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Skin Detection

**Running the Skin Detection Program**

Requirements:  
 1. Matlab

2. M5atlab Libraries

-None

Steps:

1. Open zip file and choose where to put the .m file
2. Open matlab and make sure that the same directory where you put both the .m file and the pictures is selected in the directory bar.
3. If the code is in the Editor section, the main part we write in within matlab, and the directory is in the correct spot, showing both the “SkinDetection.m” file then you can run the program by pressing the green arrow.

Program :

1. The program loads in both “face\_good.bmp” and “face\_dark.bmp”.
2. Gets skin detection using given code of both with names “picGood” and “picDark” respectfully.
3. Then it changes the skin image of “picGood” to uint8 to multiply with the original. This gives just the skin.
4. Changes the RGB values to YCbCr color space.
5. Then the program gets a histogram of “picDark”.
6. Afterwards it loops through the values of the histogram and sums them all up. With a certain distance between each one.(Mask)
7. Then divide by 10 to get to the correct number space.(I think I did the thresholding incorrect, I knew it needed to be about .63 however before doing this. I knew this because I messed around for a while. So this wont work for another image.
8. Loop through the YCrCb image and compare each pixel to the threshold, if it is above threshold, change the pixel to black.
9. Change the YCrCb image back to RGB now
10. Multiply the new RGB image to the skin image, this gets rid of the clothes, and leaves just the skin pieces. (Mine however, makes the background red, I’m still looking into this.)

Outputs:

1. Skin image of “picGood”
2. Multiplied image to show skin of “picGood”
3. Skin image of “picDark”
4. Histogram of “picDark”
5. YCrCb filtered image of “picDark”
6. Multiplied image of “picDark” skin detected and YCrCb detected to show just skin.