

# Hello Raspberry Pi

Beginner in Raspberry Pi

## Test Management Tool

Test management software to manage, track & organize test cases. [gurock.com](http://gurock.com)

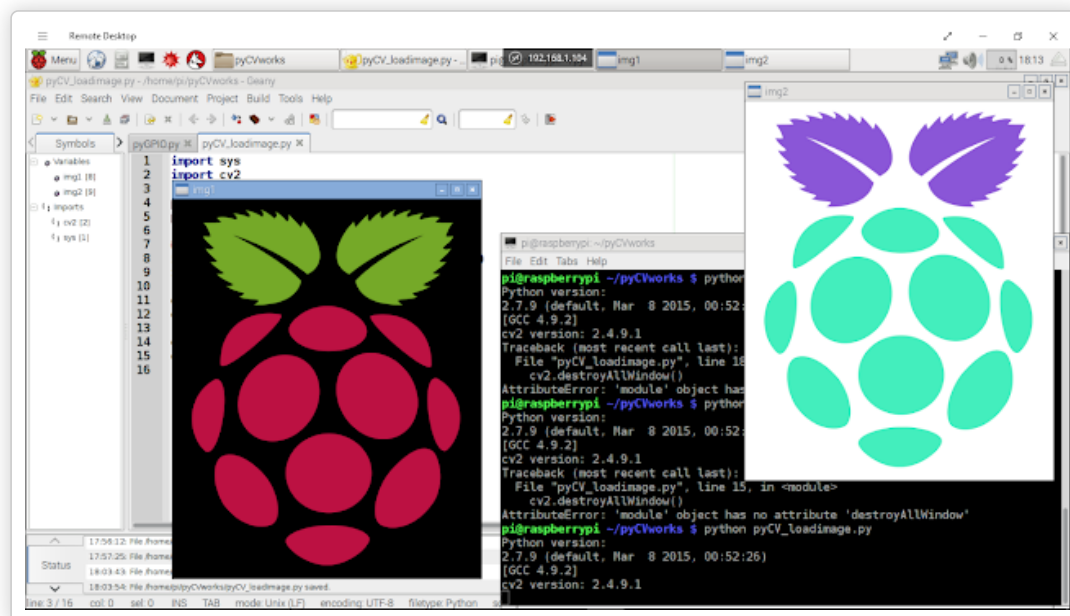
VIEW



Sunday, October 11, 2015

## Python + OpenCV: create negative image

Example to generate negative image:



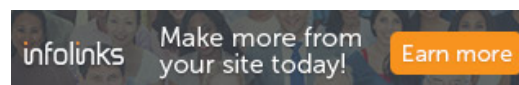
```

import sys
import cv2

```



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Playlist Raspberry Pi

```

print("Python version: \n" + sys.version)
print("cv2 version: " + cv2.__version__)

#img1 and img2 must be in same size
img1 = cv2.imread('Raspberry_Pi_Logo.png', 1)
img2 = (255-img1)

cv2.imshow('img1',img1)
cv2.imshow('img2',img2)

cv2.waitKey(0)
cv2.destroyAllWindows()

```

Edit the example "[Capture Raspberry Pi Camera image, display on OpenCV, Matplotlib PyPlot and Tkinter GUI](#)" to generate negative image from the picamera captured image.

```

import picamera
import picamera.array
import time
import cv2
from matplotlib import pyplot as plt
import Tkinter
import Image, ImageTk
import sys

def capturePiCam():
    with picamera.PiCamera() as camera:
        cap=picamera.array.PiRGBArray(camera)
        camera.resolution = (640, 480)
        camera.start_preview()
        time.sleep(3)
        camera.capture(cap,format="bgr")
        global img
        img =cap.array
        img = (255-img)

#- display on OpenCV window -
def displayAtOpenCV():
    cv2.namedWindow('imageWindow', cv2.WINDOW_AUTOSIZE)
    cv2.imshow('imageWindow',img)
    cv2.waitKey(0)
    cv2.destroyAllWindows()

#- display with matplotlib -
def displayAtPyplot():

```



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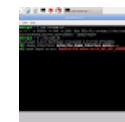
**Stream video from Raspberry Pi 3 + Camera Module V2, play in Windows 10/VLC Media Player and Android/VideoView.**

I have old posts of " Stream Raspberry Pi Camera Module video using raspivid and vlc " and " Play stream video (from Raspberr...



**Install Qt5/Qt Creator for Raspberry Pi 3/Raspbian Jessie**

This post show how to install Qt5 and QtCreator on Raspberry Pi 3 running Raspbian Jessie release 2016-03-18. install qt5-default and q...



**Stream Raspberry Pi Camera Module video using raspivid and vlc**

Here show how to stream video from Raspberry Pi Camera Module to network using raspivid and vlc. Run on Raspberry Pi 2/Raspbian View ...



**Install Code::Blocks on Raspberry Pi**

Code::Blocks is a open source, cross platform, free C, C++ and Fortran IDE. To install Code::Blocks on Raspberry Pi, enter the command: ...



**Python socket server to send camera image to client (II)**

Last exercise implement Python socket server to send camera image to client ,

```

plt.figure().canvas.set_window_title("Hello Raspberry Pi")
plt.imshow(cv2.cvtColor(img, cv2.COLOR_BGR2RGB))
plt.xticks([], plt.yticks([]) # to hide tick values on X and Y axis
plt.show()

#- display on Tkinter -
def displayAtThinter():
    root = Tkinter.Tk()
    b,g,r = cv2.split(img)
    img2 = cv2.merge((r,g,b))
    img2FromArray = Image.fromarray(img2)
    imgtk = ImageTk.PhotoImage(image=img2FromArray)
    Tkinter.Label(root, image=imgtk).pack()
    root.mainloop()

def displayUsage():
    print("usage: ")
    print("python pyCV_picam.py 1 - display wiyh OpenCV window")
    print("python pyCV_picam.py 2 - display with matplotlib")
    print("python pyCV_picam.py 3 - display with Tkinter")

if len(sys.argv) != 2:
    displayUsage()
    sys.exit()

opt = sys.argv[1]

if opt=="1":
    print("display wiyh OpenCV window")
    capturePiCam()
    displayAtOpenCV()
elif opt=="2":
    print("display with matplotlib")
    capturePiCam()
    displayAtPyplot()
elif opt=="3":
    print("display with Tkinter")
    capturePiCam()
    displayAtThinter()
else:
    displayUsage()

```

wait client, send image file, and exit. In this exercise, the...



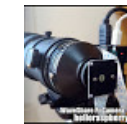
### Stream RPi Camera Module Video to network, using Python

It's a example on Picamera docs - Recording to a network stream , to stream video of Raspberry Pi Camera Module to network using Pytho...



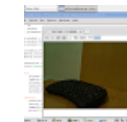
### Waveshare 3.5" 320\*480 Raspberry Pi LCD Display Module

It's a Waveshare Raspberry Pi LCD Display Module 3.5inch 320\*480 TFT Resistive Touch Screen Panel using SPI Interface. The seller pro...



### Pi telecamera - WaveShare Raspberry Pi Camera module connect to 300mm tele lens

This post show how to build a Raspberry Pi Telescope using: - Nikkor AF 300mm f4 ED - AI-C mount adapter (Nikkor Lens to C-mount) ...



### Python socket server to send camera image to client

Simple server run on Raspberry Pi to send jpg from Camera Module to client. Can be viewed on browsers at <http://<Raspberry Pi IP>:8000...>



### Python + OpenCV: convert RGB to HSV and reverse

Python + OpenCV example run on Raspberry Pi 2 to convert RGB to HSV and reverse from HSV to RGB, pyCV\_cvtImage.py. `import sys import cv2...`

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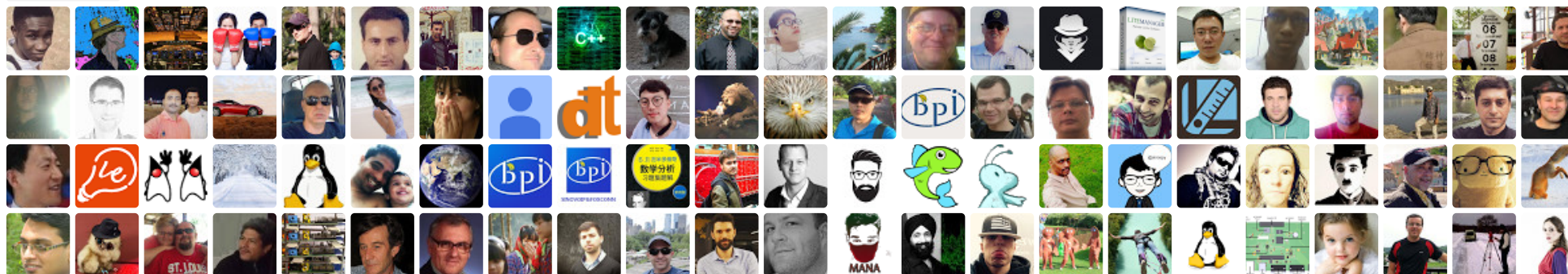
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