Computer Science

Pattern Recognition
Keywords
Skin Detection  Image Processing  Gaussian Models  Face Recognition  Multimedia