COMP9517

Lab 2, T2 2019 – Part 2

Task 1. Test rotational invariance of SIFT features

1. Rotate the sample image in increments of 45 degrees, from 0 to 180 degrees.
2. For each rotated image, compute SIFT features and draw keypoints on the image.
3. For each rotated image, match its SIFT descriptors with those from the original image based on the nearest neighbour distance ratio method. Draw the matches between the two images.

Task 2. Test scale invariance of SIFT features

1. Upscale the sample image 4 times by a scale factor of 1.05.
2. Compute SIFT features for each upscaled image. Draw the keypoints on the images.
3. For each upscaled image, match its SIFT descriptors with those from the original image based on the nearest neighbour distance ratio method. Draw the matches between the two images.

References:

https://opencv-python-tutroals.readthedocs.io/en/latest/py_tutorials/py_feature2d/py_matcher/py_matcher.html