

POST LAB EXERCISE EXP 11

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1.

```
import cv2

# image path
path = r'c:\Users\trupa\OneDrive\Documents\MU.jpg'
# read image
img = cv2.imread(path)
# details
print("Dimensions (rows, cols, channels):", img.shape)
print("Height x Width:", img.shape[0], "x", img.shape[1])
print("Number of Channels:", img.shape[2])
print("Min pixel value in Blue channel:", img[:, :, 0].min())
```

2.

```
import cv2

path = r'c:\Users\trupa\OneDrive\Documents\MU.jpg'
img = cv2.imread(path)
# Add black padding (top, bottom, left, right = 50 pixels)
padded = cv2.copyMakeBorder(img, 50, 50, 50, 50, cv2.BORDER_CONSTANT, value=[0,0,0])
cv2.imshow("Original", img)
cv2.imshow("Padded", padded)
cv2.waitKey(0)
cv2.destroyAllWindows()
```

3.

```
import cv2
import matplotlib.pyplot as plt

path = r'c:\Users\trupa\OneDrive\Documents\MU.jpg'
img = cv2.imread(path)
# OpenCV reads in BGR format
B, G, R = cv2.split(img)
```

```
plt.figure(figsize=(10,5))
plt.subplot(1,3,1)
plt.imshow(R, cmap='Reds')
plt.title("Red Channel")
plt.axis("off")
plt.subplot(1,3,2)
plt.imshow(G, cmap='Greens')
plt.title("Green Channel")
plt.axis("off")
plt.subplot(1,3,3)
plt.imshow(B, cmap='Blues')
plt.title("Blue Channel")
plt.axis("off")
plt.show()
```