Subject: Re: Convolution with non-constant Kernel?
Posted by SonicKenking on Sun, 14 Nov 2010 22:30:43 GMT
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On Nov 12, 11:48 pm, Bennett <juggernau...@gmail.com> wrote:
> On Nov 11, 7:56 pm, 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!
>
> Couldn't you just perform multiple convolutions and then combine the
> result in the end using a position mask?

That probably won't work since the kernel is 2D non-linear. Also doing
convolutions multiple times may not be efficient for large arrays.