
Subject: simple vectorizing problem

Posted by [dpm314](#) on Tue, 09 Sep 2008 01:47:06 GMT

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Hey - here is a vectorizing question from an experienced programmer 'newish' to IDL.

I have a stack of images dimensions (nx,ny, num_images) , a LOT of data sometimes, on which I need to preform a whole mathematical operation on. For example, one thing I need to do is create an array of the mean of each image.

I've done this successfully with something like

```
averages = fltarr(num_images)
```

```
for k = 0, NUM_OF_CLICKS-1 do averages[k] = mean(image(*,*,k)
```

which makes perfect sense to a c/c++/Fortran programmer. But, this really hangs up for the size images I am working with (512*512*70000 or more). Is there a way to vectorize? I've tried several things like:

```
averages = fltarr(num_images)
```

```
a = indgen(num_images)
```

```
averages(a) = mean(image(*,*,a))
```

I've also tried reforming the image to by 2D, with dimensions [nx*ny, num_images] and doing a similar thing, but no luck. That included making an array of integers, call it b, where b = 0, nx*ny*1 - 1, nx*ny*2 - 1, nx*ny*3 - 1 ... and doing something like

```
averages(a) = mean(image(b[a]:b[a+1], a)
```

(I know this probably will run out of bounds, I can't remember right now what I did, but it still didn't work and I had the series worked out right...)

It seems that in a language like IDL there should be a way to do something like this without writing a for-loop.

Thanks,

David M.
