

Problem 1.

Open the image `pic1.jpg` and display it with the name `pic1`. Convert the image to grayscale and plot the histogram of pixel intensities using `matplotlib`.

Problem 2.

Repeat the previous exercise without converting the image to grayscale and get 3 histograms for each of the color channels on one plot.

Problem 3.

Open the image `pic1.jpg` and display it with the name `pic1`. Binarize the image using 3 different methods: choosing the threshold by hand and using `THRESH_BINARY` method, using adaptive thresholding with mean and gaussian methods. Display the 3 results in separate windows.

Problem 4.

Open the image `pic2.jpg` and display it with the name `pic2`. Convert the image to grayscale. Try detecting the edges with a method of your choice. Use one technique of your choice on the image from what we have learned so far and try to get a better result. (better than simply using some edge detection technique on a grayscale of a raw image)