

[#https://github.com/SSHAHZAIBS/ALL-DIP-LABS-](https://github.com/SSHAHZAIBS/ALL-DIP-LABS-)

```
import cv2

image = cv2.imread('ccr.jpg')
rotated_image = cv2.rotate(image, cv2.ROTATE_90_CLOCKWISE)
orb = cv2.ORB_create()

keypoints, descriptors = orb.detectAndCompute(image, None)
rotated_keypoints, rotated_descriptors =
orb.detectAndCompute(rotated_image, None)

image_with_keypoints = cv2.drawKeypoints(image, keypoints, None,
color=(0, 255, 0))
rotated_image_with_keypoints = cv2.drawKeypoints(rotated_image,
rotated_keypoints, None, color=(0, 255, 0))

cv2.imshow('Original Image with Keypoints', image_with_keypoints)
cv2.imshow('Rotated Image with Keypoints',
rotated_image_with_keypoints)

cv2.waitKey(0)
cv2.destroyAllWindows()

import cv2
import matplotlib.pyplot as plt

image_path = 'test22.png'
image = cv2.imread(image_path, cv2.IMREAD_GRAYSCALE)

# Initialize ORB detector
orb = cv2.ORB_create()

keypoints, descriptors = orb.detectAndCompute(image, None)

keypoints_image = cv2.drawKeypoints(image, keypoints, None, color=(0,
255, 0))

plt.figure(figsize=(10, 6))
plt.imshow(keypoints_image, cmap='gray')
plt.title('ORB Keypoints')
plt.show()
```

