

🕒 DECEMBER 9, 2021 👤 BY ZACH

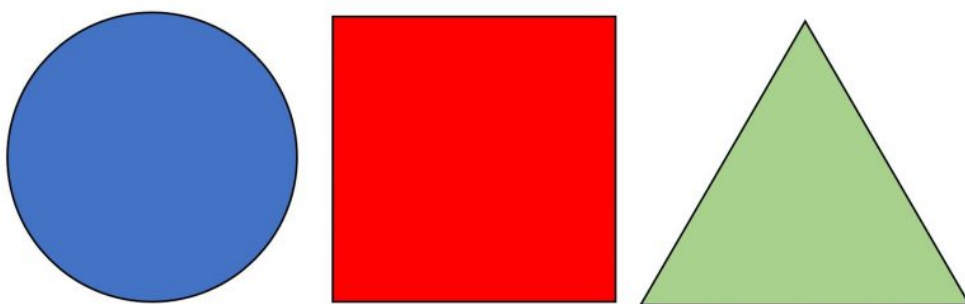
## Display an Image as Grayscale in Matplotlib (With Example)

You can use the **cmap** argument in Matplotlib to easily display images on a **grayscale**.

The following example shows how to use this argument in practice.

### Example: Display Image as Grayscale in Matplotlib

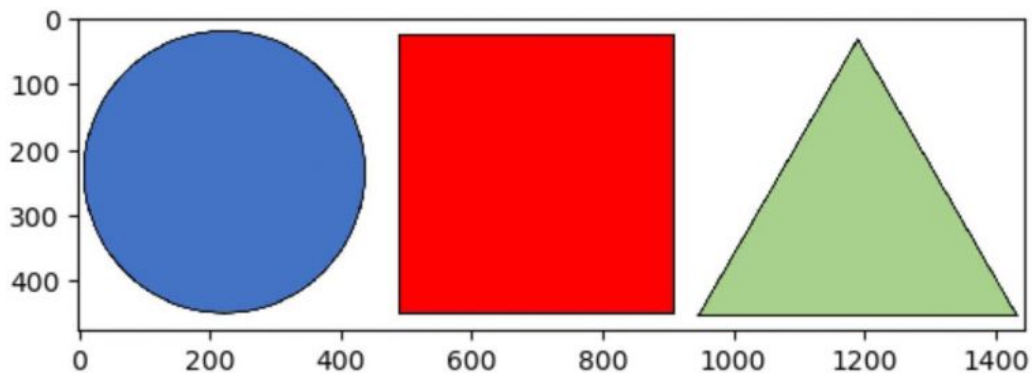
Suppose I have the following image called **shapes.JPG** that I'd like to display in Matplotlib:



I can use the following syntax to display this image using the original colors:

```
import numpy as np
import matplotlib.pyplot as plt
from PIL import Image
```

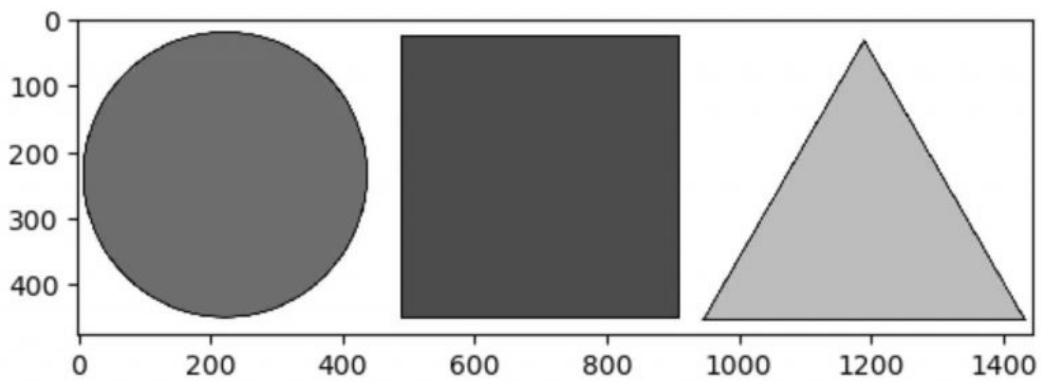
```
image=Image.open('shapes.JPG')  
plt.imshow(image)  
plt.show()
```



Notice that this image perfectly matches the image I had on file.

In order to display the image on a grayscale, I must use the **cmap='gray'** argument as follows:

```
import numpy as np  
import matplotlib.pyplot as plt  
from PIL import Image  
  
#open image  
image=Image.open('shapes.JPG')  
  
#convert image to black and white pixels  
gray_image=image.convert('L')  
  
#convert image to NumPy array  
gray_image_array=np.asarray(gray_image)  
  
#display image on grayscale  
plt.imshow(gray_image_array, cmap='gray')  
plt.show()
```



The image has now been converted to a grayscale.

**Note:** The 'L' argument converts the image to black and white pixels. Without first using this line of code, the image will not display as a grayscale.

## Additional Resources

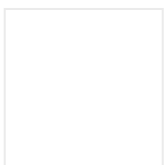
The following tutorials explain how to perform other common tasks in Matplotlib:

[How to Show Gridlines on Matplotlib Plots](#)

[How to Draw Rectangles in Matplotlib](#)

[How to Increase Plot Size in Matplotlib](#)

[How to Set Axis Ticks in Matplotlib](#)



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