Homework 6

Honor Code: ...

Image Processing

All work for this assignment will be done in a `jupyter notebook`. Grab the template from the class website and modify it. When you are done, print out the notebook and turn it in.

1. Using the camera on your laptop, grab an image of yourself and display it using `plt.imshow()`. Remember to convert the image from BGR to RGB colorspace. Also, print out (display) the size of the image in pixels
2. Create a 1x2 subplot (two images side by side) of your image. Have the left image rotated counter clockwise 90 degrees and the right image inverted (flipped).
3. Make a copy of your original image and split out (separate) the red, green, and blue planes. Then plot a 1x3 subplot of the histogram of your image. Make sure to set the title of each subplot to the appropriate color and turn on the grid.
4. Make a copy of your original image and on the copy, write your name and date on the image. Write your name in blue and the date in green.
5. Crop the image so it only shows your face (*hint:* use an ROI) and then plot it.
6. Take your original RGB image and resize it so the image is 100x100 pixels (like a thumb nail) and plot it.