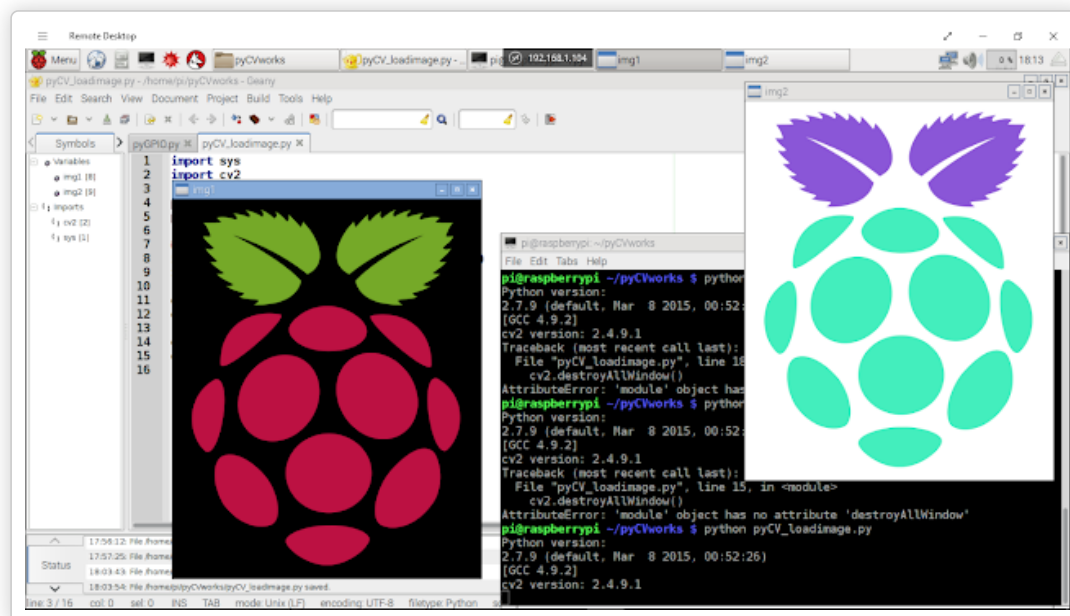# Hello Raspberry Pi

Beginner in Raspberry Pi

Sunday, October 11, 2015

Python + OpenCV: create negative image

Example to generate negative image:
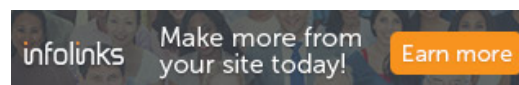


```
import sys
import cv2
```

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.destroyAllWindow()
```

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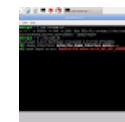
```python
    plt.figure().canvas.set_window_title("Hello Raspberry Pi")
    plt.imshow(cv2.cvtColor(img, cv2.COLOR_BGR2RGB))
    plt.xticks([]), plt.yticks([])  # to hide tick values on X and Y axis
    plt.show()

#- 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()
```
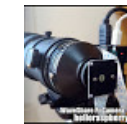
Stream RPi Camera Module Video to network, using Python

It's a example on Picamera docs - Recording to a network stream , to stream video of Raspberry Pi Camera Module to network using Pytho...
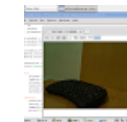
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by： Andr.oid Eric at： 3:16 AM   G+

label： example code.Python, OpenCV, picamera

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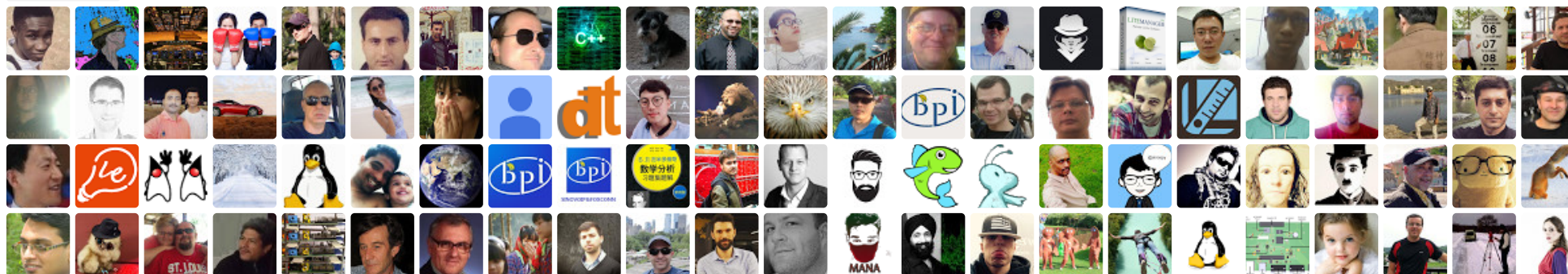► January (3)

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