Subject: Re: CONVOL : no subscripting with POLYFILLV?
Posted by David Foster on Mon, 25 Jan 1999 08:00:00 GMT
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Tom Wassenaar wrote:
>
> I'd like to use polygon vertices directly to determine the image subset
> to convolve, but is it right that CONVOL only operates on simple square
> subscripts ?
>
> a simple example :
> ENVI> a = findgen(10, 20)
> ENVI> kernel = fltarr(3, 3) + 1
> ENVI> b = convol(a[2:8, 4:15], kernel, total(kernel))
> ; this works fine !
> ENVI> x = POLYFILLV([2,2,8,8], [4,15,15,4], 10, 20)
> ENVI> b = convol(a[x], kernel, total(kernel))
> % CONVOL: Kernel's dimensions are incompatible with operand's.
>
> WHY ?
> --

Tom -

CONVOL() operates on arrays, and it could just as well operate on
a limited range of an array, but this would still be a rectangular
region.

For what you want, I would recommend making a copy of your array,
or better yet a copy of the smallest rectangular region that contains
your region of interest(*), and applying your convolution to the
copy. Then use this copy to update the pixels in the ROI of your
original array.

(*) If your copy is a subregion, be sure it is larger than the
region of your polygon. Add half the size of your kernel (3/2 or 1
in your case)
pixels in all directions, so that the convolution is applied
to all pixels within the region. (If you don't do this then
the boundary pixels of your ROI are not processed.)

Dave
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