Subject: Re: Can this be done using array operations instead?
Posted by Allan Whiteford on Thu, 02 Apr 2009 17:16:30 GMT
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Robin,

robintw wrote:
> Hi,
>
> I'm quite new to IDL and I've written a function to calculate some
> statistics for an image file in ENVI. The function has to be
> calculated for the 3x3 square around every pixel in the image. At the
> moment I'm using a couple of nested for loops to do that - is there a
> way to do it using array operations instead?
>

Probably :).

> What I suppose I'm asking for is a way to call a particular function
> for every element of an array - is that possible. I know it's possible
> to do NewArray = OldArray * 2, which is calling the + function on
> every element of the array, but is there a way to call my user-defined
> function on each element?
>

I think you want to do something slightly more complicated, you want to call your user defined function on groups of array elements rather than invididual array elements.

> I can post code if that would help.
>

If you post stand-alone code which does what you want using loops then chances are someone can point you in the right direction of code which does it using array operations.

Particularly useful is the ability to do stuff like this:

NewArray = (OldArray[0:n_elements(OldArray)-1] + OldArray[1:*])/2

which will give you the mean between adjacent elements in oldarray (oldarray assumed to be 1D). Note that you need to worry about what happens at the edges as soon as you start doing stuff like this. Note also that the above example is just to illustrate the type of array techniques you could use.

> Cheers,
>

> Robin

Thanks,

Allan
