

Task 1:

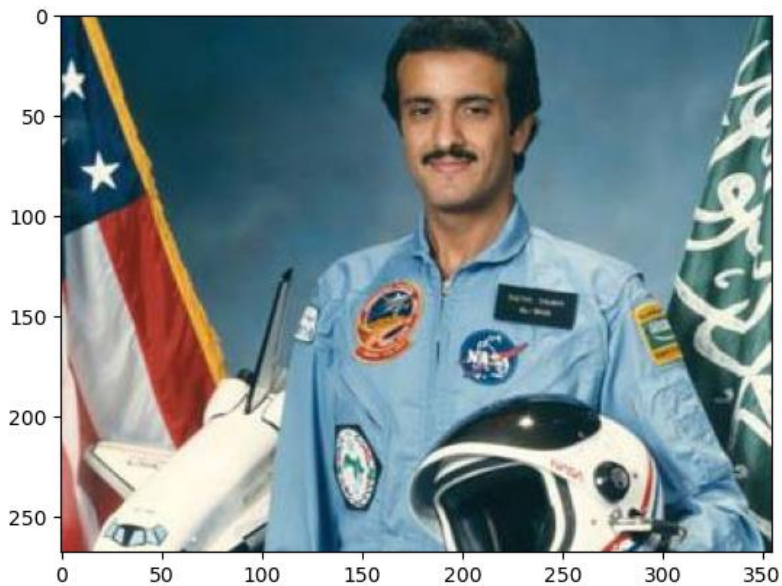
I first loaded the image using imageio and displayed it using matplotlib.

```
from skimage import data, io
from skimage.util import crop
import imageio.v3 as iio
import matplotlib.pyplot as plt
```

```
image = iio.imread(uri="image.jpg")
plt.imshow(image)
```



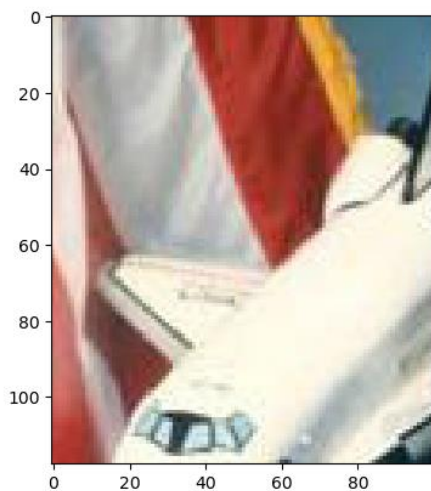
<matplotlib.image.AxesImage at 0x208cbc9d730>



Then, I applied cropping to extract only the shuttle portion.

```
cropped_image = image[150:, 0:100]
plt.imshow(cropped_image)
```

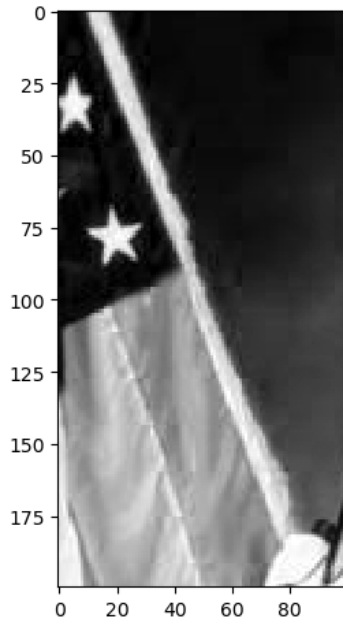
<matplotlib.image.AxesImage at 0x208d1160fb0>



Then, I cropped the top-left region of the image. This portion of the image will be used to separate the Red, Green, and Blue channels. And here I displayed the red channel.

```
cropped_image2 = image[0:200:, 0:100]  
red = cropped_image2[0:200, 0:100, 0]  
io.imshow(red)
```

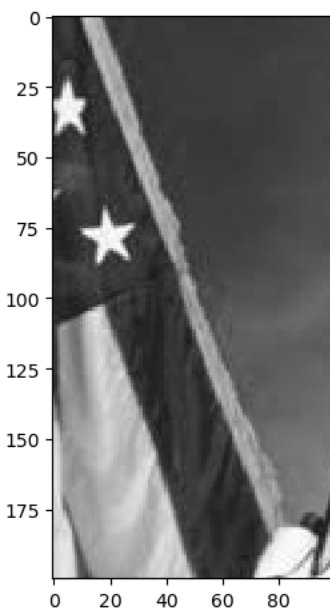
<matplotlib.image.AxesImage at 0x208d15f7ce0>



Then, the green channel.

```
green = cropped_image2[0:200, 0:100, 1]  
io.imshow(green)
```

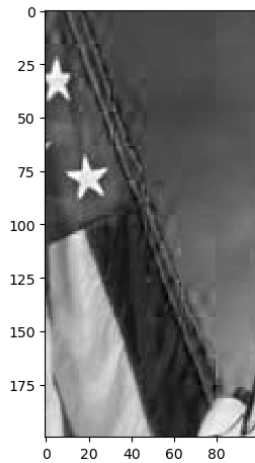
<matplotlib.image.AxesImage at 0x208cc11fe30>



Finally, the blue channel

```
[163]: blue = cropped_image2[0:200, 0:100, 2]
io.imshow(blue)
```

[163]: <matplotlib.image.AxesImage at 0x208d266ed80>



Task 2:

From the first lab, I used the `adjust_gamma` to alter the brightness in the dog image.

```
[164]: from skimage import exposure
import imageio.v3 as iio
import matplotlib.pyplot as plt
dog = iio.imread(uri='DogPic.jpg')
plt.imshow(dog)
```

[164]: <matplotlib.image.AxesImage at 0x208d15f4410>



```
[174]: gamma = exposure.adjust_gamma(dog, 0.30)
plt.imshow(gamma)
```

[174]: <matplotlib.image.AxesImage at 0x208cb0e81a0>

