**Edge Detection**

1.Gaussian edge detection

j=imread("benz.jpeg");

% Convert the image in gray scale.

j1=rgb2gray(j);

% Generate the noise of size equal to gray image.

n=25\*randn(size(j1));

% Generate noisy image by adding noise to the grayscale image.

j2=n+double(j1);

% Display the original color image.

figure

subplot(2,2,1),imshow(j)

% Display the gray image.

subplot(2,2,2),imshow(j1,[])

% Display the noisy image.

subplot(2,2,3),imshow(j2,[])

% Define the Laplacian Filter.

Lap=[0 -1 0; -1 4 -1; 0 -1 0];

% Convolve the noisy image with Laplacian filter.

j3=conv2(j2, Lap, 'same');

% Display the resultant image.

subplot(2,2,4),imshow(j3,[])

2.Canny edge detection

rgbImage = imread('flowerPink.jpg');

subplot(2, 2, 1);

imshow(rgbImage)

axis('on', 'image');

title('Original Image')

% Convert to gray scale.

grayImage = rgb2gray(rgbImage);

subplot(2, 2, 2);

imshow(grayImage)

axis('on', 'image');

title('Grey Scale Image')

% Get edges

Canny\_img = edge(grayImage, 'Canny');

subplot(2, 2, 3);

imshow(Canny\_img, [])

axis('on', 'image');

title('Edge Detected Image')

% Enlarge figure to full screen.

set(gcf, 'Units', 'Normalized', 'Outerposition', [0, 0.05, 1, 0.95]);