Subject: Re: trying to export pixel data from .dat files, based on coordinate  loc
Posted by Maxwell Peck on Mon, 12 Jul 2010 21:39:17 GMT
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On Jul 13, 7:29 am, Snow53 <jennifer_wa...@hotmail.com> wrote:
> On Jul 12, 3:12 pm, Maxwell Peck <maxjp...@gmail.com> wrote:
>
>
>
>> On Jul 13, 6:37 am, Snow53 <jennifer_wa...@hotmail.com> wrote:
>
>>> Thanks to all who gave great advice. I almost have this up and
>>> running, but have a few more questions.
>
>>> 1. At the moment, I have tested this code based on two files that each
>>> have their own .hdr. For the real thing, I want to create only
>>> one .hdr that can be used for all (200+) files since they have the
>>> same dims, data type, etc. How can I modify this code to look for that
>>> one .hdr file and use information from that file when looping through
>>> each file in the folder?
>
>>> 2. The ENVI Available Bands GUI pops up when I run this.  Is this
>>> supposed to happen? I read that envi_open_file was non-interactive in
>>> idl (with batch mode).
>
>>> 3. The way the code currently reads, it will output twice when I run
>>> it but only giving me pixel data from the first file read under
>>> 'file'.  I think that I need to write a loop to specify to read from
>>> the 'file' list one at a time, go through the code, close that file,
>>> and then start with the next.  I'm not sure, though, how to write
>>> this, and would appreciate advice.
>
>>> 4. I did notice that I'm not getting back the correct sample/line
>>> pixel file locations from my input map locations (x,y). They seem to
>>> be one pixel off. Has anyone else had this happen?
>
>>> The code is shown below. Thanks again!
>
>>>  Goal: Extract pixel data based on input coordinate location for each
>>> file (ENVI binary)
>>> ; within a specified folder location. Export this data to a .csv file.
>
>>> pro extractdata4
>
>>> ;define path
>>>  cd, 'X:\MERRA\HDF_Output_Lena\test\'
>
>>> ;open envi files within given folder

```
>>>    file_array=file_search('*.dat', count=num_file)
>
>>>  for i=0, num_file-1 do begin
>>>    file=file_array
>>>    endfor
>>>  print, num_file
>>>    print, file
>
>>>  ;read ENVI binary files
>
>>>    envi_open_file , file, r_fid=fid
>
>>>  ;convert x,y map coordinates to corresponding pixel coordinates. note
>>>  that xmap and ymap can be single values or arrays if
>>>  ;needed to extract info for multiple pixels.
>>>    XMap=[109.55551335]
>>>    YMap=[79.25]
>
>>>    ENVI_CONVERT_FILE_COORDINATES, fid,XF, YF, XMap, YMap
>
>>>  XF_out=Round(XF)
>>>  YF_out=Round(YF)
>>>  print, 'x pix' ,XF_out
>>>  print, 'y pix', YF_out
>
>>>  ;specify the data dims for the pixels who's info you want to extract.
>>>  pos specifies which band(s) you want to extract from.
>>>  ;for example, if I have 4 bands and I only want to extract from bands
>>>  1 and 4, pos would be [0,3]. Then extract for these pixels/bands.
>>>    dims=[-1, XF_out, XF_out, YF_out, YF_out]
>>>    pos=[0]
>>>    pixdata = ENVI_GET_DATA(fid=fid, dims=dims, pos=pos)
>
>>>    print, pixdata
>>>  ;open text file to write data to
>>>  OPENU, U, 'pixel_value.csv', /get_lun, /append
>>>  ;write data
>>>  printf, U, pixdata
>>>  ;close LUN
>>>  close, U
>
>>>  end
>
>>  1. It can be done just using IDL to read in the images but it will
>>  probably be easier for you just to duplicate the header file and keep
>>  them in ENVI format. (Unless you wanted to completely rewrite the
>>  program)
>
```

>> 2. You probably want ,/NO_REALISE in your envi_open_file.
>
>> 3. Yes, use ENVI_FILE_MNG to close the file each time after the map
>> conversion.
>
>> 4. Is it one pixel off or half a pixel off ?
>
>> Max- Hide quoted text -
>
>> - Show quoted text -
>
> Thanks Max.
>
> I just checked and it is one pixel off, not 0.5.

Ok, im assuming you're using ENVI to check. Envi starts at 1,1 in the top left whereas the conversion i think uses 0,0 . I don't have envi here to check at the moment so I'd take a look yourself.

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