
Subject: Re: Gradient of an Image

Posted by [meron](#) on Fri, 24 Jan 2003 08:45:14 GMT

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In article <3E30F811.8020209@ee.uwa.edu.au>, Thomas Gutzler <tgutzler@ee.uwa.edu.au> writes:

> Hi Mati,

>

> meron@cars3.uchicago.edu wrote:

>> In article <3E30D896.7000602@ee.uwa.edu.au>, Thomas Gutzler <tgutzler@ee.uwa.edu.au> writes:

>>

>>> Hi,

>>>

>>> is it true that IDL currently has no function to calculate the gradient
>>> of an image ?

>>> Google found this for me:

>>> [http://groups.google.com/groups?q=gradient+image+group:comp.
lang.idl-pvwave&hl=en&lr=&ie=UTF-8&oe=UTF-8&
amp;selm=3396D128.4CE0%40dlr.de&rnum=1](http://groups.google.com/groups?q=gradient+image+group:comp.lang.idl-pvwave&hl=en&lr=&ie=UTF-8&oe=UTF-8&selm=3396D128.4CE0%40dlr.de&rnum=1)

>>> and I am about to test, if this is doing the same as "Digital Image
>>> Processing" by Gonzales/Woods sais on page 418ff.

>>> Would be interesting to know, if anybody else has diffent (quicker?)
>>> solutions.

>>>

>>

>> If it is just the absolute value of the gradient you're after, then
>> I've a function like this (written many years ago). And it can easily
>> be modified to split the components of the gradient. The function is
>> called ABGRAD and you'll find it in the IDL users contributions page,
>> in my library (MIDL).

>

> I figured out, that Hermann Mannsteins function does what I want. It
> calculates a gradient of an image using the 'Sobel operator' and it does
> it _very_ much faster than my testfunction did (It simply went through
> the array in 2 for-loops and multiplied the subarray with the kernel,
> summed the results and stored them in the final gradient-array).
> convol rox :>

Sure.

> Just needs a Boundary-expansion to get better values at the bounds.

>

Unless you've information regarding what the boundary should be, it is
best to either force it to zero or to establish values by continuity.

Mati Meron | "When you argue with a fool,
meron@cars.uchicago.edu | chances are he is doing just the same"
