

## Transformation\_QUE3

October 19, 2023

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[54]: import cv2
import matplotlib.pyplot as plt

image=cv2.imread("purple.jpeg")
resized_image=cv2.resize(image,(200,200))
rotated_image=cv2.rotate(image,cv2.ROTATE_90_CLOCKWISE)
rotated2_image=cv2.rotate(rotated_image,cv2.ROTATE_90_CLOCKWISE)
flipped_horizontal=cv2.flip(image,1)
flipped_vertical=cv2.flip(image,0)
gray_scale=cv2.cvtColor(image,cv2.COLOR_BGR2GRAY)
blurred_image=cv2.GaussianBlur(image,(85,85),0)

plt.figure(figsize=(12,8))

plt.subplot(241)
plt.title("Original Image")
plt.imshow(cv2.cvtColor(rotated_image,cv2.COLOR_BGR2RGB))
plt.axis("off")

plt.subplot(242)
plt.title("Resized Image")
plt.imshow(cv2.cvtColor(resized_image,cv2.COLOR_BGR2RGB))
plt.axis("off")

plt.subplot(243)
plt.title("Rotated Image (180) ")
plt.imshow(cv2.cvtColor(rotated2_image,cv2.COLOR_BGR2RGB))
plt.axis("off")

plt.subplot(244)
plt.title("Horizontal_flipped Image")
plt.imshow(cv2.cvtColor(flipped_horizontal,cv2.COLOR_BGR2RGB))
plt.axis("off")

plt.subplot(245)
plt.title("Vertical_flipped Image")
plt.imshow(cv2.cvtColor(flipped_vertical,cv2.COLOR_BGR2RGB))
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plt.axis("off")

plt.subplot(246)
plt.title("Gray_scale Image")
plt.imshow(gray_scale,cmap="gray")
plt.axis("off")

plt.subplot(247)
plt.title("Blurred Image")
plt.imshow(blurred_image)
plt.axis("off")
plt.show()
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