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COMPUTER VISION

EXERCISE 0: Introduction to Matlab

Concepts: Image loading, saving, and conversion.

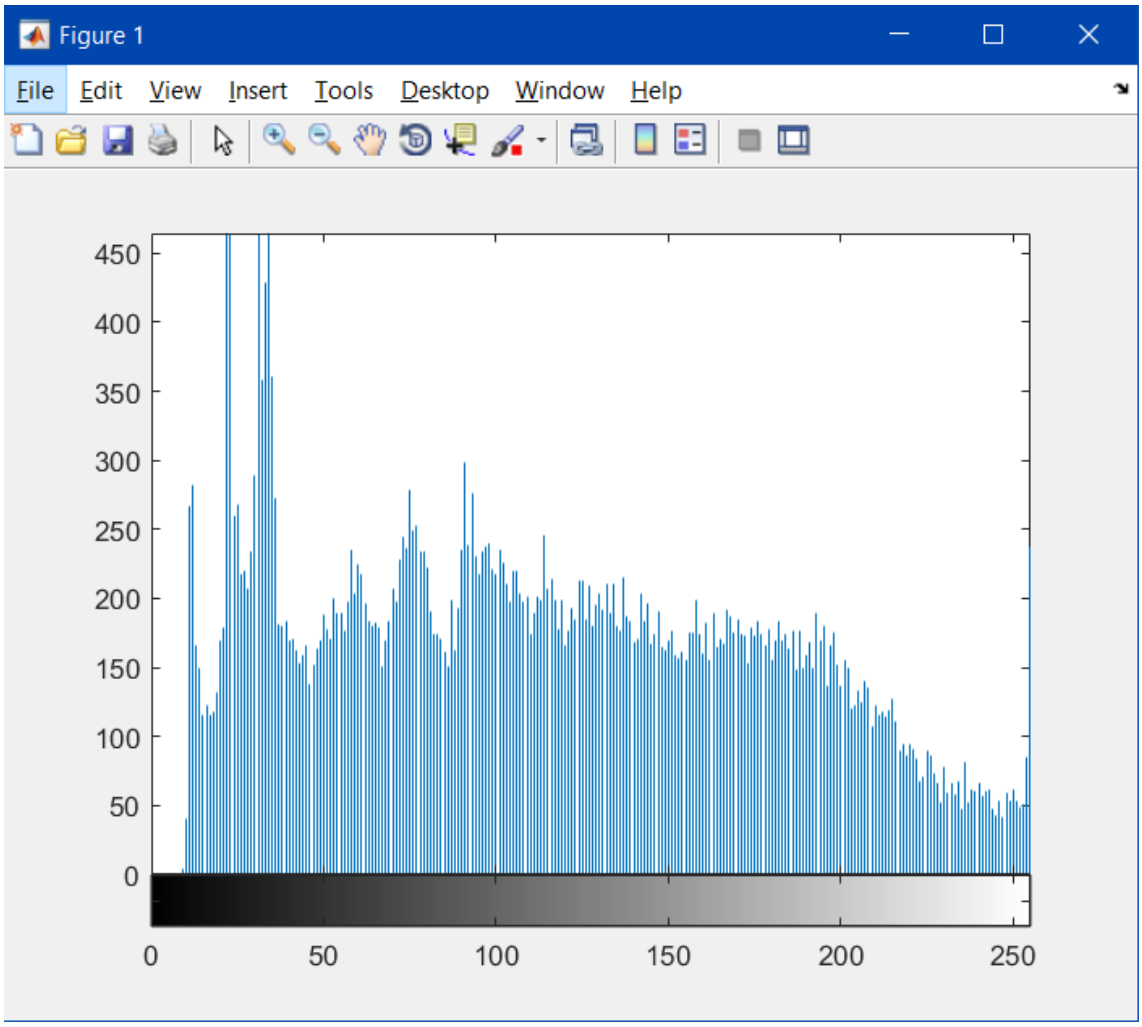
1. Simple image manipulation:
    a. Load the color image **lily.tif**,
    im = imread('imagenes\lily.tif');

    b. convert it to grayscale,
    im2 = rbg2gray(im);

    c. show its histogram and
    imhist(im2);

    d. save it as **lily_gris.tif**.
    imwrite(im2,'imagenes\lily_gray.tif');

Result:



The histogram shows the quantity of each scale of grey in a grayscale image. Here we can see there is more darks zones than light ones.

2. Implement a *script* file showing in the screen, in a subplot:
    a. The initial **lily_gris.tif** image.
       im = imread('imagenes\lily_gray.tif');
    b. Binary image from thresholding it (threshold=100).
       im2 = im2bw(im,100/255);
    c. Image with half resolution.
       im3 = imresize(im,0.5);
    d. Middle part of the image with half the size.
       x = size(1);
       y = size(2);
       c = [x/4, y/4, 3*x/4, 3*y/4];
       im4=im(c(1):c(3),c(2):c(4));

Result: