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#Import the necessary libraries
import cv2
import matplotlib.pyplot as plt
import numpy as np

# Load the image
image = cv2.imread('/content/cat1.jpeg')

#Plot the original image
plt.subplot(1, 2, 1)
plt.title("Original")
plt.imshow(image)

# Create the sharpening kernel
kernel = np.array([[0, -1, 0], [-1, 5, -1], [0, -1, 0]])

# Sharpen the image
sharpened_image = cv2.filter2D(image, -1, kernel)

#Save the image
cv2.imwrite('sharpened_image.jpg', sharpened_image)

#Plot the sharpened image
plt.subplot(1, 2, 2)
plt.title("Sharpening")
plt.imshow(sharpened_image)
plt.show()
```

