Digital Image Processing (2022)

Homework

{Contrast Enhancement + Sharpness Enhancement + Denoise}

Deadline: 111.10.31

Contrast Enhancement (30%)

Using C++ or C, improve the contrast of the given input image. You should output images with 2 different degrees of modification.

[Input]   input1.bmp
[Output]   output1_1.bmp   output1_2.bmp

Sharpness Enhancement (30%)

Using C++ or C, perform sharpness enhancement on the given image. You should output images with 2 different degrees of modification.
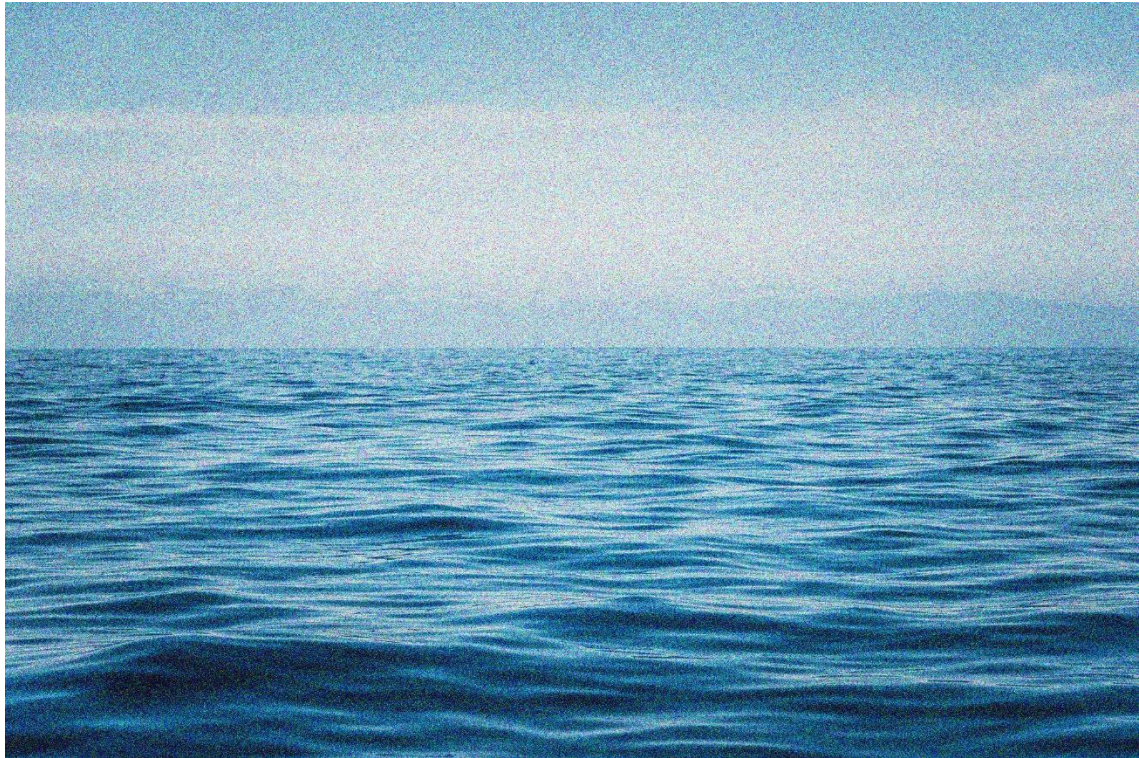

[Input]   input2.bmp
[Output]   output2_1.bmp
            output2_2.bmp

Denoise (40%)

Using C++ or C, remove the noise in the given input image. You should output images with 2 different degrees of modification.

[Input]   input3.bmp
[Output]   output3_1.bmp
            output3_2.bmp

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Homework Rules and Grading Policy

Homework will be graded by:

    1. Correctness (70%)

    2. Report (30%)

- Explain your algorithm and do some discussion in at most 4 pages. (A4)
- Different degrees of modification have to be differentiable.
- You should provide comparison between distinct levels of modifications for each type of enhancement.

Upload:

    [web]   E3

    [File Name] hw2_StudentID.zip (ex: hw2_123456789.zip)

- report in the format of .pdf.
- C, C++ codes with comments.
- ReadMe.txt file which describes how to run your program.
- all output images.

Remind:

    Deadline

    If you have a late submission by 1 to 7 days, you will only get 70% of the score.

    We DO NOT accept any late submission after 7 days after the deadline