!pip install opencv-python pillow matplotlib

import cv2

import numpy as np

from google.colab import files

from PIL import Image

import matplotlib.pyplot as plt

uploaded = files.upload()

image\_path = list(uploaded.keys())[0]

image = Image.open(image\_path)

image\_cv = np.array(image)

image\_cv = cv2.cvtColor(image\_cv, cv2.COLOR\_RGB2BGR)

Tx = 100

Ty = 50

translation\_matrix = np.float32([[1, 0, Tx], [0, 1, Ty]])

rows, cols, \_ = image\_cv.shape

translated\_image = cv2.warpAffine(image\_cv, translation\_matrix, (cols, rows))

translated\_image\_rgb = cv2.cvtColor(translated\_image, cv2.COLOR\_BGR2RGB)

plt.figure(figsize=(10, 5))

plt.subplot(1, 2, 1)

plt.imshow(image)

plt.title("Original Image")

plt.axis('off')

plt.subplot(1, 2, 2)

plt.imshow(translated\_image\_rgb)

plt.title("Translated Image")

plt.axis('off')

plt.show()

cv2.imwrite("translated\_image.jpg", translated\_image)

files.download("translated\_image.jpg")

