
Subject: latitude, longitude and a data point

Posted by [kramerpeterk](#) on Tue, 11 Nov 2008 14:00:29 GMT

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Hi,

I have 3 one dimension arrays,

```
LATITUDE    FLOAT    = Array[15979]
LONGITUDE    FLOAT    = Array[15979]
VALUES      LONG     = Array[15979]
```

and I want to be able to create a 2D array where each X,Y pair is the value at a particular latitude and longitude. To do this i've tried using David Fanning's scatter3d_on_map which I think plotted it correctly (hard for me to tell in direct graphics), but I am still not sure how to retrieve my 2D array with the floating values I want.

I'm sure someone will give me an exceedingly simple 1 line solution but any help would be appreciated =)

Regards,

Peter Kramer

Subject: Re: latitude, longitude and a data point

Posted by [MarioIncandenza](#) on Wed, 12 Nov 2008 20:29:40 GMT

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Peter,

If your lat and lon arrays are already points on a 2d grid, David's solution works. If they are points you wish to lay on an arbitrary grid, it works like this:

```
h2=hist_nd(transpose([[longitude],[latitude]]),[bin_x,bin_y],min=[-180,-90],max=[179.999999,89.99999],reverse_indices=ri2); grid
val2=h2*0.0d; initialize
for i=0l,n_elements(h2)-1 do if(h2[i] gt 0) then val2[i]
=MEAN_OR_WHATEVER(values[ri2[ri2[i]:(ri2[i+1]-1)]]); calculate
```

If that looks like black magic, go to David's website and search for "horror disgust".

--Edward H.
