eyantra

e-Yantra Robotics Competition Plus

(eYRC+ Pilot)

eYRCPlus-PS2#2526

Team leader name	Shreyas J kumar
College	RNS Institute of Technology
e-mail	eyrc1rn14ec@gmail.com
Date	29th Nov ,2015

Image Processing   (8)

Write down the answers to the following questions.

1. What is the resolution(size) of the test image assigned in the task?
2. What is the use of thresholding an image?

1. (747,900)

    →width=900pixels

    →height= 747 pixels

2. We threshold the image to differentiate the foreground from the background to the required level

Explain the algorithm used to perform the task given in practice_test folder.

1.

2. Step 2

3. Step 3 etc.

Software used   (7)

Write down the answers to the following questions.

1. Write a function in python to open a color image and convert the image into grayscale. You are required to write a function *color_grayscale(filename,g)* which takes two arguments:
   a. filename: a color image (Test color image is in folder "Task1_Practice/test_images". Pick first image to perform the experiment.)
   b. g: an integer

Output of program should be a grayscale image if g = 1 and a color image otherwise.

```python
# Import OpenCV & numpy
import numpy
import cv2

def color_grayscale(filename,g):
    '''
    filename-- input color image stored as file(Test color image is in folder
    "Task1_Practice/test_images". Pick first image to perform the experiment.)
        g-- int 0 or 1
    returnsimg-- grayscale of input image if g=1 else color image
        '''

    #imgt is image matrix that stores input image

    imgt = cv2.imread(filename)# filename is string passed

        if g==1: #checks if g is equals to 1 so that its converted to grayscale

                img = cv2.cvtColor(imgt, cv2.COLOR_BGR2GRAY)

                #img is converted

        else:

    #if g is not equal to 1 then it output matrix is the temporary matrix imgt

                img=imgt

    return(img)   # gives the caller function the resultant image matrix
```