Digital Forensics Lab (Spring 2020)

Assignment #2

Points: 50

Submission Deadline: 17-01-2020 (4:30 PM)

Embedding watermark image into a career image: Suppose a career image is given with dimensions W x H. You need to embed a watermark image of dimension w x h such that W>w and H>h.

Embed the watermark image in the original image by designing a new spatial domain algorithm (not the usual LSB modification) that will ensure that the visual quality of the career image after watermarking remains good in terms of PSNR. No inbuilt function of the image processing library can be used for the embedding process. You can apply any heuristic to embed the image. Use a secret key (8 letter word) that will be used to select the positions of the pixels. In the decryption process, the same key will be used to extract the watermark image. The embedding / decryption algorithms are open and the key is secret. Write separate programs for embedding and decryption.

Submission Guidelines:

1. Individual submission only. Plagiarism check will be done. In case, >15% match in the code is found with anyone else, both will be awarded equal amount of penalty.
2. You can discuss amongst yourselves, but final submission has to be an individual's implementation. The code will be tested in the lab.