Recoloring pixels with Python

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This article provides a step-by-step guide to adding images to Plotly plots. We will walk through the process of adding images to Plotly plots, including dependencies and configuration.

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I try to match the background color of my plots with the background color of the blog body. However, I sometimes need to borrow images from external sources, and they typically have white background. I don't like the look of such images, see an example below.
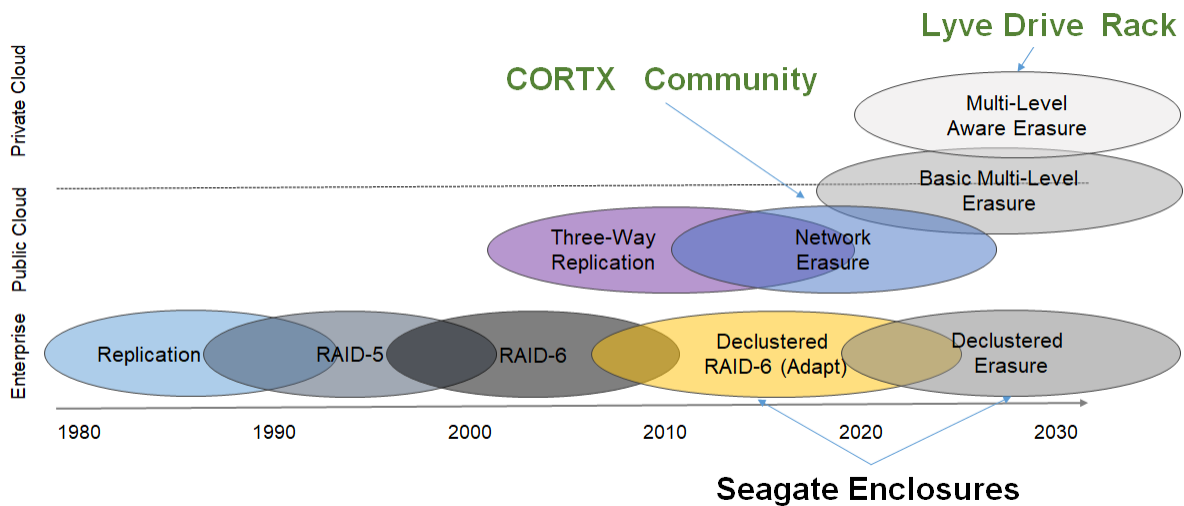

Figure 1: An image I borrowed from a Seagate presentation by John Bent. It has white background, which doesn't blend in with my blog's background.

So, I ended up writing a quick Python code to change the background color, which can be copied below or can be cloned from my repository.

1

Show the code (PIL, Python)

Hide

```python
# Replacing a target color in an image with another one
# 09/30/2021, tetraquark@gmail.com
# https://tetraquark.netlify.app/post/pythonRecolor/index.html

from PIL import Image
import math
imgName=   'posts/ligomodulation/PDH.png'
img = Image.open(imgName)
img = img.convert("RGBA")

pixels = img.load()
targetColor=[0,0,0]    # the original color
replacementColor=[80,80,80]    # replacement color
#replacementColor=(255,0,0)
offsetSquared=100  # this is the sum of the squares of RGB values. Set this to 0 if you wal

for i in range(img.size[0]):
    for j in range(img.size[1]):
        if (pixels[i, j][0]-targetColor[0])**2 +(pixels[i, j][1]-targetColor[1])**2 +(pixel
         pixels[i, j] = replacementColor

#img.show()
imgNameS=imgName.split(".")
img.save(imgNameS[0]+"_recolored."+imgNameS[1] )
```

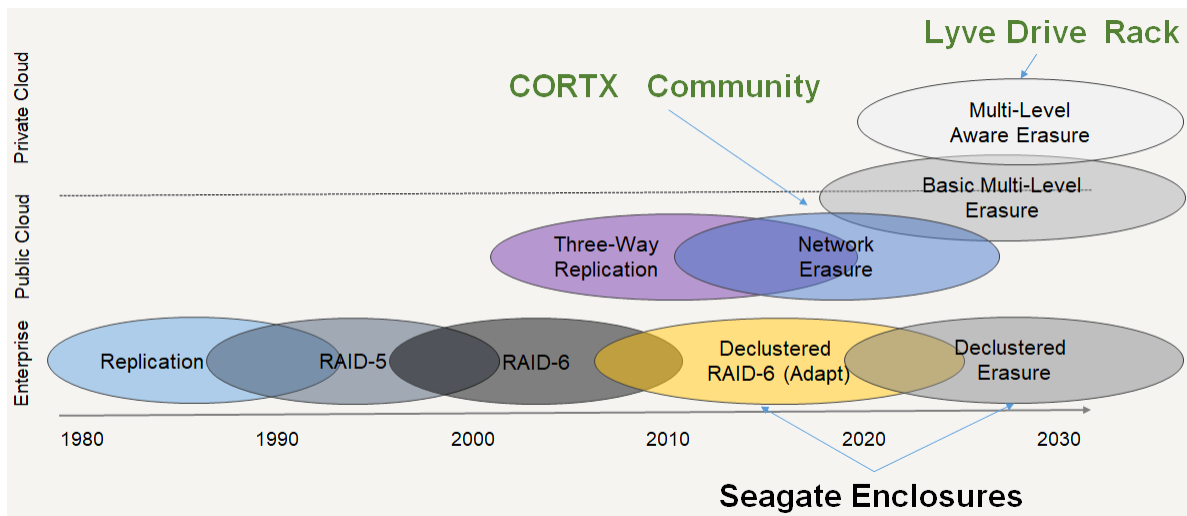Once the code is run, it changes the selected color.

Figure 2: The same image with the white background changed to (245,244,241).

If you have many such images, I have another version of the script that loops through the images in a selected folder. Find it in my repository.