

[Home](#)[PUBLIC](#)[Stack Overflow](#)[Tags](#)[Users](#)[Jobs](#)[Teams](#)
Q&A for work[Learn More](#)



Tired of recruiter spam?

Want jobs tailored to your needs?

 **stackoverflow**
JOBS

[Get started](#)

inverting image in Python with OpenCV

[Ask Question](#)

I want to load a color image, convert it to grayscale, and then invert the data in the file.

What I need: to iterate over the array in OpenCV and change every single value with this formula (it might be wrong but it seems reasonable for me):

```
img[x,y] = abs(img[x,y] - 255)
```

but I don't understand why doesn't it works:

```
def invert(img, name):  
    img = abs(img - 255)  
    cv2.imwrite(name, img)
```

```
def invert2(img, name):  
    for x in np.nditer(img, op_flags=['readwrite']):  
        x = abs(x - 255)  
    cv2.imwrite(name, img)
```

```
if __name__ == '__main__':  
    nome = str(sys.argv[1])  
    img = cv2.imread(nome)
```

Join Stack Overflow to learn, share knowledge, and build your career.

By using our site, you acknowledge that you have read and understand our [Cookie Policy](#), [Privacy Policy](#), and our [Terms of Service](#).

I don't want to do an explicit loop (I am trying to be more pythonic). I can see that in one image that got a white background it turned black, but only this it doesn't looks like the other colors are having much (if any) change.

python

arrays

opencv

numpy

image-processing

edited May 11 '16 at 20:02



Saullo G. P. Castro

34.9k 12 115 173

asked Oct 25 '13 at 2:25



Mansueli

2,848 4 20 46

2 Answers

You almost did it. You were tricked by the fact that `abs(image-255)` will give a wrong result since your `dtype` is an unsigned integer. You have to do `(255-image)` in order to keep the integers unsigned:

```
def invert(image, name):
    image = (255-image)
    cv2.imwrite(name, image)
```

As recommended by some comments here, you could invert the image using the `bitwise_not` function of OpenCV:

```
image = cv2.bitwise_not(image)
```

edited May 22 '17 at 12:58

to learn, share knowledge, and build your career.

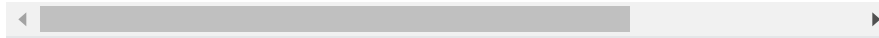
By using our site, you acknowledge that you have read and understand our

, and our



34.9k 12 115 173

- 2 Thanks you! I didn't know that in python the standard would be unsigned int ... – [Mansueli](#) Oct 31 '13 at 20:36
- 3 Neat, didn't think it would be this simple, thanks. – [Nit](#) Mar 22 '15 at 12:09



Find your dream job
on a career site built just for developers

Alternatively, you could invert the image using the `bitwise_not` function of OpenCV:

```
imagem = cv2.bitwise_not(imagem)
```

I liked the example at: <https://www.learnopencv.com/filling-holes-in-an-image-using-opencv-python-c/>

answered Dec 4 '16 at 0:36

[Eric Olmon](#)

291 3 5



to learn, share knowledge, and build your career.

By using our site, you acknowledge that you have read and understand our

, and our