Subject: Re: Multiple linear regression
Posted by Rukasu83 on Sun, 26 Jul 2009 13:17:23 GMT
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On 26 jul, 00:21, David Fanning <n...@dfanning.com> wrote:
> Rukasu83 writes:
>> Hi everyone, uhm it's the first time I use this page to ask something,
>> so I don't if my question will be too long for an answer, but anyway
>> if anyone can help me with just a anything, I would appreciate so
>> much. The things is, I'm starting with IDL so I'm a little bit lost.
>> Could anyone tell how can I apply a multiple linear regression
>> function to procedure that read an ascii file that contains five
>> columns (id of meteorology station, temperature, latitude, longitude
>> and altitude) and 3 rows of numers. I was able to open and read the
>> file but I can't "connect" the function and the procedure, and I'm
>> losing my ideas :(. So, if anyone can help, that would be great.
>
> Wait. Let's start at the beginning. Five columns and three
> *ROWS* of numbers, and we want to do multiple linear regression!?
> On what, exactly? :-)
>
> Cheers,
>
> David
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:http://www.dfanning.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Hi David, uhm ok, I'll explain what I want to do. (I'm spanish so, sorry my english is not so good hehe). I need to make a climate model for a work in my postgrade. And I have to do it in IDL. But I'm a beginner with IDL, so my first goal is to make a code for a very simple climate model, in a way to get used to IDL. I'll start with a file that contains information of three climate station. Each climate station has information of Temperature, latitude, longitude and altitude, something like that:

Station	Temperature	Latitude	Longitude	Altitude
1	y1	x1	x2	x3
2	y1	x1	x2	x3
3	y1	x1	x2	x3

From this three stations, a want to interpolate temperature for an area. This area will be a DEM (digital elevation model, is that right?) I previously created in ENVI. The final result will be a

temperature image with the size of the DEM file. I hope I could express more or less in a clear way what I need to do.

What I've done so far, it's open the file with data of stations and read it. However I did it so simple, with this orders:

```
header = strarr(1)
readf, lun, header
print, header

data = fltarr (5,3)
readf, lun, data
print, data
```

Once I have my data, my next step would be to apply this data to a regression model:

Y= aX1+bX2+cX3+d where X1= latitude X2=longitude X3= altitude

With the regression model I would like to obtain a,b,c and d constants. So, if I have these constants I will able to introduce all the values from each pixel of my DEM in my regression equation and obtain Temperature for the whole DEM. Well, the values I would get from each pixel would be

Latitude = x value
Longitude = y value
Altitude = a value between 0 and 255.

So, this is what I'm working in and that's why I asked in these group about the possibily of use a regress function in a procedure. By the way, I checked your webpage, and it's soooo cool, really,it's very helpful. There is one example to read ascii file I try to use it in my procedure that help me a lot to understand IDL. It's great to have people in internet like you so helpful hehe. Anyway, thanks for asking and any help hehe.
regards

Lucas