
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 kernel
> 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 kernel 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.

hope this helps,
Tal
