
Subject: Re: Missing Data Programming Contest
Posted by [Homeyer](#) on Wed, 08 Apr 2009 23:02:51 GMT
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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
