03-Numpy-and-Image-Assessment

August 12, 2025

1 NumPy and Image Assessment

COMPLETE THE TASKS IN BOLD BELOW.

TASK: Import NumPy

[1]:
```
```

TASK: Create a 5 by 5 array where every number is a 10

[3]:
```
```

[4]:
```
```

[4]:
```
array([[10., 10., 10., 10., 10.],
       [10., 10., 10., 10., 10.],
       [10., 10., 10., 10., 10.],
       [10., 10., 10., 10., 10.],
       [10., 10., 10., 10., 10.]])
```

TASK: Run the cell below to create an array of random numbers and see if you can figure out how it works.

[9]:
```
# This line sets a "seed" so you get the same random numbers we do
np.random.seed(101)
# This line creates an array of random numbers
arr = np.random.randint(low=0,high=100,size=(5,5))
```

TASK: What are the largest and smalled values in this array?

[10]:
```
```

[10]:
```
95
```

[11]:
```
```

[11]:
```
4
```

TASK: Use PIL and matplotlib to read and display the ../DATA/00-puppy.jpg image.

[18]:

[18]:

TASK: Convert the image to a NumPy Array

[13]:

[13]:
```
(1300, 1950, 3)
```

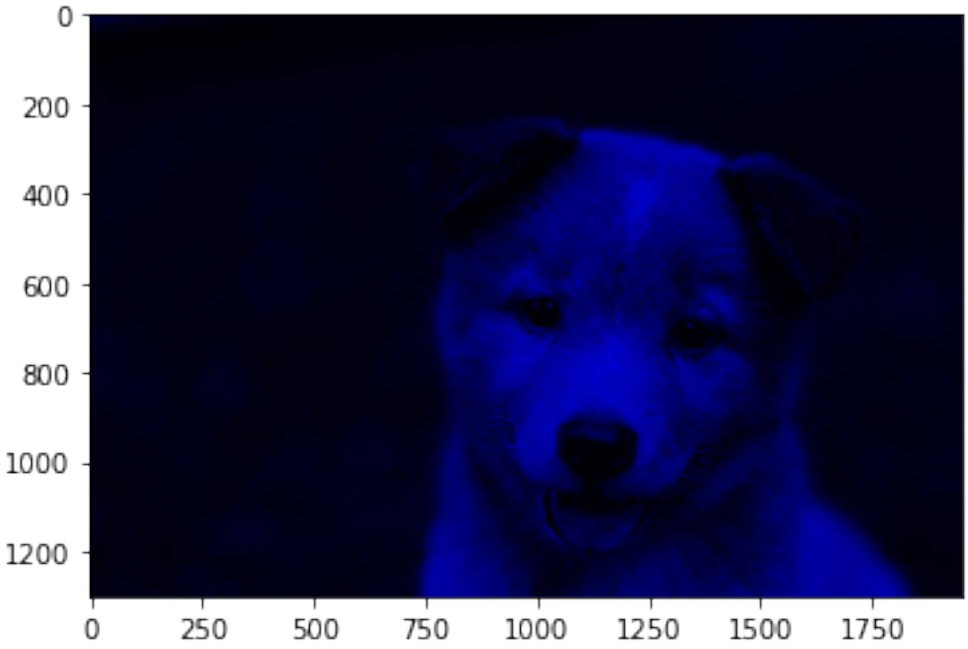
FINAL TASK: Use slicing to set the RED and GREEN channels of the picture to 0, then use imshow() to show the isolated blue channel

[14]:

[16]:

[17]:

[17]:
```
<matplotlib.image.AxesImage at 0x16626fb8f60>
```


0
200
400
600
800
1000
1200
0
250
500
750
1000
1250
1500
1750
