Subject: Re: Correlate and NAN
Posted by Pavel A. Romashkin on Mon, 08 Jan 2001 16:55:37 GMT
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How about using just the coincident valid data pairs that you can get
using FINITE and GET_INTERSECTION functions?

ind_1 = where(finite(data_set_1))
ind_2 = where(finite(data_set_2))
index = Setintersection(ind_1, ind_2)
result = correlate(data_set_1[index], data_set_2[index])

"Setintersection" is posted on David's home page,
http://www.dfanning.com/tips/set_operations.html. Although it is called
there *Setintersection*, although it does not *set* anything, it returns
what you need :-)

Cheers,
Pavel

Ben Tupper wrote:
>
> Hello,
>
> I have two datasets that I would like to correlate using the CORRELATE
> function. Each dataset has some members flagged as NANs; the NANs are
> not neccessarily coincident.   The online documentation makes no mention
> of NAN-handling, but the procedure in the lib directory indicates (see
> modifications history) that it handles NANs (although there is no
> keyword for it). It doesn't really handle NANs the way I expect it
> to.   For example, repeated calls to the TOTAL function don't set the
> keyword NAN, so TOTAL doesn't check for NANs.
>
> I'm not sure if it is reasonable to involve NANs in a correlation... but
> it seems reasonable to request that the routine ignore NANs in the input
> arguments.
>
> Is there a simple solution to this NAN-jam?
>
> Thanks,
>
> Ben
>
> --
> Ben Tupper
> Bigelow Laboratory for Ocean Sciences
> 180 McKown Point Rd.
> W. Boothbay Harbor, ME 04575

Subject: Re: Correlate and NAN
Posted by Andy Loughe on Mon, 08 Jan 2001 17:08:59 GMT
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Why not simply perform the correlation on a subset of the larger arrays,
that portion with the NaNs removed? Something like:

indices = [where(finite(dataset1) eq 1), where(finite(dataset2) eq 2
)]

common_indices = indices(UNIQ(indices, sort(indices)))

Result = CORRELATE(dataset1(common_indices), dataset2(common_indices)
)

Ben Tupper wrote:
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> Ben Tupper
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--
Andrew Loughe ==
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Subject: Re: Correlate and NAN
Posted by btt on Mon, 08 Jan 2001 18:24:24 GMT

Thanks Pavel and Andy,

I have deNANed the data as you suggested.

Ben

Andy Loughe wrote:

> Why not simply perform the correlation on a subset of the larger arrays,
> that portion with the NaNs removed? Something like:
>
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>
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>
> Result = CORRELATE(dataset1(common_indices), dataset2(common_indices)
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>> --
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>
> --
> Andrew Loughe ===
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--
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Subject: Re: Correlate and NAN
Posted by atmospheric physics on Tue, 03 Feb 2015 15:06:18 GMT
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Hello,

Following the earlier posts, I have one query: How about applying this method for a data matrix with m columns & n rows? Finding common indices for two arrays is easy. How can this be done for a data matrix with m x n dimensions so that CORRELATE function can be used automatically to obtain m x m dimensional correlation matrix.

Any suggestions???

Thanks in advance,
Madhavan