R10521516 廖浚評　　　　HW8

Python OpenCV

Snr test = 15.673697077

a.

SNR of g10 =13.612

SNR of g30 = 4.061

snr test: 15.673697071703499
done gauss
done salt pepper
done gauss box
done sp box
done gauss median
done sp median
done closeopen
done open close
13.612192679775825
4.061481404141023
-2.0969795511830838
0.9779490804129275
13.608612952909775
9.902731927141852
8.814608090554412
8.37569761021811
5.720516389087241
8.121056627829493
6.621652810273414
7.781754703708355
11.395040653234492
8.938813475200082
8.265373912294912
7.91265581580975
10.541703417707652
11.50988464990234
8.099919044642206
8.133952951731299
13.262104929777625
11.137956976978407
-2.113455723909852
5.746030469248842
13.634810433284471
11.187202417384771
-2.4894242615074207
5.48143307982097

b.

SNR of sp01 =-2.097

SNR of sp005 = 0.978

c. BOX Filter

SNR of g10box3 = 13.6086

SNR of g30box3 = 9.9027

SNR of g10box5 = 8.8146

SNR of g30box5 = 8.37569

SNR of sp01box3 =5.7205163

SNR of sp005box3 = 8.121

SNR of sp01box5 = 6.6216

SNR of sp005box5 = 7.7818

d. Median Filter

SNR of g10median3 = 11.39504

SNR of g30median3 = 8.9388

SNR of g10median5 = 8.265
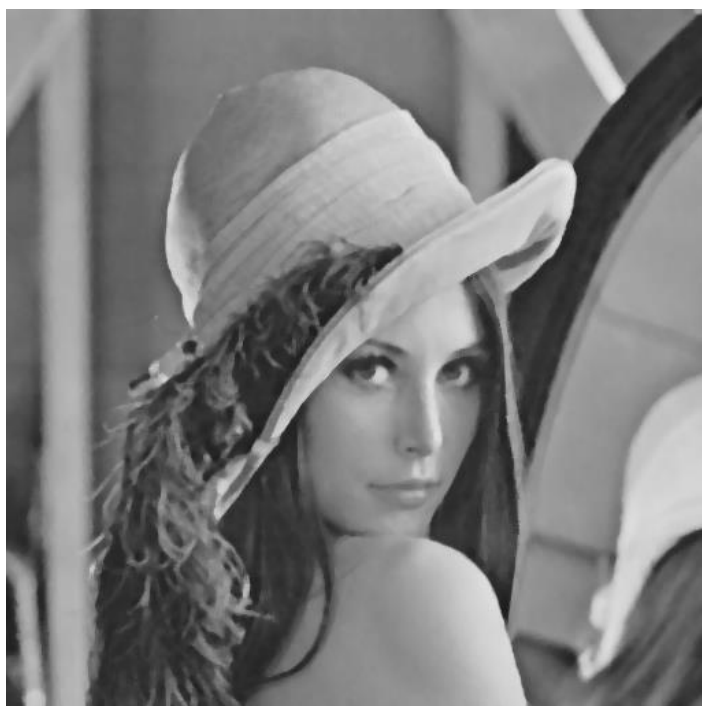

SNR g30median5 = 7.9127

SNR of sp01median3 = 10.5417

SNR of sp005median3 = 11.5098

SNR of sp01median5 = 8.09992

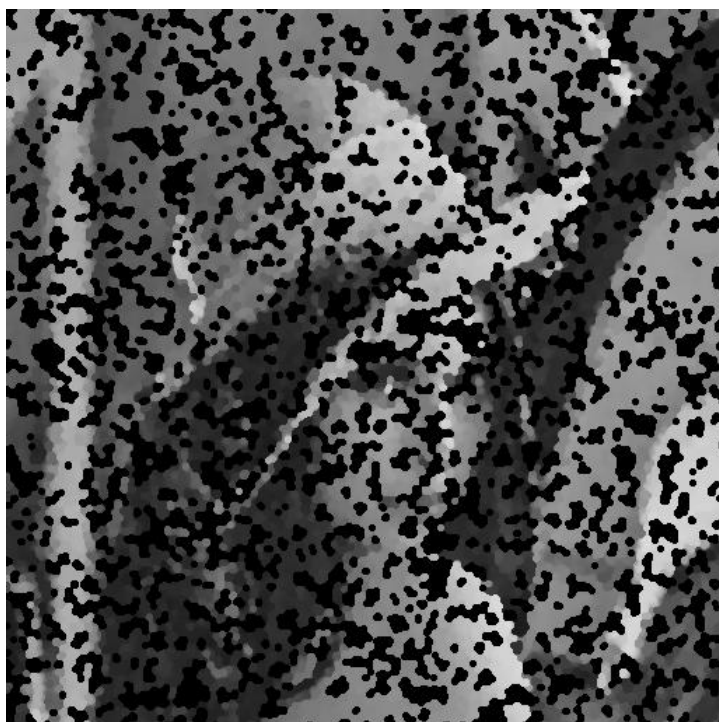SNR of sp005median5 = 8.1334

e. openclose closeopen

SNR of g10co = 13.2621

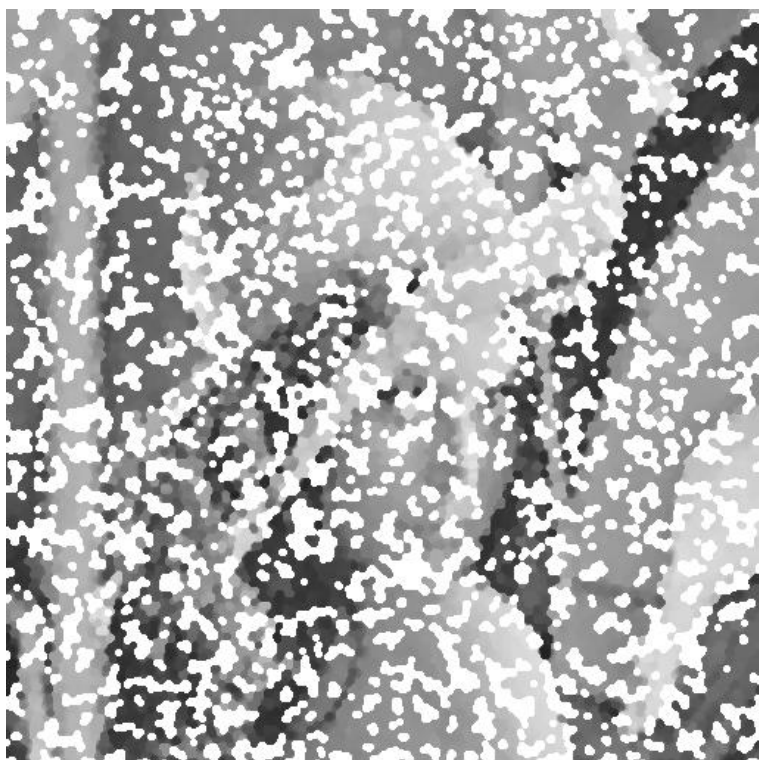
SNR of g30co = 11.138

SNR of sp01co = -2.1135

SNR of sp005co = 5.746

SNR of g10oc = 13.6348

SNR of g30oc = 11.1872

SNR of sp01oc = -2.489424

SNR of sp005oc = 5.48143