Subject: Re: Convolution with non-constant Kernel?
Posted by Juggernaut on Sat, 13 Nov 2010 16:23:42 GMT
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On Nov 12, 5:03 pm, chris <rog...@googlemail.com> wrote:
> 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

These types of algorithms would be useful for implementing a tilt-shift photography on a standard image.