## Subject: Re: 2-D Convolutions in IDL w/o zero-padded edges Posted by Jean H. on Tue, 23 Oct 2007 21:50:44 GMT

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Matt Harner wrote:

> Hello.

>

- > I am familiar with IDL and convolutions independently but not
- > together. Is there a way in IDL to convolve an image with a kernal
- > and return only those parts of the convolution that are computed
- > without zero-padded edges? This would be equivalent to the MATLAB
- > procedure conv2(image,kernel, 'valid').

>

- > Thanks in advance for any help.
- > Matt

Maybe you could compute the convolution over the whole area, then keep only the valid entries... so if your kernel is a 3\*3 one, you would do

GoodResults = AllResult[1:Xsize-2; 1:Ysize-2]

If you are using a kernel that is not a square, I have a function to reduce your study area so that every pixel has a complete neighborhood (you define the neighborhood by its coordinates as if it was centered on cell 0;0)

Jean

Subject: Re: 2-D Convolutions in IDL w/o zero-padded edges Posted by Tal on Wed, 24 Oct 2007 08:56:45 GMT

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>> Is there a way in IDL to convolve an image with a kernal and return only those parts of the convolution that are computed without zero-padded edges?

Yes, i think so.

if

b is the result

a is the source image

k is the kernel

s is the scale factor (for example: total(k))

then

b = convol(a,k,s,/edge\_truncate)

should produce what you want and will not pad the edges with zeros.