Spatial Domain Point Processing Image Enhancement Techniques

Matlab Code:

a=imread('C:\Users\djsce.student\Desktop\lena.jpg')

b=imread('C:\Users\djsce.student\Desktop\lena.jpg')

c=imread('C:\Users\djsce.student\Desktop\lena.jpg')

d=imread('C:\Users\djsce.student\Desktop\lena.jpg')

e=imread('C:\Users\djsce.student\Desktop\lena.jpg')

f=imread('C:\Users\djsce.student\Desktop\lena.jpg')

%Digital Negative

figure(1)

b=255-a;

imshow(b);

title('Digital Negative')

[m n]=size(a);

% thresholding

figure(2);

T=127;

for i=1:256

for j=1:256

if c(i,j)< T

c(i,j)=0;

else

c(i,j)=255;

end

end

end

imshow(c)

title('Thresholding')

%Grey Level Slicing without background

figure(3);

L=256;

for i=1:256

for j=1:256

if d(i,j)< (L-1)/3

d(i,j)=0;

else if d(i,j)> (2\*(L-1))/3

d(i,j)=0;

else

d(i,j)=255;

end

end

end

end

subplot(2,1,1)

imshow(d)

title('Grey level slicing without brackground ')

%Grey Level Slicing with background

L=256;

for i=1:256

for j=1:256

if (e(i,j)>((L-1)/3) && e(i,j)<(2\*(L-1)/3))

e(i,j)=L-1;

else

e(i,j)=e(i,j);

end

end

end

subplot(2,1,1)

imshow(e)

title('Grey level slicing with brackground ')

%Bit Plane Slicing

figure(4);

for i=1:8

a1= bitget(a,i);

figure(i)

imshow(logical(a1));

end

%Contrast Streching

figure(5);

L=256;

for i=1:256

for j=1:256

if f(i,j)<((L-1)/3)

f1(i,j)=0.5\*f(i,j);

else if f(i,j)<(2\*(L-1)/3)

f1(i,j)=(0.5\*((L-1)/3))+(2\*(f(i,j)-((L-1)/3)));

else

f1(i,j)=(0.5\*(f(i,j)-(2\*(L-1)/3)))+(0.5\*((L-1)/3))+(2\*(((L-1)/3)-(2\*(L-1)/3)));

end

end

end

end

imshow(f1)

title('Contrast Streching ')