Subject: Re: newbie MOMENT question
Posted by Liam Gumley on Mon, 15 Jul 1996 07:00:00 GMT
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Charlotte DeMott wrote:
> I want to compute the mean and variance of a set of data points, and
> I'm using the MOMENT procedure to do it. With some fields, the
> variance is quite small (i.e., o(e-03)), so I get floating point
> underflow errors when MOMENT tries to compute the skewness and
> kurtosis. since i don't really care about the skewness and kurtosis,
> how can i get IDL to not worry about this, and continue with the
> rest of the procedure? online help suggests that some combination
> of ON_ERROR and/or CATCH would appropriate, but i haven't been
> able to figure out exactly how to use these two yet. any suggestions?

The following works well for me.

Cheers,
Liam.

```
pro stddev, array, mean, variance, sigma

;+
; Purpose:
;    To compute the mean, variance, and standard deviation
;    (also known as RMS, root-mean-square) values for a given dataset.
;
; Usage:
;    stddev, array, mean, variance, sigma
;
; Input:
;    array    array of data values (must have more than one element)
;
; Output:
;    mean      data mean
;    variance  data variance
;    sigma     data standard deviation
;-

;- check number of elements

n = n_elements( array )
if ( n lt 1 ) then message, 'Number of elements less than 1 in STDDEV'

;- compute mean and variance

mean = total( double( array ) ) / double( n )
variance = total( double( array ) ^ 2 ) / double( n ) - mean ^ 2
```

```
;- compute sigma if precision ok, otherwise return zero

sigma = 0.0d
test = 1.0d + variance
if ( test gt 1.0d ) then sigma = sqrt( variance )

end
```

Subject: Re: newbie MOMENT question
Posted by David Foster on Tue, 16 Jul 1996 07:00:00 GMT
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demott@denali (Charlotte DeMott) wrote:
>
> Hi,
>
> I want to compute the mean and variance of a set of data points, and
> I'm using the MOMENT procedure to do it. With some fields, the
> variance is quite small (i.e., o(e-03)), so I get floating point
> underflow errors when MOMENT tries to compute the skewness and
> kurtosis. since i don't really care about the skewness and kurtosis,
> how can i get IDL to not worry about this, and continue with the
> rest of the procedure?

Try using

 junk = CHECK_MATH(trap=0)

to disable math traps.

Dave Foster
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