

# Image translation

## Image translation

1. Implementation principle
2. Implementation effect
3. Implementation code

## 1. Implementation principle

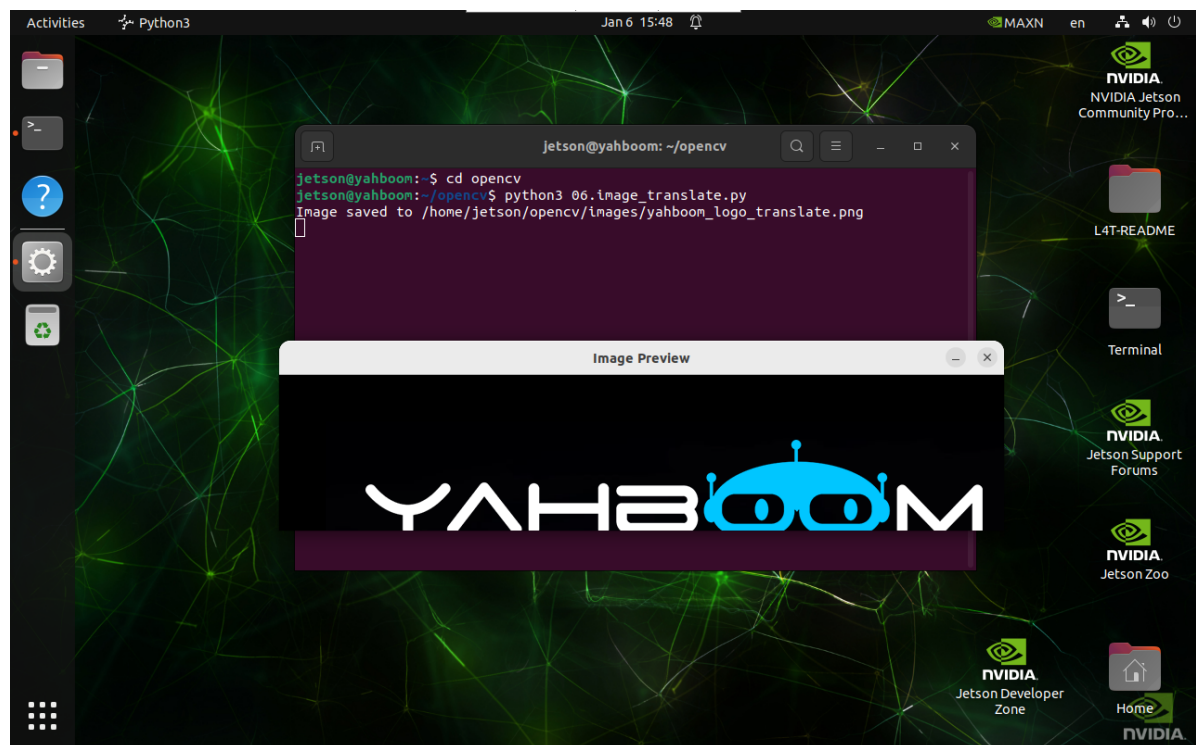
Use `cv2.warpAffine()` function to perform affine transformation (translation, rotation, scaling and shearing) on the image.

## 2. Implementation effect

```
cd ~/opencv
```

```
python3 06.image_translate.py
```

Note: Select the image and press `q` to exit the program!



## 3. Implementation code

```
import cv2
import numpy as np

def translate_image(input_path, output_path, tx, ty):
    image = cv2.imread(input_path)
    if image is None:
        print("Error: Unable to open image file.")
```

```
        return
    M = np.float32([[1, 0, tx], [0, 1, ty]])
    shifted_image = cv2.warpAffine(image, M, (image.shape[1], image.shape[0]))
    if cv2.imwrite(output_path, shifted_image):
        print(f"Image saved to {output_path}")
        cv2.imshow('Image Preview', cv2.imread(output_path))
        cv2.waitKey(0)
        cv2.destroyAllWindows()
    else:
        print("Error: Unable to save image file.")

translate_image('/home/jetson/opencv/images/yahboom_logo.png', \
                '/home/jetson/opencv/images/yahboom_logo_translate.png', \
                50, 50)
```