Computer Vision — Homework 8

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1 Gaussian noise

(1) Gaussian noise with amplitude of 10.

SNR=13.61286

3x3 Box Filter, SNR=17.74024

5x5 Box Filter, SNR=14.86497

3x3 Median Filter, SNR=17.67332

5x5 Median Filter, SNR=15.99259

Opening then closing, SNR=13.22848

Closing then opening, SNR=13.60221

(2) Gaussian noise with amplitude of 30.

SNR=4.05832

3x3 Box Filter, SNR=12.52711

5x5 Box Filter, SNR=13.29495

3x3 Median Filter, SNR=11.08009

5x5 Median Filter, SNR=12.89108

Opening then closing, SNR=11.12723

Closing then opening, SNR=11.18418

2 Salt and Pepper noise

(1) Salt and Pepper noise with probability of 0.1.

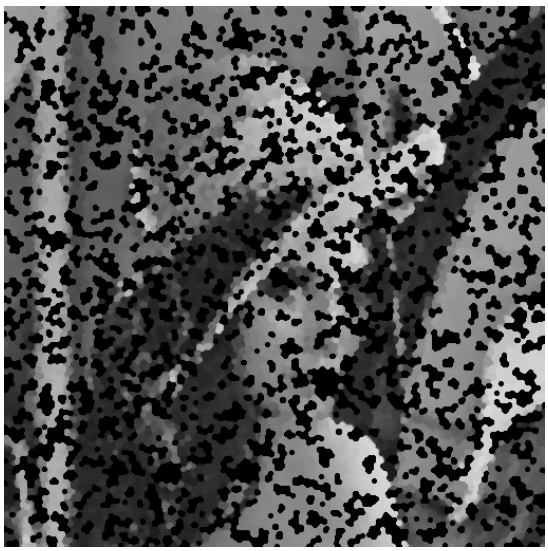
SNR=-1.88286

3x3 Box Filter, SNR=6.52512

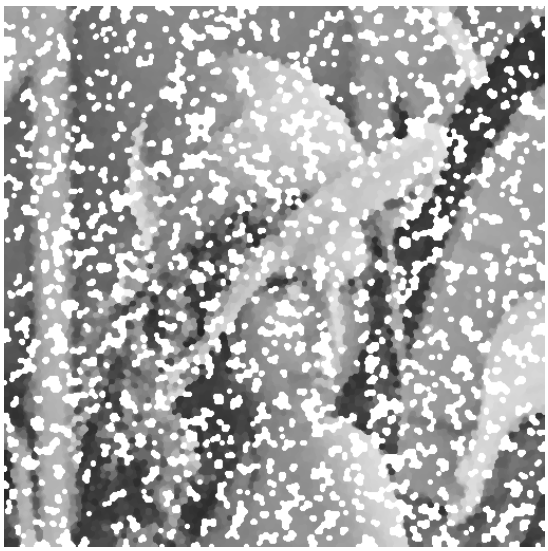
5x5 Box Filter, SNR=8.71193

3x3 Median Filter, SNR=15.286

5x5 Median Filter, SNR=15.82128



Opening then closing, SNR=-2.11953



Closing then opening, SNR=-1.76772

(2) Salt and Pepper noise with probability of 0.05.

SNR=1.03511

3x3 Box Filter, SNR=9.55817

5x5 Box Filter, SNR=11.21415

3x3 Median Filter, SNR=19.29178

5x5 Median Filter, SNR=16.37596

Opening then closing, SNR=5.73884

Closing then opening, SNR=5.89781