Junhao Du

**Codes Position:** / Assignment1-Code

**Pictures Position**: /results

**Explaination:** /README.pdf

**Observation:**

As the rubric, I have 3 functions: Main(), edgeDetection(), and canny1step();

The main function is the entry of the program. It requires 3 args such as the first sigma, the second sigma, and the filename. What’s more, we need to make sure that the filename needs the quotes like ‘kangaroo.pgm’.

The edgeDetection function implements the first and second requirement of Gaussian filter and the gradient computation of the sobel filters. This function takes the sigma1 and sigma2 and the filename as the arguments.

The canny1step function take the image and the low Thresholding as the arguments.

After many test, I found that the low thresholding =17 fits the sigma=1 well and low thresholding=8 fits the sigma=2 well.

**Images:**

**1) kangaroo:**

Filtered:

D:\universityGraduate\CS558ComputerVision\Assignments\assignment1\documents\results\kangaroo\filtered.tif

Gradient: D:\universityGraduate\CS558ComputerVision\Assignments\assignment1\documents\results\kangaroo\gradient.tif

Suppression:

D:\universityGraduate\CS558ComputerVision\Assignments\assignment1\documents\results\kangaroo\suppression.tif

**2) plane:**

Filtered:

**D:\universityGraduate\CS558ComputerVision\Assignments\assignment1\documents\results\plane\filtered.tif**

Gradient:

**D:\universityGraduate\CS558ComputerVision\Assignments\assignment1\documents\results\plane\gradient.tif**Suppression:

**D:\universityGraduate\CS558ComputerVision\Assignments\assignment1\documents\results\plane\suppression.tif**

**3)red:**

Filtered:

**D:\universityGraduate\CS558ComputerVision\Assignments\assignment1\documents\results\red\filtered.tif**

Gradient:

D:\universityGraduate\CS558ComputerVision\Assignments\assignment1\documents\results\red\gradient.tif

Suppression:

**D:\universityGraduate\CS558ComputerVision\Assignments\assignment1\documents\results\red\suppression.tif**