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import cv2
import numpy as np
from google.colab.patches import cv2_imshow

# Load the image
image = cv2.imread('/content/siv.png')

# Create a mask initialized with zeros
mask = np.zeros(image.shape[:2], np.uint8)

# Define the rectangle containing the object to segment (you can
adjust this rectangle)
rect = (50, 50, image.shape[1]-50, image.shape[0]-50) # (x, y, width,
height)

# Allocate space for background and foreground models
bgdModel = np.zeros((1, 65), np.float64)
fgdModel = np.zeros((1, 65), np.float64)

# Apply GrabCut algorithm
cv2.grabCut(image, mask, rect, bgdModel, fgdModel, 5,
cv2.GC_INIT_WITH_RECT)

# Modify the mask: convert probable foreground to definite foreground
mask2 = np.where((mask == 2) | (mask == 0), 0, 1).astype('uint8')

# Multiply the original image with the mask to get the segmented
foreground
segmented_image = image * mask2[:, :, np.newaxis]

# Resize images for display
image_resized = cv2.resize(image, (300, 300)) # Resize to 300x300
pixels
segmented_resized = cv2.resize(segmented_image, (300, 300))

# Display the images using cv2_imshow
cv2_imshow(image_resized)
cv2_imshow(segmented_resized)

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