Subject: Re: least square matrix
Posted by James Kuyper on Fri, 11 Mar 2005 14:43:56 GMT
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Matthias Demuzere wrote:
> Hi,
>
> Because my question maybe still a bit unclear, here it is again:
>
> I have a dataset of temperatures taken at hourly steps (k-value, ranging
> from 1-24) for a whole
> month (with i days). Now, I would like to compare each temperature Tk,i with
> every other Tk,j with j the same number of days as in i. I would like to do
> that comparison by least square methods like this
>
> Matrix Ai,j = sum (Tk,i-Tk,j)^2
>
> where the matrix Ai,j is a symmetrical matrix (because i,j are the same
> day).
>
> How can that be done in IDL?

sum(Tk,i-Tk,j)
= sum(Tk,i^2 -2Tk,i*Tk,j+Tk,j^2)
= sum(Tk,i^2) -2 sum(Tk,i*Tk,j)+sum(Tk,j^2)

```
T = indgen(31,24)*0.1
T2 = (T^2)#replicate(1,24,31)
A = T2 -2*T#transpose(T)+transpose(T2)
```