Subject: Re: Find pixel based on latitude/longitude.
Posted by David Fanning on Thu, 26 Jan 2012 03:37:46 GMT
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Daniel Otis writes:

> This is a very basic question, but I am struggling to find a good
> solution. I have image arrays and want to find a pixel and a line
> value based on a latitude and a longitude.
>
> For example, a global SST array is 2D (8640x4320). I have a 1D array
> of latitudes(4320) and 1D array of longitudes(8640). Based on depth
> and other considerations, I have a latitude value and a longitude
> value where I want to extract data and I need to find the closest
> pixel.
>
> I can't use a WHERE command because my desired lat/lon values don't
> exactly correspond to those in the lat/lon arrays. I just want to find
> the closest pixel in the 2D array based on the lat and lon that I
> provide.
>
> This seems simple, but I have not been able to find a good solution.
> Any ideas are appreciated. Thanks.

```
latindex = Value_Locate(lats, mylat)
lonindex = Value_Locate(lons, mylon)
valueIwant = image[lonindex, latindex]
```

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Find pixel based on latitude/longitude.
Posted by Craig Markwardt on Thu, 26 Jan 2012 06:53:10 GMT
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On Jan 25, 10:37 pm, David Fanning <n...@dfanning.com> wrote:
> Daniel Otis writes:
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>> solution. I have image arrays and want to find a pixel and a line

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>
> latindex = Value_Locate(lats, mylat)
> lonindex = Value_Locate(lons, mylon)
> valueIwant = image[lonindex, latindex]

David's method is "nearest neighbor" interpolation. If you want to
get slightly fancier, use linear interpolation with INTERPOLATE().

Craig

Subject: Re: Find pixel based on latitude/longitude.
Posted by Fabzi on Thu, 26 Jan 2012 10:17:35 GMT
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On 01/26/2012 07:53 AM, Craig Markwardt wrote:
> David's method is "nearest neighbor" interpolation. If you want to
> get slightly fancier, use linear interpolation with INTERPOLATE().

Fancier, yes, but not allways scientifically valid ;-) It depends on the
spatial validity of your grid points and the kind of data you are
looking at. For SST, linear should more or less do the job...
