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Subject: Re: 2D Pearson correlation coefficient  
Posted by [Russell Ryan](#) on Fri, 31 Jan 2014 05:14:40 GMT  
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Lim,

You're getting snarky responses because you're asking a stupid question. I can understand if you don't know how to calculate the 2d Pearson coefficient. But, how can you expect anyone to have any clue what the weighting coefficients ought to be, since you've told us nothing about what {M} or {O} are? I assume they're data of some sort, but what data? Are they measurements, do they have uncertainties? If so, then what is your error distribution (I mean are they Gaussian uncertainties or Poisson or what). If so, then I'd consider inverse variance weighting, but that's just a hunch.

How can you expect anyone to know what you're doing if you don't tell them?

You should read a few blogs (including David's) on "how to ask a help question." I truly mean no disrespect.

Russell

On Thursday, January 30, 2014 9:43:54 AM UTC-5, Lim wrote:

> Dear all,  
>  
> I would like to ask if someone know a code to calculate a 2D Pearson correlation as:  
>  
>  
>  
> 
$$r^2 = \frac{\sum w_i (M_i - M)(O_i - O)}{(\sum w_i (M_i - M)^2)(\sum w_i (O_i - O)^2)}$$
  
>  
>  
> Sum runs from  $i=1$  to  $N$ .  $N$  is the total number of grid cells.  
>  
>  $M_i$  and  $O_i$  are the values in the grid cell  $i$  and  $w_i$  is a normalized weight (area) of grid cell  $i$ .  $\sum w_i = 1$  (Sum from  $i=1$  to  $N$ ).  
>  
>  
>  
> IDL has `C_Correlate` and `R_correlate` but none of them include the  $w_i$  factor.  
>  
>  
>  
> I will appreciate any assistance.  
>  
>

>  
> Lim

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