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Final Project Proposal

Image Facial Detection

Input a colored image with or without a face. Extract Intensity and Chrominance (YUV color scheme) and detect faces by filtering facial colors within a certain chrominance range, and calculating their centroids. Output whether a face is in the image and where it is. Ignoring the intensity component Y helps with detecting a variety of dark and light skin tones.

Input 3 text files containing the R, G, and B byte values respectively of an image. Output a high signal for face detected and position output variables.

Optional Bonus features: Output multiple faces. Smooth the masked image to improve the facial region
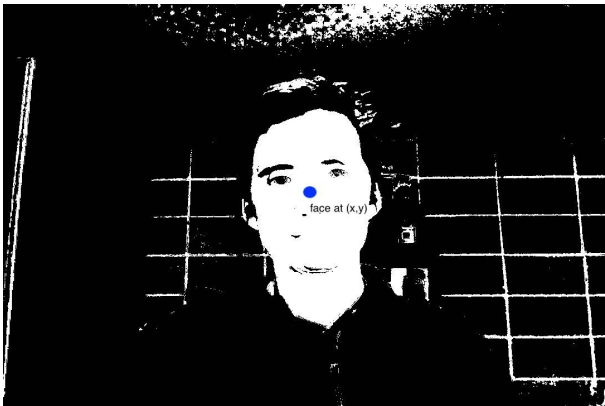
Examples
Input:

Mask:

Output:
FACE_DETECTED = 0
FACE_X = 0
FACE_Y = 0

Input:

Mask:

face at (x,y)

Output
FACE_DETECTED = 1
FACE_X = 250
FACE_Y = 250