

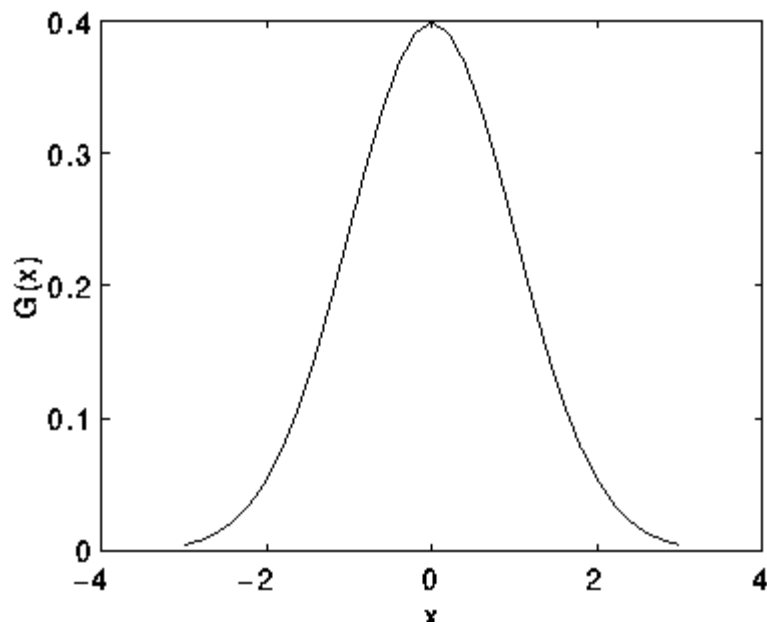
Python3 OpenCV3.3图像处理教程

– 贾志刚

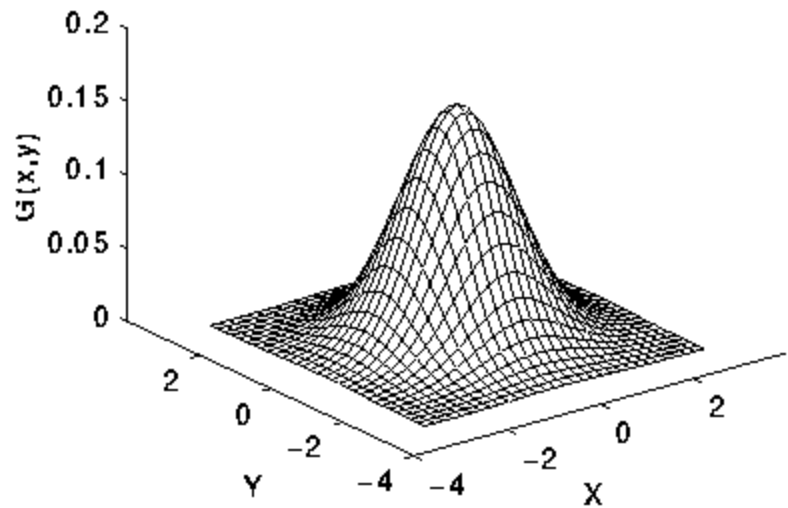
高斯模糊

- ▶ 高斯模糊
- ▶ 操作

$$G(x) = \frac{1}{\sqrt{2\pi}\sigma} e^{-\frac{x^2}{2\sigma^2}}$$



$$G(x, y) = \frac{1}{2\pi\sigma^2} e^{-\frac{x^2+y^2}{2\sigma^2}}$$



$$\frac{1}{273}$$

1	4	7	4	1
4	16	26	16	4
7	26	41	26	7
4	16	26	16	4
1	4	7	4	1

Apply the Gaussian filter to the image:
 Borders: **keep border values as they are**

15	20	25	25	15	10
20	15	50	30	20	15
20	50	55	60	30	20
20	15	65	30	15	30
15	20	30	20	25	30
20	25	15	20	10	15

Original image

Or:

1	2	1
2	4	2
1	2	1

*1/16

$$\frac{1}{4} \star \begin{bmatrix} 1 & 2 & 1 \end{bmatrix}$$

$$\frac{1}{4} \star \begin{bmatrix} 1 \\ 2 \\ 1 \end{bmatrix}$$

15	20	24	23	16	10
20	25	36	33	21	15
20	44	55	51	35	20
20	29	44	35	22	30
15	21	25	24	25	30
20	21	19	16	14	15

15	20	24	23	16	10
19	28	38	35	23	15
20	35	48	43	28	21
19	31	42	36	26	28
18	23	28	25	22	21
20	21	19	16	14	15

代码层面知识点

- ▶ 高斯模糊与应用场景



Thank You