Visual Data

06/11/2019

```
A = imread('C:\Users\student\Downloads\grayscakeimages\womI.bmp');
B = imread('C:\Users\student\Downloads\grayscakeimages\moonI.bmp');
C = imread('C:\Users\student\Downloads\grayscakeimages\fce4.bmp');
D = imread('C:\Users\student\Downloads\grayscakeimages\7i.bmp');

imshow(A)
figure;
imhist(A)
K = imadjust(A,[0.3 0.7],[]);
figure
imshow(K)
```

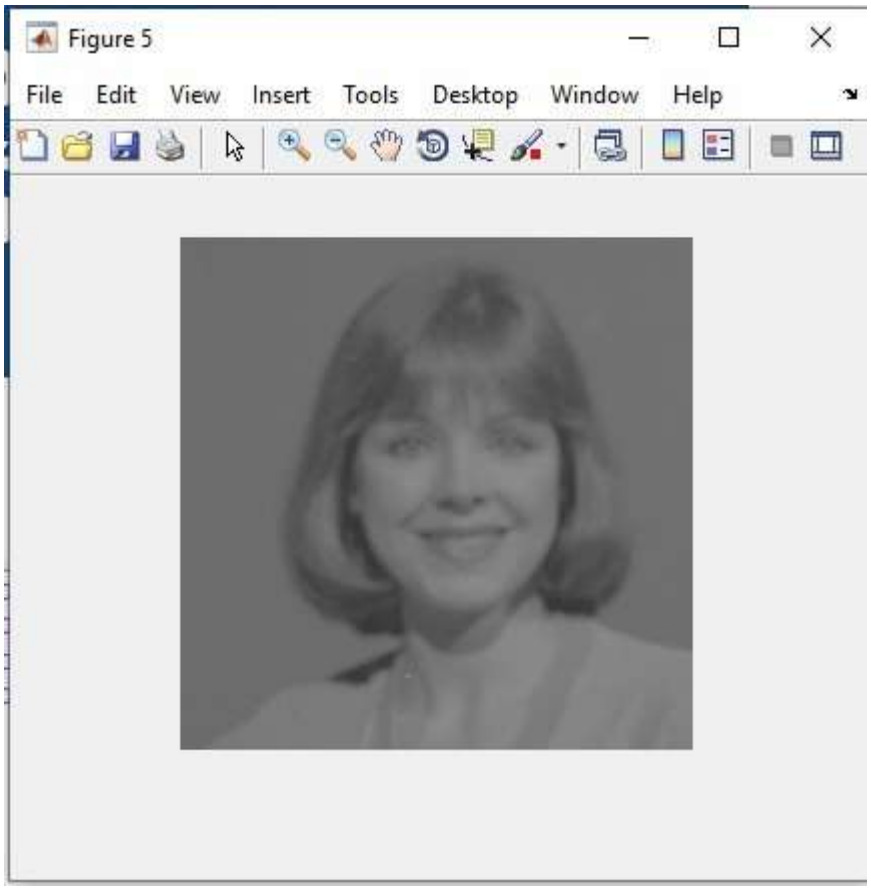


fig 1. before adjusting

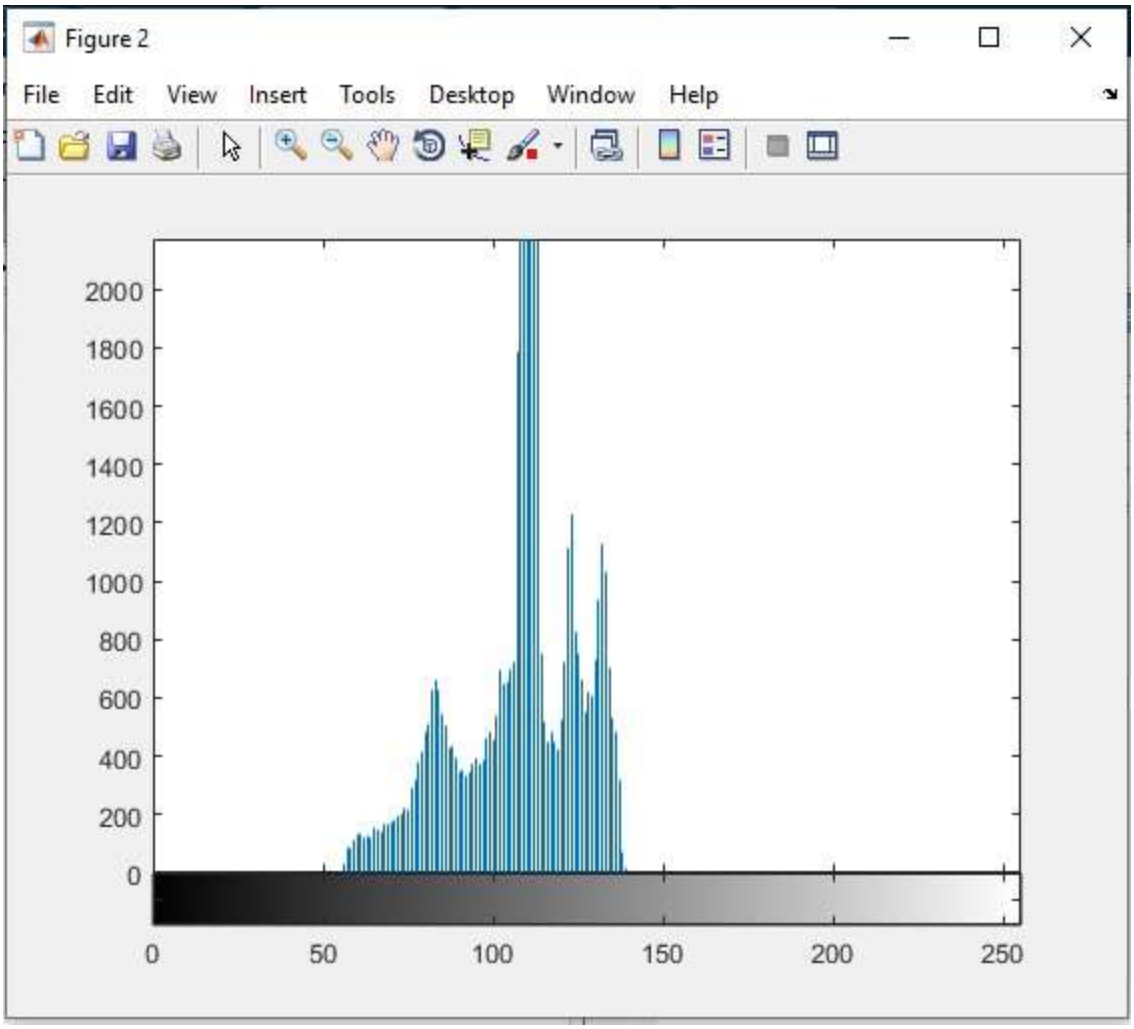


fig 2.Analyzing histogram for woml.bmp

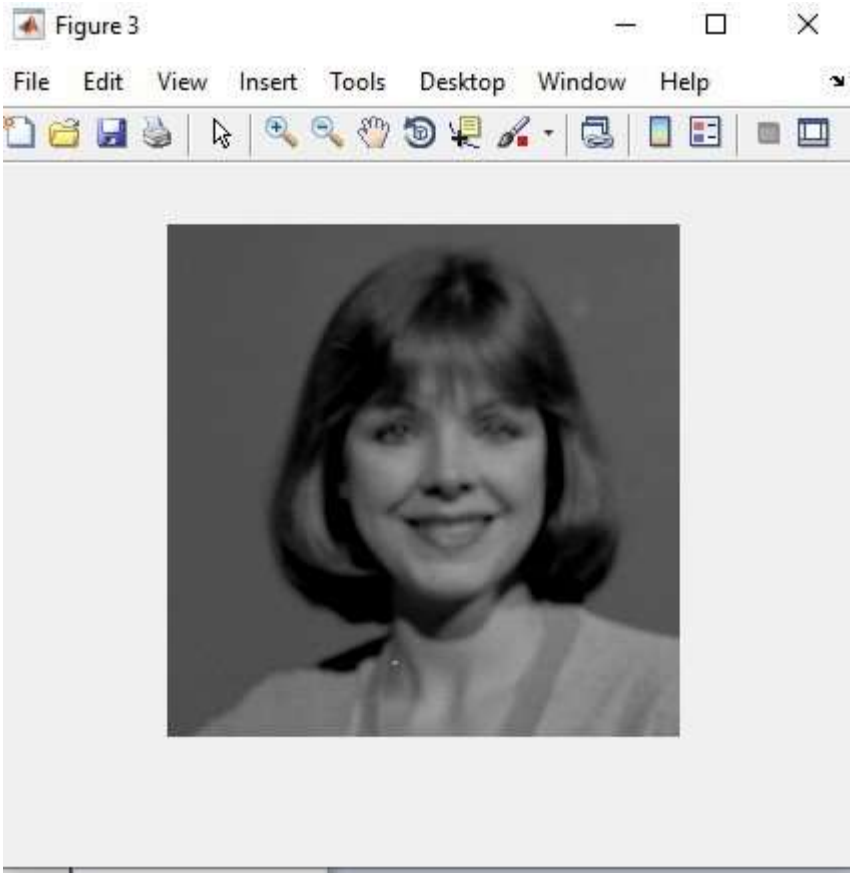


fig3.After adjusting the woml.bmp using imadjust function

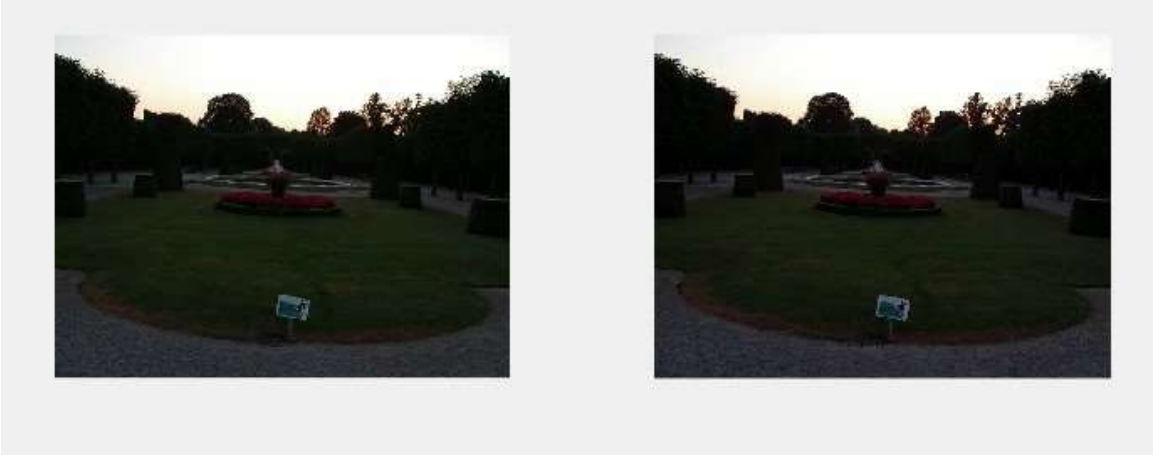


fig6.using imadjust

fig7.using histeq

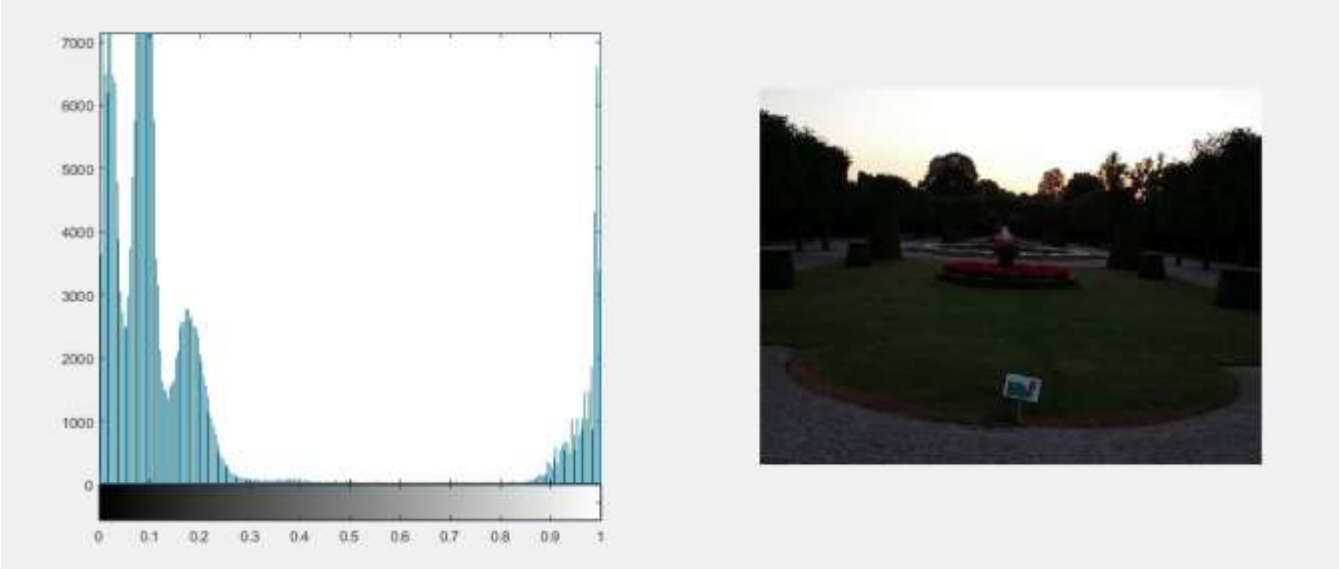


fig8. imhist

Context filtering

a.Add Gaussian and salt and pepper noise (imnoise)

fig9.filtering using imnoise

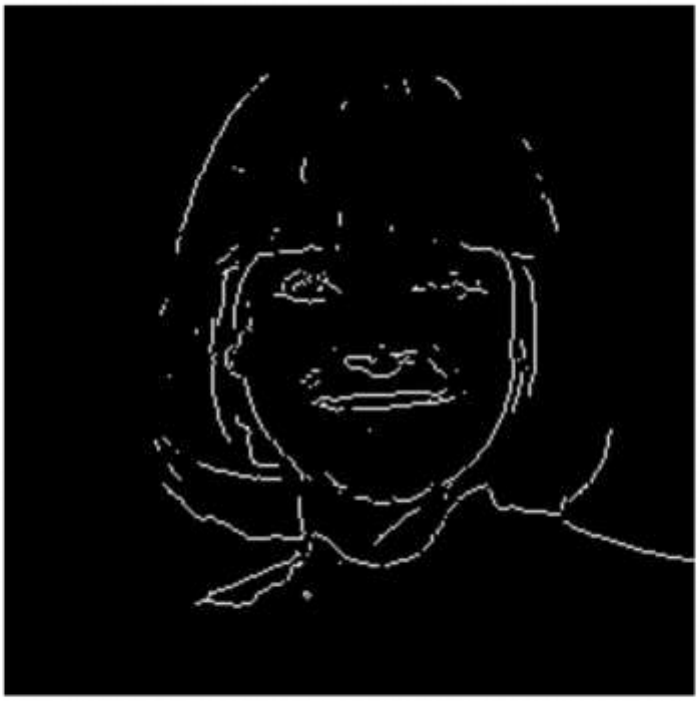
Create a normalized, 5-by-5, averaging filter.

```
A = imread('C:\Users\student\Downloads\grayscakeimages\womI.bmp');
J = imnoise(A,'salt & pepper',0.02);
imshow(J); h =
ones(5,5)/25; I2 =
imfilter(A,h); figure
imshow(I2)
title('Filtered Image')
```

Median filtering (medfilt2):

Low pass filtering in Fourier domain

Edge detection Sobel:



comaprison between edge detection using canny and prewitt

Sorce Code:

```
%{
A = imread('C:\Users\student\Downloads\grayscakeimages\womI.bmp');
B = imread('C:\Users\student\Downloads\grayscakeimages\moonI.bmp');
C = imread('C:\Users\student\Downloads\grayscakeimages\fce4.bmp');
D = imread('C:\Users\student\Downloads\grayscakeimages\7i.bmp');
 imshow(A)
figure;
imhist(A)
K = imadjust(A,[0.3 0.7],[]);
figure
imshow(K)
%}
```

```
% image = imread('D:\Studia\VD\lab2\woman.bmp');
% image=im2double(image);
A = imread('C:\Users\student\Downloads\grayscakeimages\womI.bmp');
A=im2double(A);
% J = imnoise(A,'salt & pepper',0.02);
% imshow(J);
% h = ones(5,5)/25;
% I2 = imfilter(A,h);
% figure
% imshow(I2)
% title('Filtered Image')
% K = medfilt2(A);
% imshowpair(A,K,'montage')
%

F=fft2(A);
[r,c]=size(F);
maska=zeros(r,c);
r1=uint8(r*0.45);r2=uint8(r*0.55);
c1=uint8(c*0.45);c2=uint8(c*0.55);
maska(r1:r2,c1:c2)=1;
F=fftshift(F);
F=F.*maska;
F=ifftshift(F); imageNew=real(ifft2(F));
imageNew=imadjust(imageNew);
imshow(imageNew)
BW1 = edge(A,'sobel');
imshow(BW1);
% BW2 = edge(A,'Canny');
% BW3 = edge(A,'Prewitt');
% imshowpair(BW2,BW3,'montage')
% subplot(2,2,1);
% imshow(image);
% subplot(2,2,2);
% imhist(image);
% j=imadjust(image);
% subplot(2,2,3);
% imshow(j);
% subplot(2,2,4);
% imhist(j);

% subplot(2,2,1);
% imshow(image);
% subplot(2,2,2);
% imhist(image);
% j=histeq(image);
% subplot(2,2,3);
% imshow(j);
% subplot(2,2,4);
% imhist(j);

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%
```

```
image=im2double(imread('C:\Users\student\Downloads\grayscakeimages\IMGP3
113.jpg'));
% subplot(1,2,1);
% imshow(image);
% red=image(:,:,1);
% green=image(:,:,2);
% blue=image(:,:,3);
%
% brig=red/3+green/3+blue/3;

% brigNew=histeq(brig);
% redNew=red.*brigNew./brig;
% greenNew=green.*brigNew./brig;
% blueNew=blue.*brigNew./brig;

% redNew=histeq(red);
% greenNew=histeq(green);
% blueNew=histeq(blue);

% redNew=imadjust(red);
% greenNew=imadjust(green);
% blueNew=imadjust(blue);
%
image=im2double(imread('C:\Users\student\Downloads\grayscakeimages\IMGP3
113.jpg'));
% subplot(1,2,1);
% % imshow(image);
% red=image(:,:,1);
% green=image(:,:,2);
% blue=image(:,:,3);
%
% brig=red/3+green/3+blue/3;
% imhist(brig);
%
% % brigNew=histeq(brig);
% % redNew=red.*brigNew./brig;
% % greenNew=green.*brigNew./brig;
% % blueNew=blue.*brigNew./brig;
%
% % redNew=histeq(red);
% % greenNew=histeq(green);
% % blueNew=histeq(blue);
%
% redNew=imadjust(red);
% greenNew=imadjust(green);
% blueNew=imadjust(blue);
%
% imageNew(:,:,1)=redNew;
% imageNew(:,:,2)=greenNew;
% imageNew(:,:,3)=blueNew;
%
% brigNew=redNew/3+greenNew/3+blueNew/3;
%
% subplot(1,2,2);
```

```
% % imshow(imageNew);
% imhist(brigNew);
% imageNew(:,:,1)=redNew;
% imageNew(:,:,2)=greenNew;
% imageNew(:,:,3)=blueNew;
%
% subplot(1,2,2);
% imshow(imageNew);
```