# **Basic Image transforms, overlays and stitching.**

# TASK 1

1. Create a Python program that superimposes an image on another.
2. Load an image and convert to grayscale.
3. Use cv2.resize() to resize image to 400x400 pixels.
4. Research the following functions available in the **imutils** library:
   1. imutils.rotate()
   2. imutils.rotate\_bound()
5. Use each of the above functions to rotate the image by 30 degrees.

1. Show both images. What is the difference between the two results?

# TASK 2

1. Research Python OPENCV image functions to add image matrices and superimpose the original and rotated images (used in Task 1) on each other.
2. Modify the algorithm in 7. to allow the user to input a % strength of Image A in relation to Image B. This should determine how much of Image A is displayed in relation to Image B. (e.g. 25% Image A and 75% Image B)

HINT: Research cv2.addWeighted()

# TASK3

1. Modify program in Task 1 to allow loading of two different images.

Note: Resize the second image to be equal to the first image.

# TASK 4

1. Load two images of your choice.
2. Resize the image with the larger vertical size to be equal to the image with the smaller vertical size.
3. Stitch the images together, with Image A on the left and Image B on the right.
4. Show and save the result image.