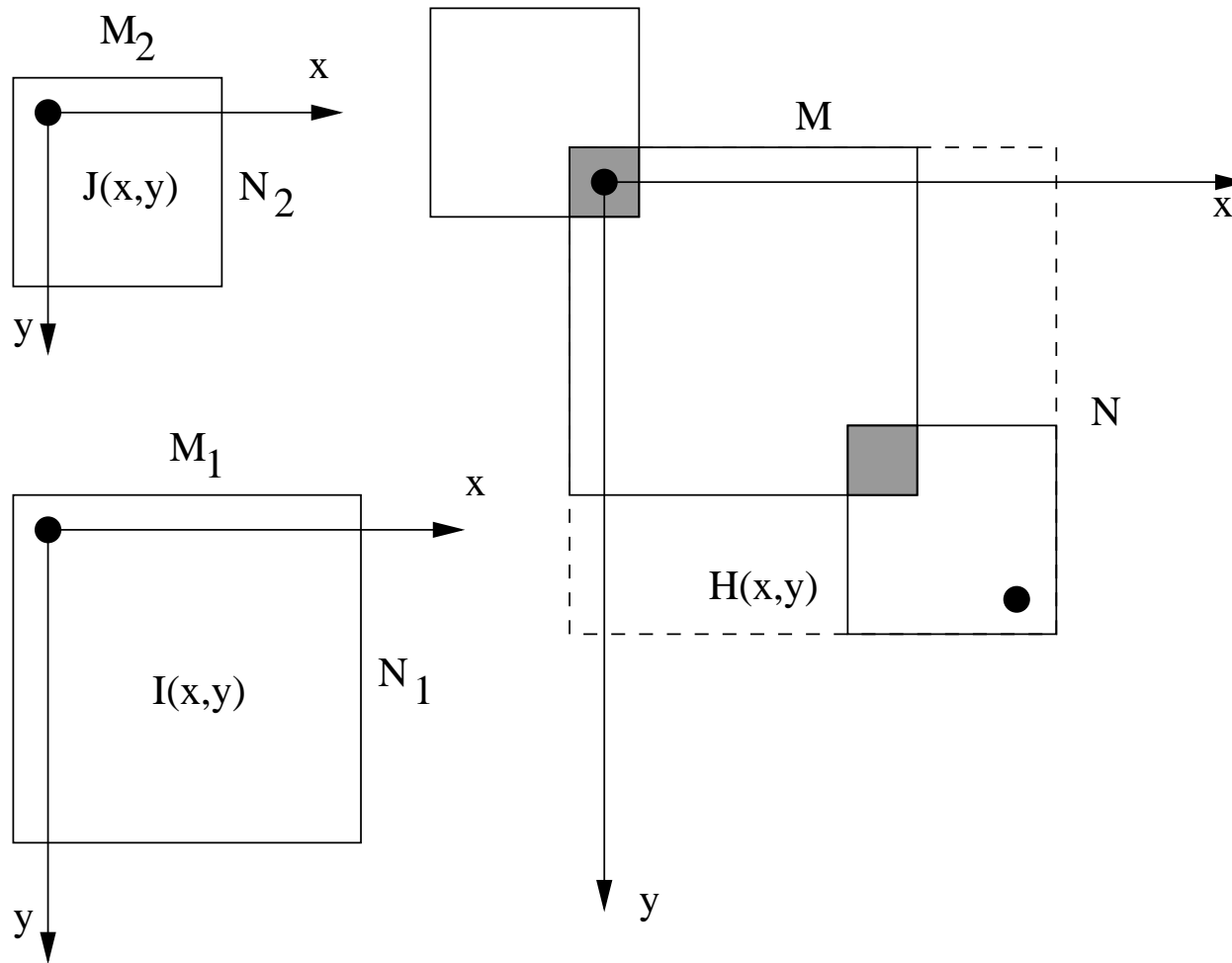
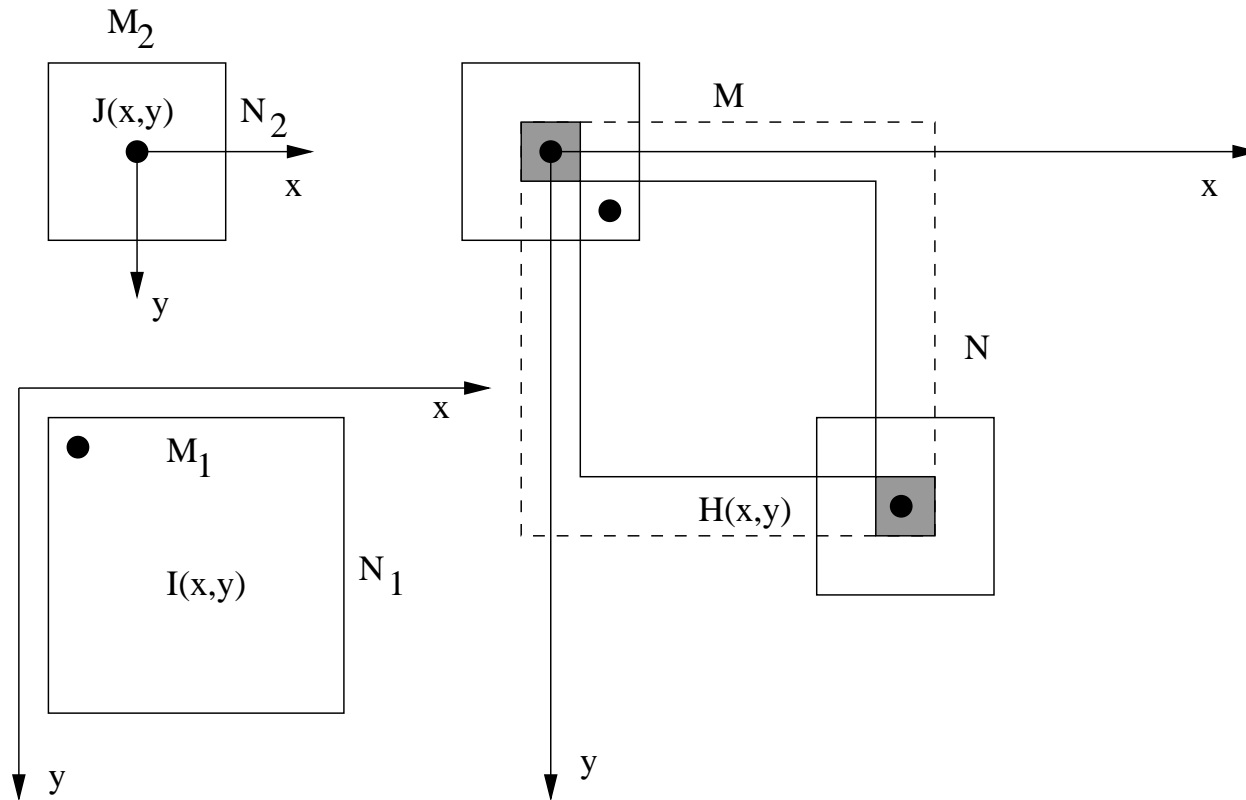


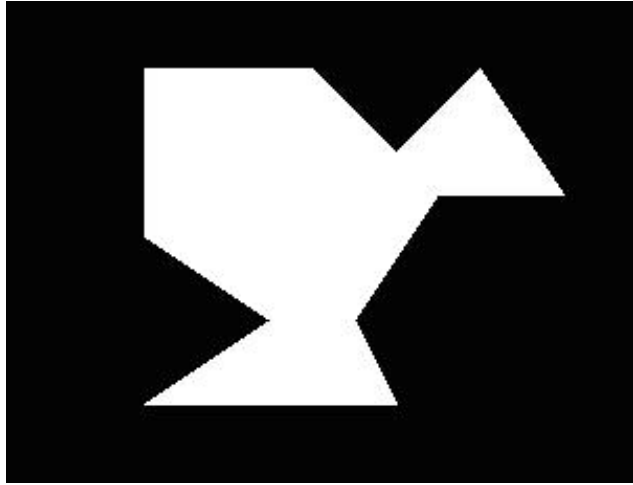
2D Discrete Convolution



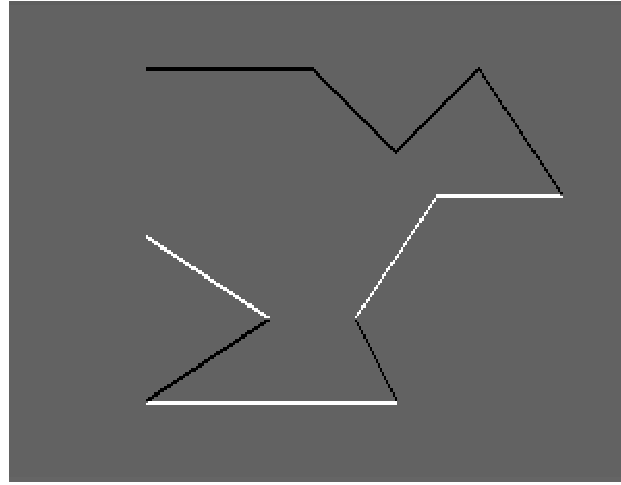
2D Linear Filtering



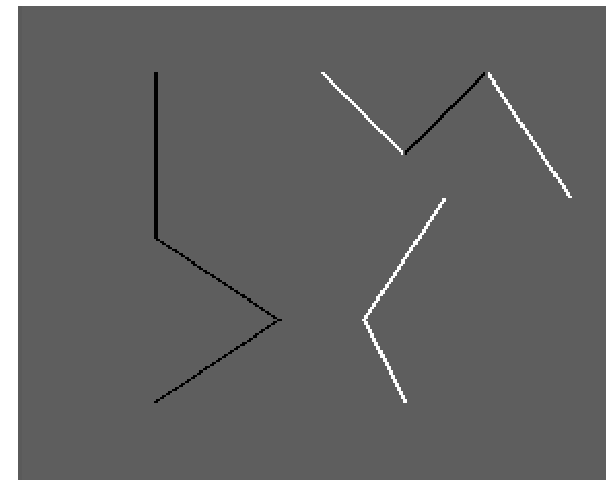
Edge enhancement



(a) Binary image



(b) Horizontal edges

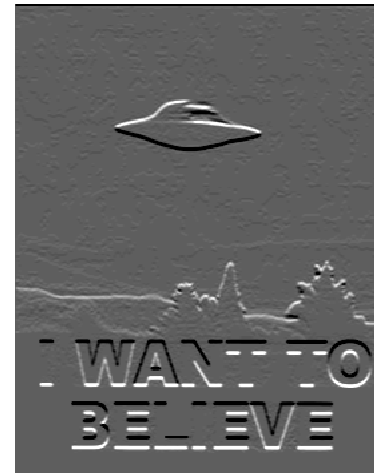


(c) Vertical edges

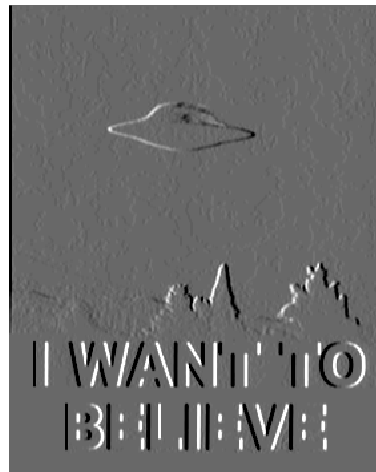
Edge enhancement



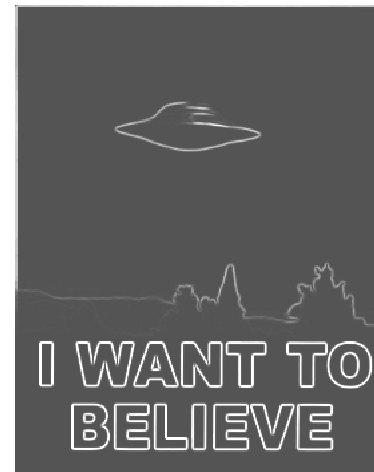
(a) Gray-scale image



(b) After Sobel S_y



(c) After Sobel S_x



(d) Gradiente magnitude

Blurring and Sharpness



(a) Original

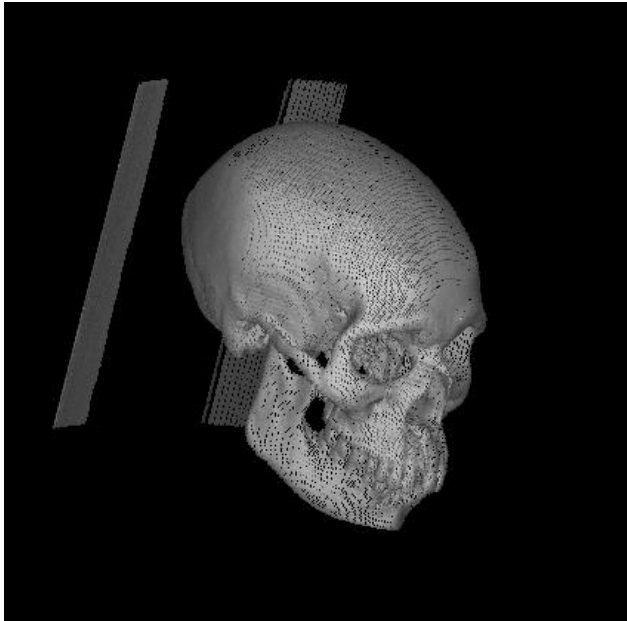


(b) After blurring

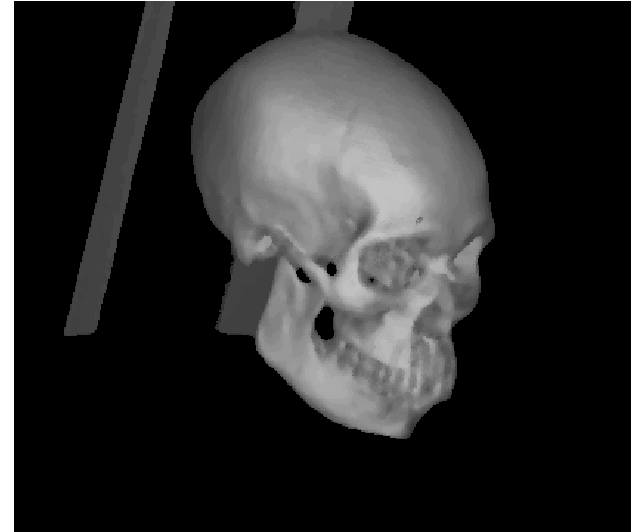


(c) After sharpning on (b)

Median filtering



(a) Gray-scale image



(b) After median filtering