DIP Assignment-04 – Report

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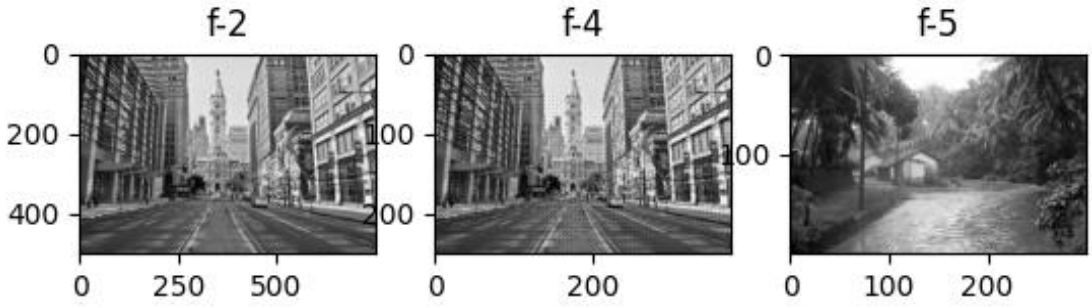
MTech-AI

Sol_01 -

1a. here is the output for downsampled img by factor k (2,4,5).

Img downsampled by selecting every kth pixel.

By f-5 no idea why looks like this.



1b. Here is the output for downsampled smooth img (by gaussians filter).

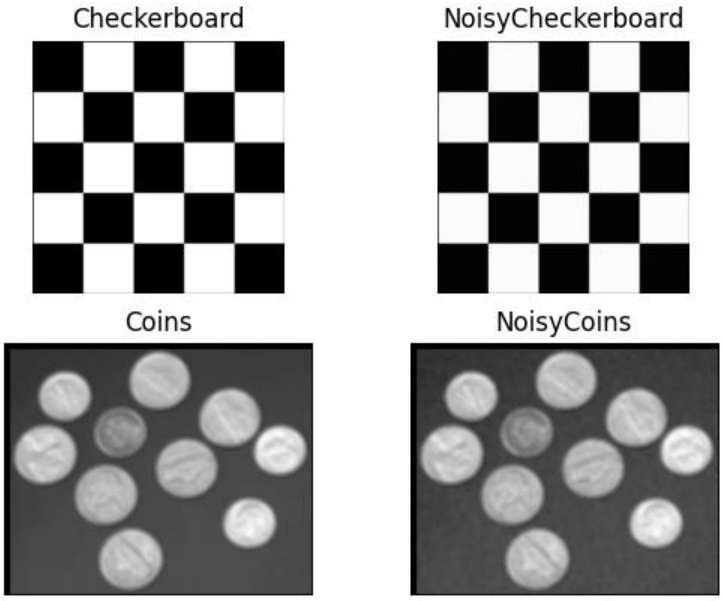
I tried with different sigma, but not considerable change was observed.

This output for sigma = 2, window size = 5 down sampling factor = 5

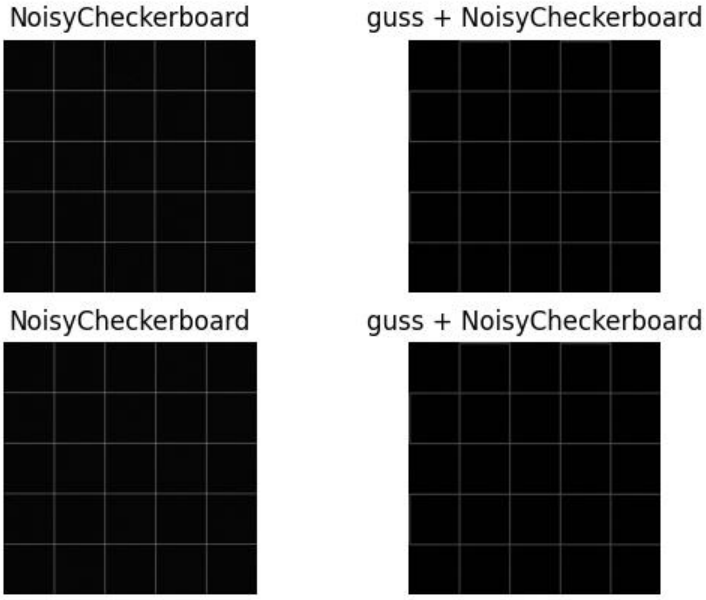
minimum mse : 13173.8394 for sigma: 2 (I search in range of 1 to 5 and select sigma with least mse).

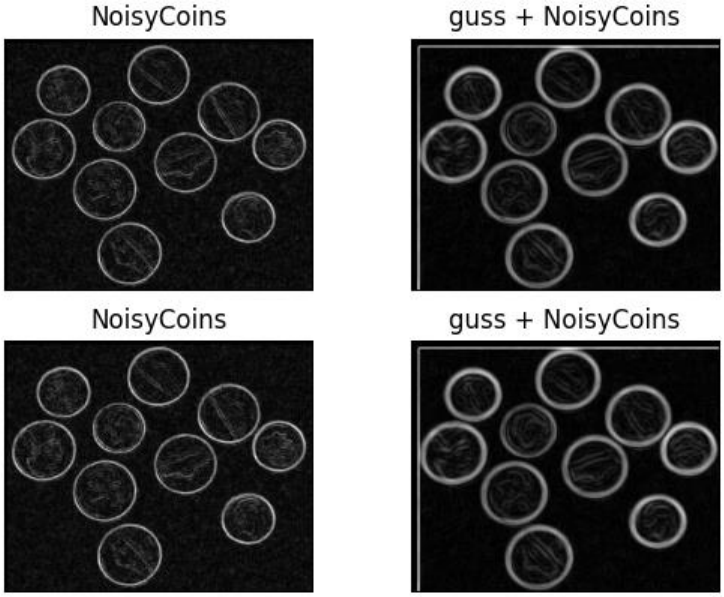
Sol_02:

2a. output of Gaussian filter...

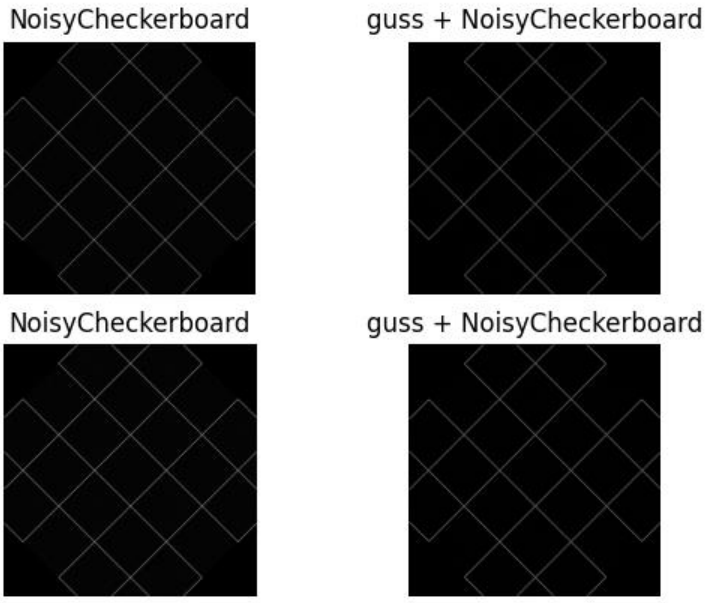


2b. the upper part of the output for Sobel operator and lower part is for Prewitt operator...



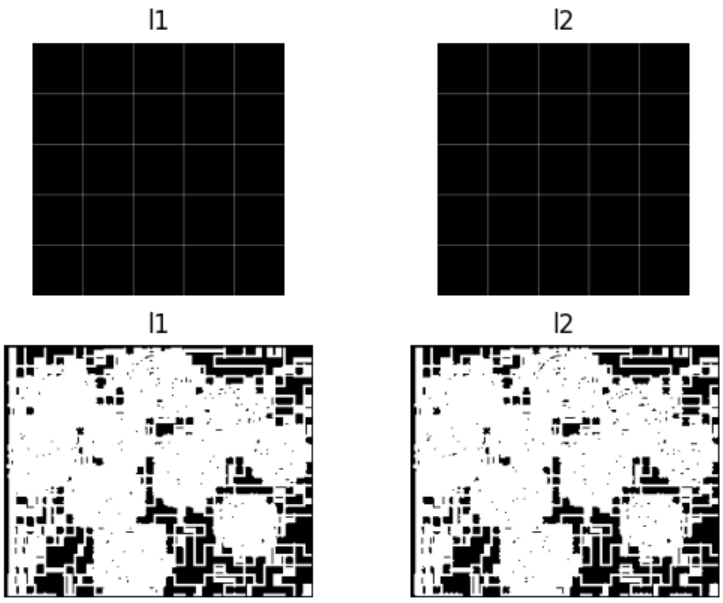


2c. Yes, here images rotated by 45 degree. Each operator detects the edges.



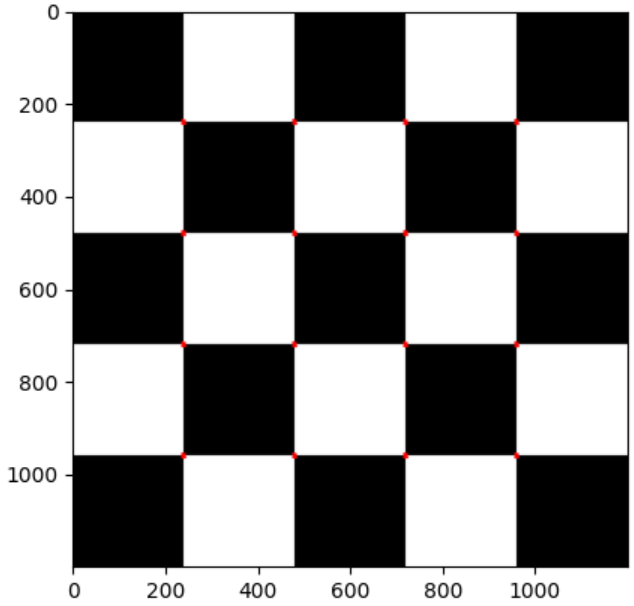
2d. output for Laplacian operator both (first order and 2nd order).

Upper part for checkerboard and lower part for Coins img.



Sol_03

3a. Harris corner detector...



3b. Harris corner detector for modified img.