

Convolution Practice

2	2	1	1	1	1	1	8	5
2	2	1	1	1	1	1	8	5
2	2	1	1	1	1	8	5	5
2	1	1	1	1	1	8	5	5
1	1	1	1	1	1	8	4	5
1	1	1	1	1	8	4	4	4
1	1	1	1	8	4	4	4	4
1	1	1	1	8	4	4	3	3
1	1	1	1	8	4	4	4	3

Image

0	1	0
1	0	-1
0	-1	0

Kernel
Weights

Compute the correlation over the valid region for the image and kernel shown at left.

1	1	0	0	0	-14	-1
2	1	0	0	-7	-11	6
2	0	0	0	-7	-4	4
0	0	0	0	-14	1	4
0	0	0	-14	-6	8	0
0	0	-7	-10	8	0	1
0	0	-7	-3	4	1	1

The kernel shown is used for Roberts edge detection. Where are the edges in this image?