HW2: Problem 2

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1 Convert Image to Greyscale

Image converted to greyscale:

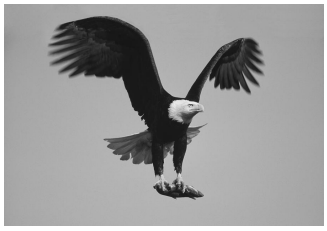

Figure 1: Greyscale image.

2 Part 1

2.1 Sobel Threshold: 10

Use the sobel operator on the image with a threshold of 10:

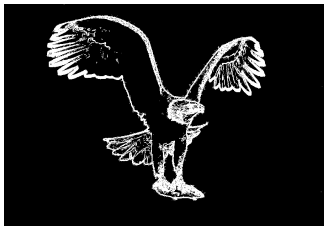

Figure 2: Sobel threshold of 10.

2.2 Sobel Threshold: 50

Use the sobel operator on the image with a threshold of 50:

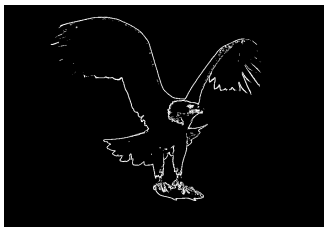

Figure 3: Sobel threshold of 50.

2.3 Sobel Threshold: 100

Use the sobel operator on the image with a threshold of 100:

Figure 4: Sobel threshold of 100.

2.4 Sobel Threshold: 150

Use the sobel operator on the image with a threshold of 150:

Figure 5: Sobel threshold of 150.

2.5 Sobel Threshold: 200

Use the sobel operator on the image with a threshold of 200:

Figure 6: Sobel threshold of 200.

2.6 Sobel Threshold: 255

Use the sobel operator on the image with a threshold of 255:

Figure 7: Sobel threshold of 255.

3 Part 2

3.1 Prewitt Threshold: 10

Use the prewitt operator on the image with a threshold of 10:

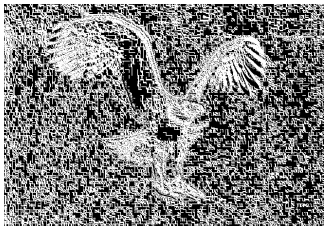

Figure 8: Prewitt threshold of 10.

3.2 Prewitt Threshold: 50

Use the prewitt operator on the image with a threshold of 50:

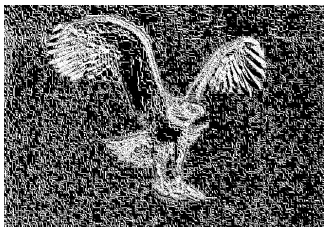

Figure 9: Prewitt threshold of 50.

3.3 Prewitt Threshold: 100

Use the prewitt operator on the image with a threshold of 100:

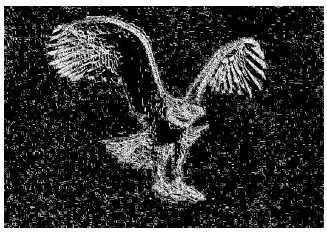

Figure 10: Prewitt threshold of 100.

3.4 Prewitt Threshold: 150

Use the prewitt operator on the image with a threshold of 150:

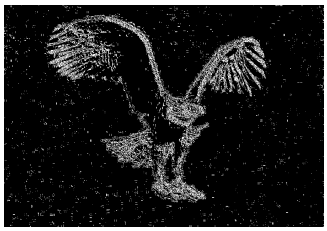

Figure 11: Prewitt threshold of 150.

3.5 Prewitt Threshold: 200

Use the prewitt operator on the image with a threshold of 200:

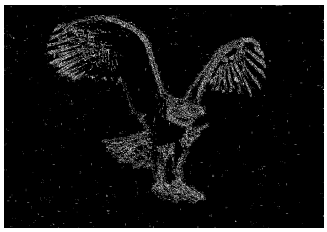

Figure 12: Prewitt threshold of 200.

3.6 Prewitt Threshold: 255

Use the prewitt operator on the image with a threshold of 255:

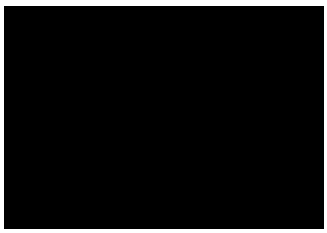

Figure 13: Prewitt threshold of 255.

4 Part 3

Detect edges using Laplacian of Gaussian:

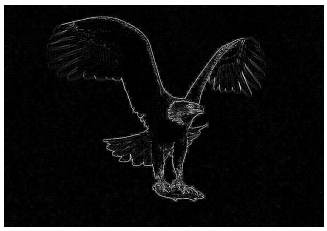

Figure 14: Laplacian of Gaussian for edge detection.

5 Part 4

Detect edges using Difference of Gaussian:

Figure 15: Difference of Gaussian for edge detection.