Subject: CONVOL: no subscripting with POLYFILLV? Posted by Tom Wassenaar on Fri, 22 Jan 1999 08:00:00 GMT View Forum Message <> Reply to Message

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) + 1ENVI > 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? 2/ نِ آ2/ نِ آ %¿ڗؖ۫۩ٝڮڗڰڒڿڗ۩ڮڗڰڒڿڗ۩ڮڗڰڒڿڗ۩ڮڒڿڗڰڒڿڗڰڒڿڗ %¿ڗؖ۫۩ٝڮڗڰڒڿڗ۩ڮڗڰڒڿڗ۩ڮڗڰڒڿڗ۩ڮڒڿڗڰڒڿڗڰڒڿڗ ڲؙؙٛٛڹڗڲڒڹڗڲڒڹڗ Tom Wassenaar INRA Science du Sol, 2 place Pierre Viala 34060 Montpellier Cedex 02, tel. +33 (0)499612764 Mï¿1/21: wassenaar@ensam.inra.fr رِيرِ اللهِ ال ½¿ڙ½¿ڙ½٪ نائلان ائلان آئلان ½¿ڙ½¿ڙ½٪ نائلان ائلان آئلان %¿ڗؖ۫۩ٝڮڗڰڒڿڗ۩ڮڗڰڒڿڗ۩ڮڗڰڒڿڗ۩ڮڒڿڗڰڒڿڗڰڒڿڗ ڲٛڹٳؖ؉ۣڹٳ؉ۣڹٳ

Subject: Re: CONVOL: no subscripting with POLYFILLV? Posted by David Foster on Mon, 25 Jan 1999 08:00:00 GMT View Forum Message <> Reply to Message

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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