EN2550 2018: Assignment 03

October 25, 2018

Please note that you must implement the key Python functions and scripts on your own. If you copy from the Internet or others, you will not get the learning experience intended through this assignment.

1. Write a function to Gaussian smooth an image. The function must take the window size (e.g., 5×5), and σ as arguments.
2. Implement a function that computer the Difference of Gaussian (DoG) operator using the function that you wore above.
3. Detect features on the Graffiti images `http://www.robots.ox.ac.uk/~vgg/data/data-aff.html` as scale-space extrema.
4. Plot your detections on the image with circles of appropriate scale.
5. Compare your detections with the Harris corners in the OpenCV.

Upload a four-page report named as your_index_a03.pdf. The report must include important parts of code, image results, and comparison of results . The interpretation of results and the discussion are important in the report. Extra-page penalty is 2 marks per page.