Abstract

Skin is the most widely used primitive in human image processing research and computer vision with application ranging from face detection and person tracking to pornography filtering. It has proven to be a useful and robust cue for detecting human parts in images since (i) it is invariant to orientation and size (ii) it gives extra dimension compared to gray scale methods and (iii) it is fast to process. The main problems with the robustness of skin color detection depend on illumination condition, it varies between individuals, many everyday life objects are skin color like and skin color is not unique. To detect skin tone in images with this complex background, we presented a method based on hybrid approach. In this approach, the Cheddad's approach is combined with Cr of YCbCr color space. In Cheddad's approach, the red channel is discarded. Only green and blue channels are used to find the skin tones. Due to the absence of red channel, this approach is not working properly in images which have poor illumination. To improve the performance, we propose to include the Cr component of YCbCr color space. The experimental results show that the proposed approach is simple and preserve skin color better than the previous methods under various illumination and background conditions.

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Index Terms

Computer Science  Pattern Recognition

Keywords

Color Transformation  Cheddad’s Approach  Ycbr Color Space  Skin Tone Detection