Subject: multiple linear regression
Posted by sese on Fri, 09 Jan 2004 10:33:43 GMT
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I'm using REGRESS to perform a multiple linear regression, but I need a solution with all the coefficients positive. Is there a routine similar to regress allowing only non-negative solutions?

Subject: Re: Multiple linear regression
Posted by David Fanning on Sat, 25 Jul 2009 22:21:52 GMT
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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.")

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:
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> 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

Subject: Re: Multiple linear regression
Posted by Wout De Nolf on Sun, 26 Jul 2009 14:21:10 GMT
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On Sat, 25 Jul 2009 15:10:11 -0700 (PDT), Rukasu83
<lsevillagarcia@gmail.com> wrote:

> Hi everyone, uhm it's the first time I use this page to ask something,
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> Thank you.
>
> Lucas

Look for the REGRESS function in IDL's help.
