

```
# Import required libraries
import cv2
from google.colab.patches import cv2_imshow
from google.colab import files
import numpy as np

# Upload image
uploaded = files.upload()

# Read the image
image_path = next(iter(uploaded))
image = cv2.imdecode(np.frombuffer(uploaded[image_path], np.uint8), cv2.IMREAD_COLOR)

# Display original image
print("Original Image:")
cv2_imshow(image)


# Get image dimensions
(h, w) = image.shape[:2]
center = (w // 2, h // 2)

# Rotate 90 degrees clockwise
matrix_clockwise = cv2.getRotationMatrix2D(center, -90, 1.0)
rotated_clockwise = cv2.warpAffine(image, matrix_clockwise, (w, h))

# Rotate 90 degrees counter-clockwise
matrix_counter = cv2.getRotationMatrix2D(center, 90, 1.0)
rotated_counter = cv2.warpAffine(image, matrix_counter, (w, h))

# Show rotated images
print("Rotated 90 Degrees Clockwise:")
cv2_imshow(rotated_clockwise)

print("Rotated 90 Degrees Counter-Clockwise:")
cv2_imshow(rotated_counter)
```

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Saving i7.jpg to i7.jpg

Original Image:



Rotated 90 Degrees Clockwise:

