
```
% MD.Haneefa
% 21A91A0484
clc;
clear;
close all;
a = imread('cameraman.tif');
b = im2double(a);
c = imnoise(b,'salt & pepper');
psnr_noise= psnr(b,c);
[m,n] = size(b);
d_max = zeros(m,n);
d_min = zeros(m,n);
d_median = zeros(m,n);
for i = 2:m-1
for j = 2:n-1
d_max(i,j) = max(max(c(i-1:i+1,j-1:j+1)));
d_min(i,j) = min(min(c(i-1:i+1,j-1:j+1)));
d_median(i,j) = median(median(c(i-1:i+1,j-1:j+1)));
end
end
subplot(511);imshow(b);title('original image');
subplot(512);imshow(c);title('image with salt & pepper noise');
subplot(513);imshow(d_max);title('max filter output');
subplot(514);imshow(d_min);title('min filter output');
subplot(515);imshow(d_median);title('median filter output');
%psnr calculation
psnr_median = psnr(b,d_median);
psnr_max = psnr(b,d_max);
psnr_min = psnr(b,d_min);
psnr_median
psnr_max
psnr_min

psnr_median =

    21.7237

psnr_max =

    10.5564

psnr_min =

    11.4430
```

original image



image with salt & pepper noise



max filter output



min filter output



median filter output



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