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Subject: Re: Missing Data Programming Contest  
Posted by [Homeyer](#) on Wed, 08 Apr 2009 23:26:19 GMT  
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On Apr 8, 6:02 pm, Homeyer <cam.the.weather....@gmail.com> wrote:

> On Apr 8, 8:23 am, David Fanning <n...@dfanning.com> wrote:

>

>

>

>> Folks,

>

>> I don't have time today to think about this, so I've

>> decided to get you to do my thinking for me. :-)

>

>> Suppose you are expecting a data array and you suspect

>> the data has "missing values" in it that you wish to

>> exclude from further processing. You write a keyword

>> for your routine that allows the user to pass in what

>> he is using for the "missing value".

>

>> PRO Junker, data, MISSING\_VALUE=missing\_value

>

>> How would you write the code to assure that this missing

>> value would be excluded from further processing?

>

>> You should assume:

>

>> 1. The data can be any data type except complex or string.

>

>> 2. The missing value \*could\* be !VALUES.F\_NAN.

>

>> 3. Unsophisticated users might be using your program,

>> so, for example, they might pass in a missing value

>> such as 594.32.

>

>> No, this is NOT my homework! But I do need it ASAP. ;-)

>

>> 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.")

>

> The following should suffice:

>

```

> IF (missing_value GT 0) THEN BEGIN
>   type = SIZE(array, /TNAME)
>
>   CASE type OF
>     'COMPLEX' : MESSAGE, 'Complex values not allowed for removing
> MISSING data.'
>     'STRING' : MESSAGE, 'String values not allowed for removing
> MISSING data.'
>     ELSE      : invalid = WHERE((array EQ missing_value), iv_count,
> COMPLEMENT = valid, NCOMPLEMENT = v_count)
>   ENDCASE
>
>   IF (v_count GT 0) THEN array = array[valid]
> ENDIF
>
> That is, if you dont care about overwriting the original data or it is
> not gridded. If it is gridded (data points with missing values should
> remain), then you could replace those with NaNs in the final array
> using the indices above.
>
> Cheers,
> Cameron Homeyer

```

oops, missed the NaN part:

This would go before the last IF (v\_count...

```

IF (~FINITE(missing)) THEN invalid = WHERE(~FINITE(array), iv_count,
COMPLEMENT = valid, NCOMPLEMENT = v_count)

```

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