

HW2: Problem 2

Ian Dover

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:

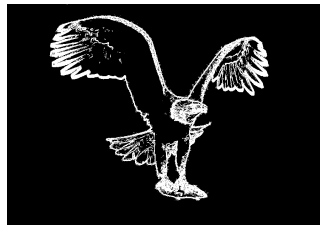


Figure 2: Sobel threshold of 10.

2.2 Sobel Threshold: 50

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

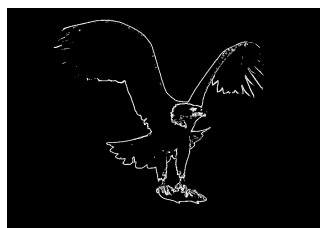


Figure 3: Sobel threshold of 50.

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:

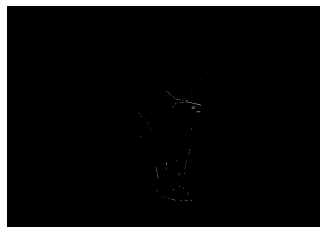


Figure 6: Sobel threshold of 200.

2.6 Sobel Threshold: 255

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

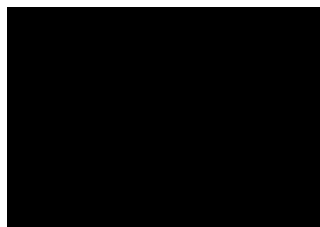


Figure 7: Sobel threshold of 255.

3 Part 2

3.1 Prewitt Threshold: 10

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

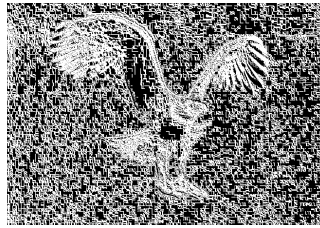


Figure 8: Prewitt threshold of 10.

3.2 Prewitt Threshold: 50

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

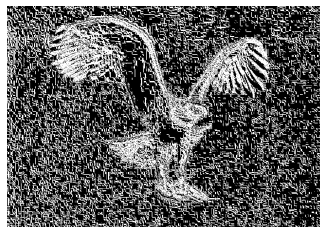


Figure 9: Prewitt threshold of 50.

3.3 Prewitt Threshold: 100

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

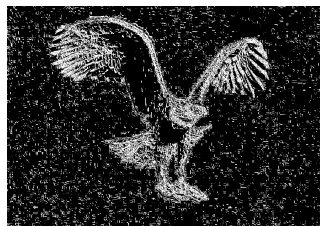


Figure 10: Prewitt threshold of 100.

3.4 Prewitt Threshold: 150

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

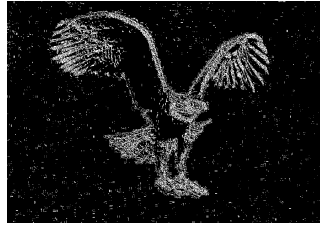


Figure 11: Prewitt threshold of 150.

3.5 Prewitt Threshold: 200

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

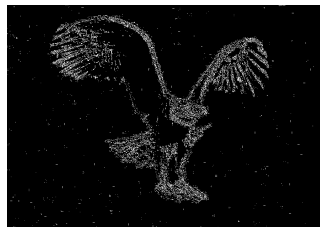


Figure 12: Prewitt threshold of 200.

3.6 Prewitt Threshold: 255

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

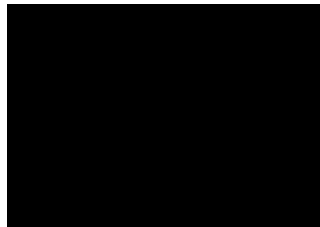


Figure 13: Prewitt threshold of 255.

4 Part 3

Detect edges using Laplacian of Gaussian:

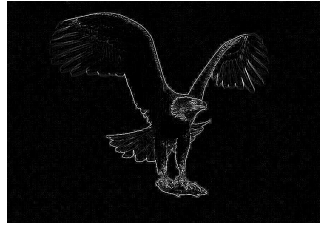


Figure 14: Laplacian of Gaussian for edge detection.

5 Part 4

Detect edges using Difference of Gaussian:

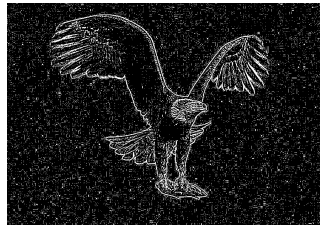


Figure 15: Difference of Gaussian for edge detection.