Subject: Re: Convolution with non-constant Kernel?
Posted by rogass on Fri, 12 Nov 2010 22:03:25 GMT
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On 12 Nov., 01:56, SonicKenking <ywa...@gmail.com> wrote:
> Hi, I wonder if there is an easy way to perform convolution on an
> array with non-constant kernel.
>
> The IDL built-in CONVOL function requires the kernel to be a fixed
> array, e.g.
> [-1,2,-1]. I want to have a dynamic kernel that changes based on the
> position of the array. Something like
>
> array = [8,6,7,9,1,3,4,5], kernel=[sin(index_i-1), 2, sin(index_i+1)]
>
> Is there any other built-in IDL function that can do this or is there
> someone who has already coded this up? If the answer is no, I'll go
> ahead and code my own program. Just checking it here beforehand to
> avoid re-inventing wheels.
>
> Thanks!

If you are interested. I have a routine which strictly performs discrete convolutions for a 2d array and a 3d kernel without zero padding, without loops and for small kernels faster than fft. Just send me an email.

Cheers

CR