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Subject: Re: Local Maxima of 2D array

Posted by [Jeremy Bailin](#) on Thu, 21 Jan 2010 13:02:52 GMT

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On Jan 20, 10:35 am, DavidPS <dps.he...@gmail.com> wrote:

> On Jan 19, 5:48 pm, Robin Wilson <r.t.wil...@rmpc.co.uk> wrote:

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>

>

>

>> Hi,

>

>> Another question from me I'm afraid. I'm trying to implement a routine  
>> which needs to be able to calculate the local maxima of a small window  
>> moved across an array. That is, I have a large array and I will need to  
>> move a small 3x3 array across it, each time working out what the maximum  
>> value of that array is and storing its index (or selecting it in some  
>> other way).

>

>> I've investigated various methods for doing this, including the dilate  
>> method, but I can't seem to get them to work properly.

>

>> Is there any good (as in fast, efficient and elegant) way of doing this,  
>> or will I be reduced to using for loops and lots of IF statements?

>

>> Best regards,

>

>> Robin

>> University of Southampton

>

> Hi Robin,

>

> I asked something similar a few weeks ago, but I was looking for a  
> local minima in a running window of 9. I think you can use the same  
> the guys suggested to me then, just changing the sign of the function  
> to convolve (so you find a max). It's in here:[http://tr.im/L0ob\[groups.google.com\]](http://tr.im/L0ob[groups.google.com])

>

> David

I don't think it's the same problem... correct me if I'm wrong, but I think that Robin wants the maximum value within the window, regardless of whether it's surrounded by lower values.

The only IDL-way I've thought of so far uses absurd amounts of memory if your image is large, so I'm not even going to suggest it. Still thinking about it...

-Jeremy.

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