# CSCI 442 Quiz 2 – OPENCV Progamming Quiz

50 minutes from 12pm,  one point off for every minute late, past 12:50pm.
10 points total possible.
You must use Python with OpenCV to complete quiz.
You will paste your answer screen captures in doc with python code pasted at
bottom of doc. Open doc now.

For each screen capture make sure your name is the title of window with your name stays the same for all screen captures.
Six levels below, first is five points and then each increases by one point. You're going to have to move fast to get the last one in…….it will take a while.

**Level one – 5  Points**

Download the image linked on D2L below the quiz link.

Open image and change the title bar to your name, it should look like this (except your name) when done.  I searched mugshots, and I felt sorry for this guy, I don't think he did it. He will look innocent by the time we are done.  Sure he has devil horns on his forehead, does that make him guilty?
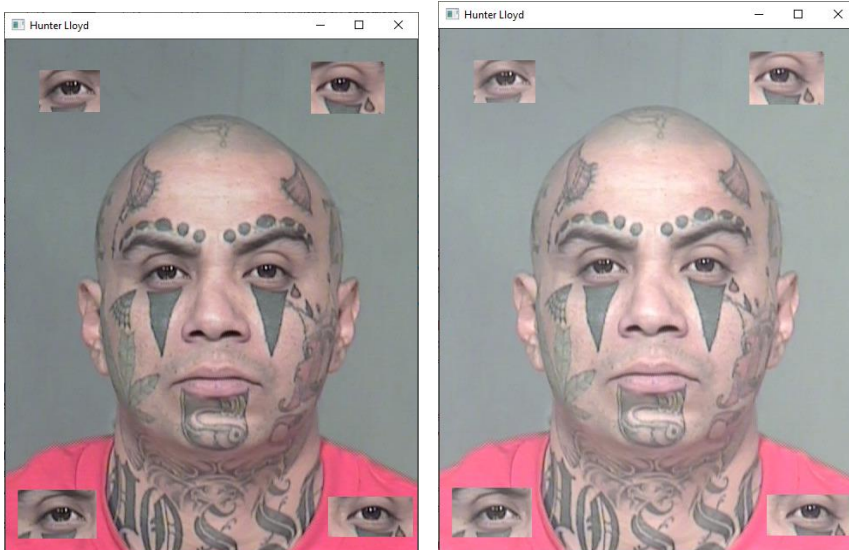
**Level two – 6 Points**

Create an new image/mat of the same height and width of the original image with all values in the whole mat equal to 30 and add this new image from the original image. It should look like this when done:



It's subtle, but the new image will be lighter……..here they are side by side, first level on left, second level on right.
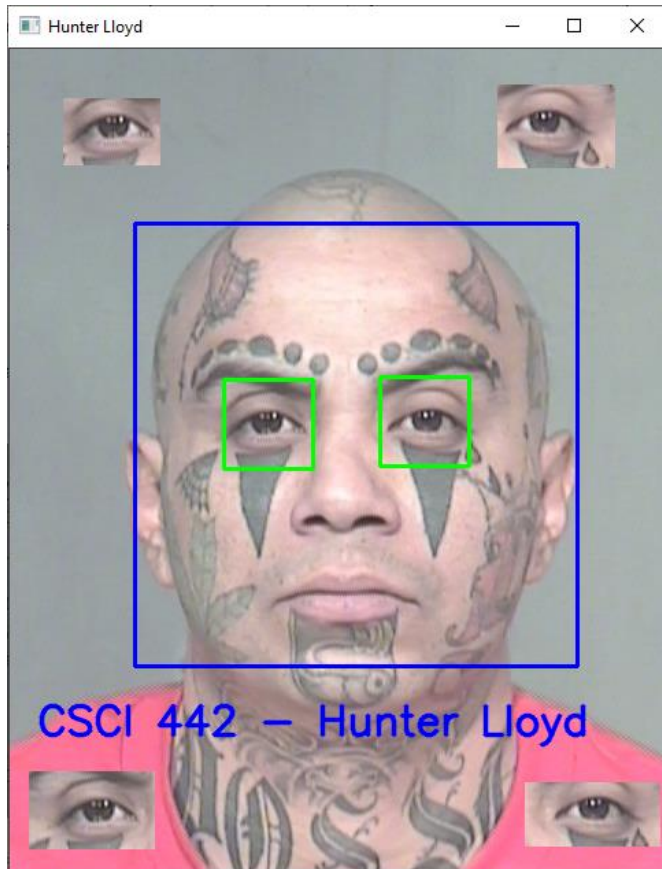
**Level three – 7 points**

Add text to the picture "CSCI *442 your name*". The text should be blue, size should be 1 (size is right before the color). Move it up so it is a little higher than the eyeballs on the shirt.
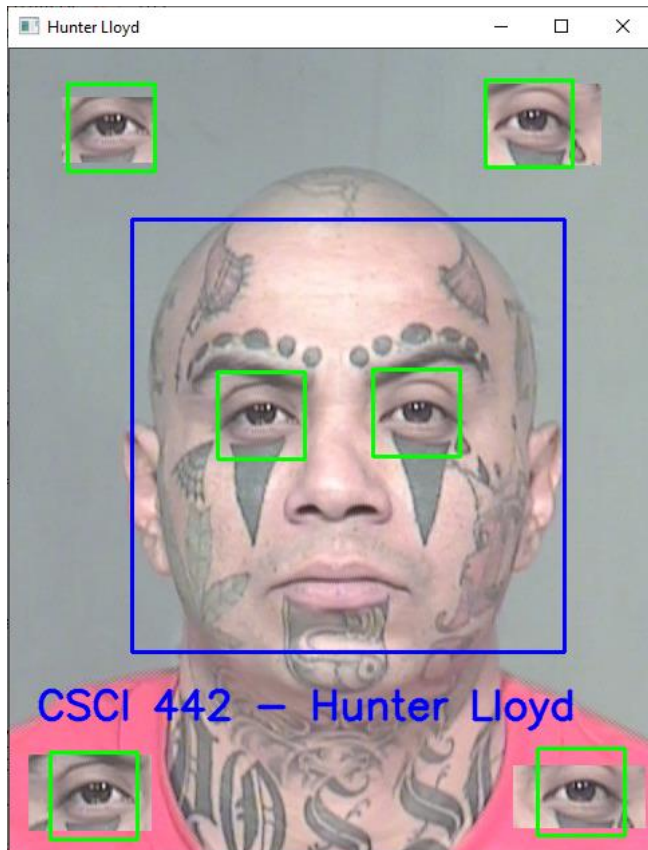
**Level four – 8 points**

Use the code I gave you for Face Recognition (not identification)…….hopefully you listened to the review video to get this code ready, especially the part about moving the data folder over to be prepared for this. Run the code and find the eyes only on the face…….not the extra few eyes floating around (but if you do find them, hold on to it for the next part).  This part should look like this:

**Level five – 9 points**

Change the code to find all the eyeballs, all the eyeballs.  This is why the text needs to be above the eyes to get it to work.

………should look like this:

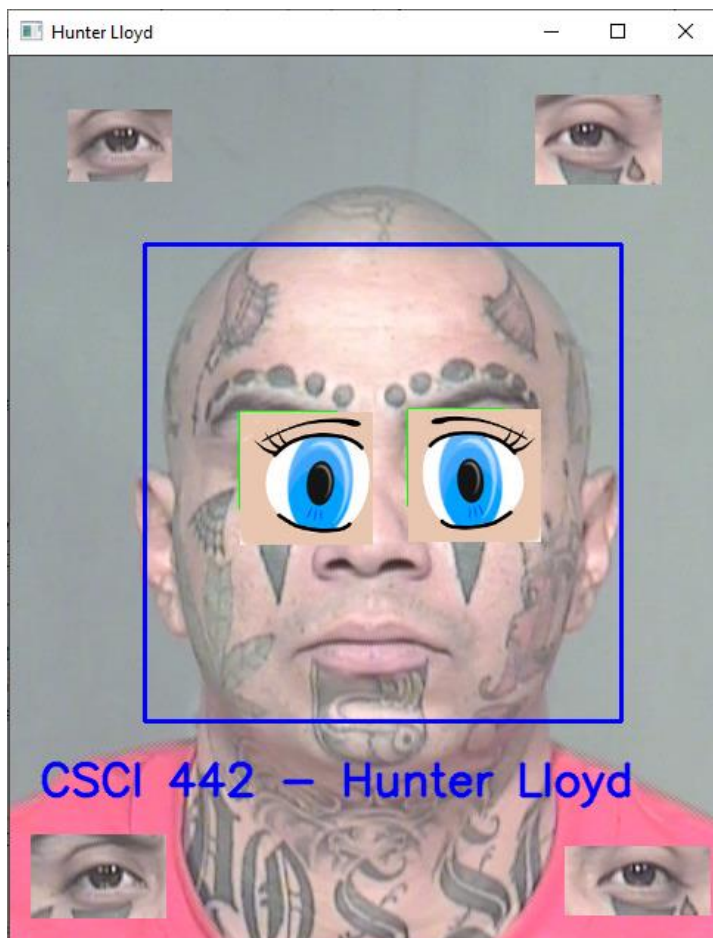**Level six = 10 points (all of above must be done to get 10 points).**

Download the two eyeball images I linked in D2L.

Replace the two eyeballs on the face with these two images. These pictures are 90x90 so make your rectangles around eyes as a height and width of 90 before replacing pixels.

Be careful on your rows and cols, remember the ROI values are just inside the face rectangle.

They are png files ………….righteye.png and lefteye.png

It will look like this when done:



If you want to keep the old rectangles on there to speed up time you can.

Now how could anybody think this sweetheart did anything wrong?