Grey and 3 channel separation

April 28, 2019

Grey and 3 channel separation

In [4]:
```
import cv2
import numpy as np
import matplotlib.pyplot as plt
```

In [5]:
```
image = cv2.imread("flower.jpeg", cv2.IMREAD_COLOR)
```

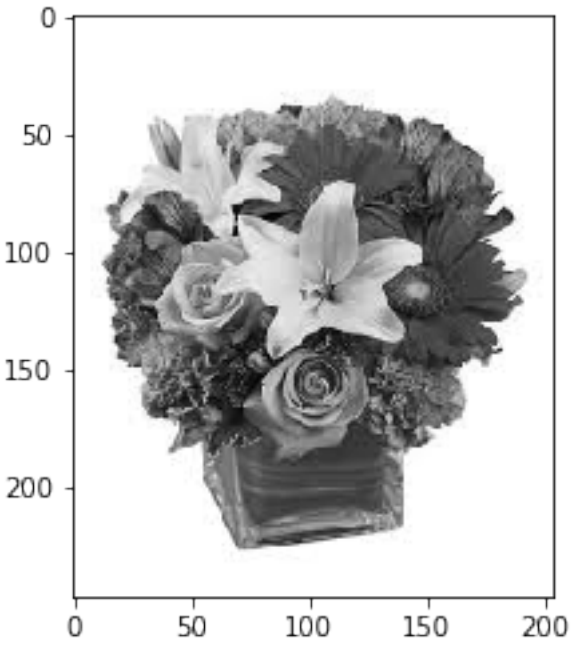
In [6]:
```
image[:, :, 0], image[:, :, 2] = np.array(image[:, :, 2]), np.array(image[:, :, 0])
```

In [8]:
```
shape = image.shape
gray_image = np.zeros(shape[:2])
```

In [10]:
```
for i in range(shape[0]):
    for j in range(shape[1]):
            red   = image[i][j][0]
            green = image[i][j][1]
            blue  = image[i][j][2]
            gray_image[i][j] = 0.3 * red + 0.59 * green + 0.11 * blue
```

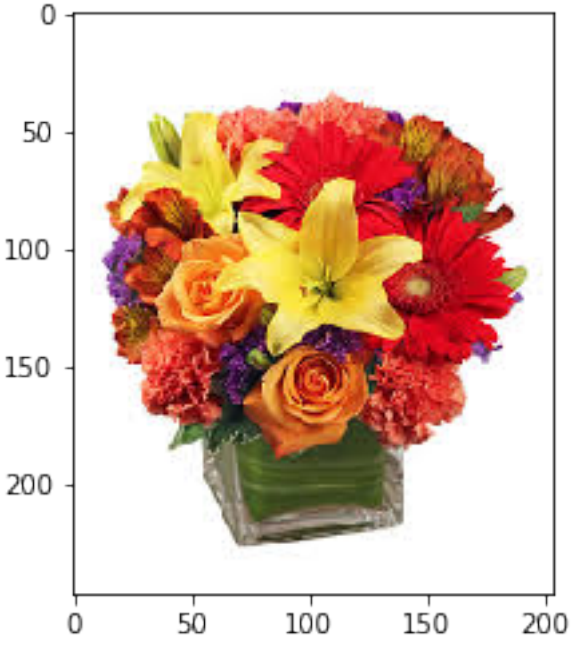
In [11]:
```
plt.imshow(gray_image, cmap='gray')
```

Out[11]:
```
<matplotlib.image.AxesImage at 0x12a8e3e48>
```



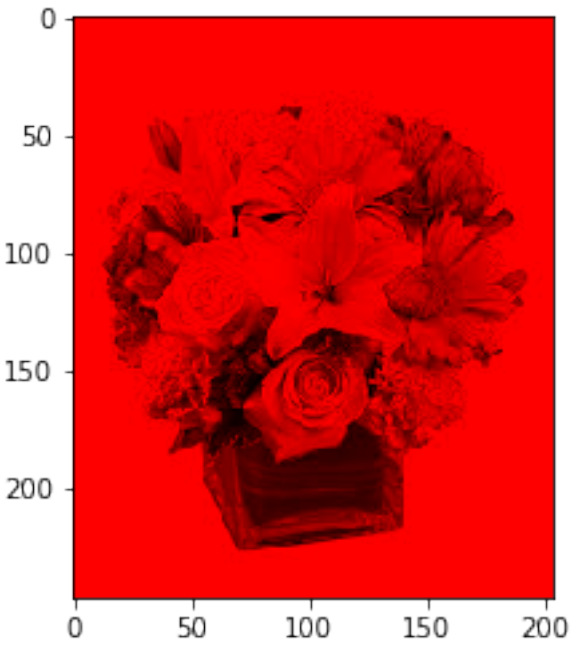
In [12]: plt.imshow(image)

Out[12]: <matplotlib.image.AxesImage at 0x12ab10588>



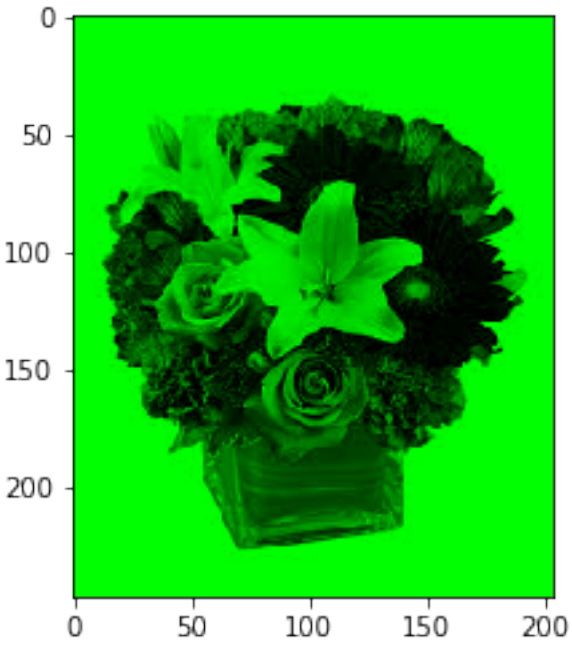
In [14]:
```
red_channel = np.array(image)
red_channel[:, :, 1:3] = 0
plt.imshow(red_channel)
```

Out[14]: <matplotlib.image.AxesImage at 0x12aae2b70>



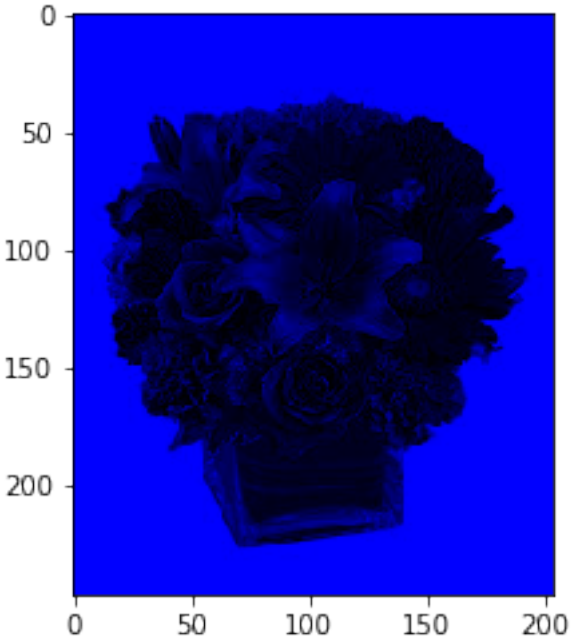
In [16]:
```
green_channel = np.array(image)
green_channel[:, :, 0] = 0
green_channel[:, :, 2] = 0
plt.imshow(green_channel)
```

Out[16]: <matplotlib.image.AxesImage at 0x12a9992e8>



In [17]:
```
blue_channel = np.array(image)
blue_channel[:, :, 0:2] = 0
plt.imshow(blue_channel)
```

Out[17]: <matplotlib.image.AxesImage at 0x12ad253c8>



In [ ]: