Report Blatt 3

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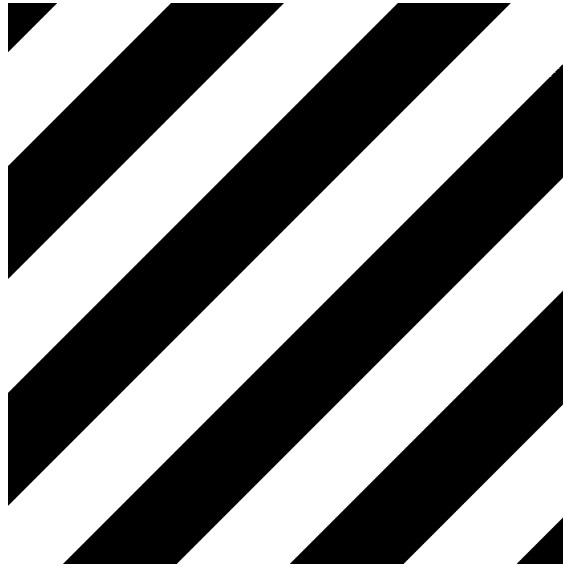
1 Exercise 1 Edge Detection
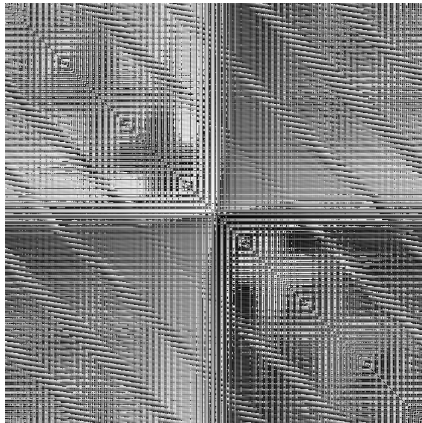
1.1 Sobel Edge Detection

The sobel operator is a specific filter convolved with the Image. It is used to approximate the calculation of the gradient in x and y direction It is usually a $3x3$ matrix with:
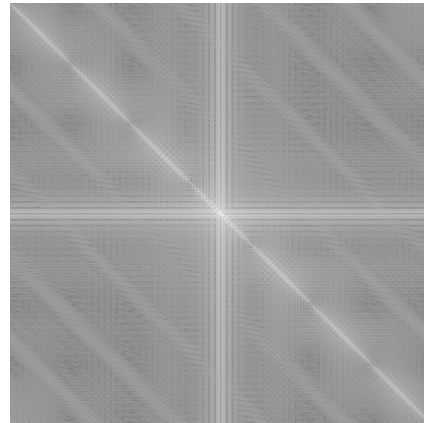
1.2 Canny Edge Detection

1.3 Comparison
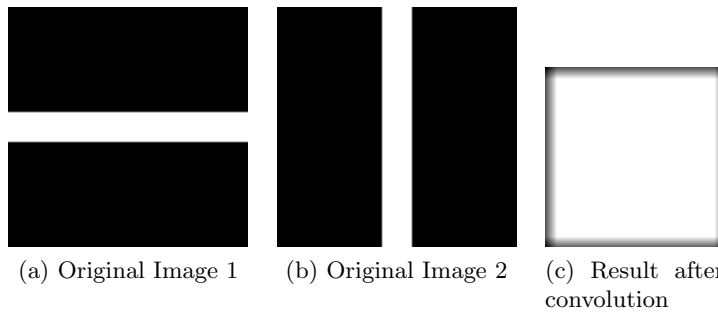
(a) Original Image

(b) Phase Image

(c) Log Magnitude Image

Figure 1: Fourier transformation of a stripe pattern.

(a) Original Image 1

(b) Original Image 2

(c) Result after convolution

Figure 2: Spatial convolution of two images.

2   Excercise 2