Extra Functions

This document lists some other useful functions that the OpenCV library offers us.

1. Converting Images to Grayscale

   cv2.cvtColor(source, cv2.COLOR_BGR2GRAY)→destination– This command takes a source image(in BRG format), converts it to a grayscale image, and returns it. Thus, if the source image is represented as an HxWxC matrix, where C = 3 (for Blue, Green and Red channels), then the destination image is a HxW matrix

2. Finding out the size of the image

   <image matrix>.shape → H,W[,C] – This command is used to find out the dimensions of the image matrix. In case of a BGR or HSV image, it returns 3 values, the number of rows(height of image), the number of columns(width of image), and the number of channels(3 in the case of BGR images). In case the image is a grayscale image, then it only returns the number of rows and columns as there is only one channel

3. Addressing a region of the image

<image matrix>[h1:h2,w1:w2,c1:c2] → <matrix with desired region of image> - This is the way we refer to regions of the image, with the rows from h1 to h2, columns from w1 to w2 and the channels c1 to c2. This uses the usual way to address lists in python, meaning that if we do not mention any of the parameters, then a default is assumed. For example, if our image matrix is called img, then img[h1:,:w2,:] will return all the rows from h1 to the end and all the colums from the start to w2 and all the channels.