

DSA0210 Computer Vision with Open CV LAB Experiments

Experiment- 4: Scaling an image to its Bigger and Smaller sizes.

PROGRAM:

```
import cv2

import matplotlib.pyplot as plt

# Read the input image
img = cv2.imread(r"D:\New Folder\input.jpeg")

# Check if image is loaded
if img is None:
    raise FileNotFoundError("Image not found. Check the file path.")

# Get original dimensions
height, width = img.shape[:2]

# Scale to bigger size (2x)
bigger = cv2.resize(img, (width * 2, height * 2),
                    interpolation=cv2.INTER_LINEAR)

# Scale to smaller size (0.5x)
smaller = cv2.resize(img, (width // 2, height // 2),
                    interpolation=cv2.INTER_AREA)

# Display images
plt.figure(figsize=(10, 4))

plt.subplot(1, 3, 1)
```

```
plt.imshow(cv2.cvtColor(img, cv2.COLOR_BGR2RGB))
```

```
plt.title("Original Image")
```

```
plt.axis("off")
```

```
plt.subplot(1, 3, 2)
```

```
plt.imshow(cv2.cvtColor(bigger, cv2.COLOR_BGR2RGB))
```

```
plt.title("Bigger Image")
```

```
plt.axis("off")
```

```
plt.subplot(1, 3, 3)
```

```
plt.imshow(cv2.cvtColor(smaller, cv2.COLOR_BGR2RGB))
```

```
plt.title("Smaller Image")
```

```
plt.axis("off")
```

```
plt.tight_layout()
```

```
plt.show()
```

OUTPUT:

