Subject: Re: code help
Posted by lecacheux.alain on Thu, 31 Mar 2011 15:14:22 GMT
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On 31 mar, 14:22, smuzz <smussol...@gmail.com> wrote:
> Hi ---
>
> I am new to programming in IDL and am trying to write a code to avoid
> wasting hundreds of hours fighting with excel.
>
> My data: I have a .csv file with 2 columns. One column has the date
> (mm/dd/yyyy) and the second column has timestamps (hh:mm:ss). Each
> timestamp represents an incidence of a whale call occurrence. See
> below:
>
> 11/20/2007 00:00:53
> 11/20/2007 00:10:42
> 11/20/2007 00:17:50
> 11/20/2007 05:23:56
> 11/20/2007 05:00:10
> 11/20/2007 07:10:01
> 11/21/2007 01:20:23
> 11/21/2007 01:21:34
> .....
>
> My objectives: I would like to sum the number of whale call
> occurrences in each hour for the day (hours 0 - 23). Most days have
> hours without any whale call occurrences, so those are not accounted
> for in my .csv file above. Ideally for each day I am trying to get my
> data to look like this (including both absence and presence of whale
> call occurrences):
>
> 11/20/2007
> 0 3
> 1 0
> 2 0
> 3 0
> 4 0
> 5 2
> 6 0
> 7 1
> 8 0
> 9 0
> 10 0
> ....
> 23
>
> 11/21/2007

> 0
> 1
> 2
> 3
> ....
> 23
>
> Any suggestions would be greatly appreciated!
>
> Thanks, S

First transform your original string array in a julian day (double
precision) array, by using C formatting:
IDL> jd = dblarr(N_elements(your_string_array))
IDL> reads, your_string_array, jd, FORMAT='some_C_format'
in your case, some_C_format is
(C(CDI2,1x,CMOI2,1x,CYI4,3x,CHI2,1x,CMI2,1x,CSI2))
Then you can use the histogram function (with reverse indices) to sort
and count your data first by day, then by hours.
alx.

Subject: Re: code help
Posted by Jeremy Bailin on Thu, 31 Mar 2011 16:00:04 GMT
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You should be able to do it with one histogram - if you have a day "jd" and a time in hours "hour", create a new index that is hours since midnight on the first day:

day0 = min(jd)
index = hour + (jd-day0)*24

and then histogram index. You can then reform the result into a number-of-days x 24 array.

-Jeremy.
