Use of Segmentation and Color Adjustment for Skin Tone Classification in Dermatological Images

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Abstract : The work aims to evaluate the use of classical image processing methodologies towards skin tone classification in dermatological images. The skin tone is an important attribute when considering several factor for skin cancer diagnosis. Currently, there is a lack of clear methodologies to classify the skin tone based only on the dermatological image. In this work, a recent released dataset with the label for skin tone was used as reference for the evaluation of classical methodologies for segmentation and adjustment of color space for classification of skin tone in dermatological images. It was noticed that even though the classical methodologies can work fine for segmentation and color adjustment, classifying the skin tone without proper control of the aquisition of the sample images ended being very unreliable.