

```
import cv2 as cv
import numpy as np
import matplotlib.pyplot as plt
from google.colab import drive
drive.mount("/content/drive")

# Read the image in color mode
image = cv.imread('/content/drive/MyDrive/images/daisy.jpg', cv.IMREAD_COLOR)

assert image is not None # Check if the image is loaded successfully

# Define the initial rectangle parameters
# You need to adjust these for your specific image
rect = (50, 50, 450, 290) # Example rectangle (x, y, width, height)

# Initialize mask, bgdModel, fgdModel for GrabCut
mask = np.zeros(image.shape[:2], np.uint8)
bgdModel = np.zeros((1, 65), np.float64)
fgdModel = np.zeros((1, 65), np.float64)

# Run GrabCut
cv.grabCut(image, mask, rect, bgdModel, fgdModel, 5, cv.GC_INIT_WITH_RECT)

# Modify mask so that all 0 and 2 pixels are converted to the background (0), and all 1 and 3 pixels to foreground (1)
mask2 = np.where((mask == 2)|(mask == 0), 0, 1).astype('uint8')

# Create the segmented image by multiplying the mask with the input image
segmented = image * mask2[:, :, np.newaxis]

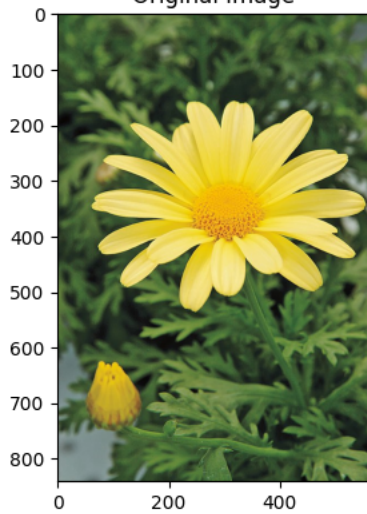
# Create a blurred background
blurred_background = cv.GaussianBlur(image, (21, 21), 0)

# Create the final enhanced image by combining the blurred background with the segmented foreground
enhanced_image = blurred_background * (1 - mask2[:, :, np.newaxis]) + segmented

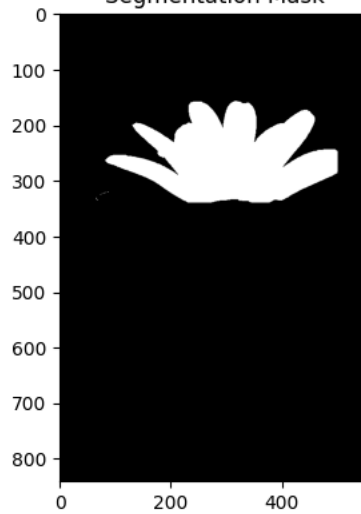
# Display the results
plt.figure(figsize=(10, 10))
plt.subplot(221), plt.imshow(cv.cvtColor(image, cv.COLOR_BGR2RGB)), plt.title('Original Image')
plt.subplot(222), plt.imshow(mask2, 'gray'), plt.title('Segmentation Mask')
plt.subplot(223), plt.imshow(cv.cvtColor(segmented, cv.COLOR_BGR2RGB)), plt.title('Foreground Image')
plt.subplot(224), plt.imshow(cv.cvtColor(enhanced_image, cv.COLOR_BGR2RGB)), plt.title('Enhanced Image with Blurred Background')
plt.show()
```

Drive already mounted at /content/drive; to attempt to forcibly remount, call `drive.mount("/content/drive", force_remount=True)`.

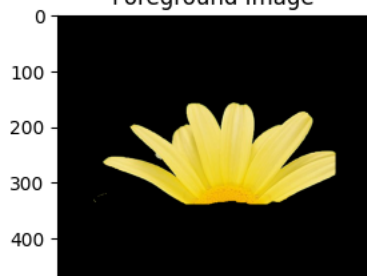
Original Image



Segmentation Mask



Foreground Image



Enhanced Image with Blurred Background

