

Computer Vision Report

Edge Detection with
first, second derivative
and canny algorithms

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Section: 2.

```
%%MATLAB CODE
```

```
IMGRGP=imread('C:\Users\anahi_000\Desktop\img.jpg');
```

```
IMG=rgb2gray(IMGRGP);
```

```
%show the original image
```

```
subplot(2,2,1);
```

```
imshow(IMG);
```

```
xlabel('original image');
```

```
FDIMG=edge(IMG, 'prewitt');
```

```
%show the first derivative edge detection for the  
photo
```

```
subplot(2,2,2);
```

```
imshow(FDIMG);
```

```
xlabel('first derivative edge detection');
```

```
SDIMG=edge(IMG, 'log');
```

```
%show the second derivative edge detection for the  
photo
```

```
subplot(2,2,3);
```

```
imshow(SDIMG);
```

```
xlabel('second derivative edge detection');
```

```
CANNYIMG=edge(IMG, 'canny');
```

```
%show the canny edge detection for the photo
```

```
subplot(2,2,4);
```

```
imshow(CANNYIMG);
```

```
xlabel('canny edge detection');
```



original image



first derivative edge detection



second derivative edge detection



canny edge detection

I observe that canny gives the best edge detection quality.