Subject: Re: More For Loops
Posted by Craig Markwardt on Thu, 13 Apr 2000 07:00:00 GMT
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majewski@cygnus.uwa.edu.au_stralia writes:
> Hi
> I'm looking to get rid of the for loops below.
> They make two arrays;
> one containing evey second column and evey second row
> the other containing evey second column and evey alternate row
>
> ;---------- ----------
> x_data = 3072
> y_data = 512
> DATA_size = [x_data/2,y_data]
> Data_sets_ev = bytarr(DATA_size[0],DATA_size[1])
> Data_sets_od = bytarr(DATA_size[0],DATA_size[1])
>
> for i = 0, (DATA_size[0]/2)-1 do begin
> for j = 0, DATA_size[1]-1 do begin
> Data_sets_ev[i,j] = my_data[(2*i),(2*j)]
> Data_sets_od[i,j] = my_data[(2*i),(2*j+1)]
> endfor
> endfor
> ;---------- ----------
>
> This is to extract a couple of NOAA14 AVHRR Sea Surface Temperature
> measurements. The different spectral bands overlap in the data file,
> hence they need to be separated by the above.

Liam has shown the array subscripting method -- which is fine -- but I will show another.

Keep in mind that a (2M) x N array can be thought of as a 2 x M x N array -- or an M x N array of pairs. IDL can reform the first kind of array into the second, and then it's a simple matter of extracting what you want. The "_ev" is the first of each pair, the "_od" is the second.

```
my_data = reform(my_data, 2, x_data/2, y_data, /overwrite)

data_sets_ev = my_data[0,*,*]
data_sets_od = my_data[1,*,*]
```

I use the /overwrite keyword for memory savings, but this of course modifies the dimensions of the original data.

Craig

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