The magnified section in Fig. 4.49 shows that the characters in this document have distorted shapes due to lack of resolution, and many of the characters are broken. Although humans fill these gaps visually without difficulty, machine recognition systems have real difficulties reading broken characters. One approach for handling this problem is to bridge small gaps in the input image by blurring it. Figure 4.49 shows how well characters can be “repaired” by this simple process using a Gaussian lowpass filter with The images are of siZe pixels.

abcdefghijklmnopqrstuvwxyZ ABCDEFGHIJKLMNOPQRSTUVWXYZ

bhxbvbjdfvn,dc,m nxmZxZm,mZ,..ZZmZcbnvdghsdfcmsdfjsdkjfkjsdfn mnmnZjnZbbhjds

ZmmbcZnbZcbmbdbjfmbmdcmZ,m,Zbjvjkmxv,mxv,mmbZxcb

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