

Laplacian filter example

- Compute the convolution of the Laplacian kernels L_4 and L_8 with the image
- Use border values to extend the image

0	0	10	10	10
0	0	10	10	10
0	0	10	10	10
0	0	10	10	10
0	0	10	10	10

y

x

-1	-1	-1
-1	8	-1
-1	-1	-1

L_8

0	-1	0
-1	4	-1
0	-1	0

L_4

L_8

0	-30	30	0	0
0	-30	30	0	0
0	-30	30	0	0
0	-30	30	0	0
0	-30	30	0	0

L_4

0	-10	10	0	0
0	-10	10	0	0
0	-10	10	0	0
0	-10	10	0	0
0	-10	10	0	0

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Laplacian filter example

- Compute the convolution of the Laplacian kernels L_4 and L_8 with the image
- Use zero-padding to extend the image

0	0	10	10	10
0	0	10	10	10
0	0	10	10	10
0	0	10	10	10
0	0	10	10	10

y

x

-1	-1	-1
-1	8	-1
-1	-1	-1

L_8

0	-1	0
-1	4	-1
0	-1	0

L_4

L_8

0	-20	50	50	50
0	-30	30	0	30
0	-30	30	0	30
0	-30	30	0	30
0	-20	50	50	50

L_4

0	-10	20	10	20
0	-10	10	0	10
0	-10	10	0	10
0	-10	10	0	10
0	-10	20	10	20

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