Subject: Interpolate the NaN in 2D array.
Posted by anagetinga on Wed, 22 Jul 2015 17:14:52 GMT
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Hi everyone,

I have a question about 2D interpolation with NaN inside. My doubt is how I proceed to interpolate NaN inside the 2D array.

Best regards,
Cosme

Subject: Re: Interpolate the NaN in 2D array.
Posted by Paul Van Delst[1] on Wed, 22 Jul 2015 18:04:51 GMT
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On 07/22/15 13:14, anagetinga@gmail.com wrote:
> Hi everyone,
>
> I have a question about 2D interpolation with NaN inside. My doubt is
> how I proceed to interpolate NaN inside the 2D array.

Filter them out?

INTERPOL has a /NAN keyword. But you can do it yourself too.

cheers,

paulv

Subject: Re: Interpolate the NaN in 2D array.
Posted by wlandsman on Wed, 22 Jul 2015 19:11:48 GMT
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On Wednesday, July 22, 2015 at 2:04:53 PM UTC-4, Paul van Delst wrote:
> On 07/22/15 13:14, a**@gmail.com wrote:
>> Hi everyone,
>>
>> I have a question about 2D interpolation with NaN inside. My doubt is
>> how I proceed to interpolate NaN inside the 2D array.
>
> Filter them out?
>
> INTERPOL has a /NAN keyword. But you can do it yourself too.

INTERPOL() is only for 1-d data I believe. But I would probably start by averaging the result of using INTERPOL() over a row, and INTERPOL() over a column. A more "correct' way would be to use the very powerful -- and very complicated -- GRIDDATA() function, but this is only for the ambitious.

For a similar problem I have used the maskinterp package by Joe Harrington (https://physics.ucf.edu/~jh/ast/software.html) but again it is not very user-friendly. However, in my case I had to make sure that I did not bias my results when interpolating over multiple NaN values, and this package is good for this.

Subject: Re: Interpolate the NaN in 2D array.
Posted by Haje Korth on Thu, 23 Jul 2015 11:58:08 GMT
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On Wednesday, July 22, 2015 at 1:14:54 PM UTC-4, Cosme Alexandre wrote:
> Hi everyone,
>
> I have a question about 2D interpolation with NaN inside. My doubt is how I proceed to interpolate NaN inside the 2D array.
>
> Best regards,
> Cosme

INTERPOLATE (instead of INTERPOL) does 2D interpolation. It has a MISSING keyword. Try setting MISSING=!value.f_nan.

Subject: Re: Interpolate the NaN in 2D array.
Posted by wlandsman on Fri, 24 Jul 2015 03:40:15 GMT
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On Thursday, July 23, 2015 at 7:58:10 AM UTC-4, Haje Korth wrote:
>
> INTERPOLATE (instead of INTERPOL) does 2D interpolation. It has a MISSING keyword. Try setting MISSING=!value.f_nan.

I don't believe that INTERPOLATE() can deal with NaN values. The MISSING keyword is used to set an *output* value to elements outside of the range of the input array.

And INTERPOLATE() does not have any way to recognize NAN values as special. For example,

```
IDL> a = dist(5)
IDL> a[2,3] = !values.f_nan
IDL> print,interpolate(a,2,3)
       NaN
```

```
IDL> print,interpolate(a,2.3,3.3)
      NaN
```