Subject: Re: irregular-to-irregular interpolation
Posted by Gray on Thu, 12 May 2011 16:46:58 GMT
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On May 12, 11:01 am, Jeremy Bailin <astroco...@gmail.com> wrote:
> This is one of those this-must-exist-but-I-can't-find-it cases:
>
> I have a quantity which is sampled irregularly over a 2D region. I would like to interpolate its value at a number of irregularly-spaced locations. I've only been able to find functions that go to and from regular grids - so I could go from the irregularly-sampled grid to a regular grid, and then from the regular grid to the irregularly-spaced interpolation points, but that seems silly. Is there something that already exists that goes directly from irregularly-sampled data to irregularly-spaced interpolation points?
>
> -Jeremy.

You should be able to use INTERPOLATE, with your x and y vectors being
your irregular points.

Subject: Re: irregular-to-irregular interpolation
Posted by Jeremy Bailin on Thu, 12 May 2011 16:58:02 GMT
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No, INTERPOLATE requires that the original samples be on a regular grid.

I probably should just code up my own, but I don't have time so I'm resorting to using TRIGRID to go from irregular samples to a regular grid, and then INTERPOLATE to go from the regular grid to my desired locations.

-Jeremy.

Subject: Re: irregular-to-irregular interpolation
Posted by Kenneth P. Bowman on Thu, 12 May 2011 21:35:24 GMT
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In article
<61009620-8115-4a53-a223-b2f8189a186c@w36g2000vbi.googlegroups.com>,
Gray <graylikethecolor@gmail.com> wrote:

>> This is one of those this-must-exist-but-I-can't-find-it cases:
>>
>> I have a quantity which is sampled irregularly over a 2D region. I would like to interpolate its value at a number of irregularly-spaced locations. I've only been able to find functions that go to and from regular grids - so I could go from the irregularly-sampled grid to a regular grid, and then

from the regular grid to the irregularly-spaced interpolation points, but that seems silly. Is there something that already exists that goes directly from irregularly-sampled data to irregularly-spaced interpolation points?
>>
>> -Jeremy.
>
> You should be able to use INTERPOLATE, with your x and y vectors being
> your irregular points.

I don't think that INTERPOLATE will work. INTERPOLATE expects
a gridded input field.

I think you need to use TRIGRID with the XOUT and YOUT keywords.

Ken Bowman

Subject: Re: irregular-to-irregular interpolation
Posted by Kenneth P. Bowman on Thu, 12 May 2011 21:50:10 GMT
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In article <k-bowman-A42E1F.16352312052011@news.tamu.edu>,
"Kenneth P. Bowman" <k-bowman@null.edu> wrote:

> I think you need to use TRIGRID with the XOUT and YOUT keywords.
>
> Ken Bowman

That may not work either. You will have to do some experimentation,
and I bet you can fool TRIGRID into doing what you want.

Ken Bowman

Subject: Re: irregular-to-irregular interpolation
Posted by David Streutker on Fri, 13 May 2011 12:05:57 GMT
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On May 12, 5:50 pm, "Kenneth P. Bowman" <k-bow...@null.edu> wrote:
> In article <k-bowman-A42E1F.16352312052...@news.tamu.edu>,
> "Kenneth P. Bowman" <k-bow...@null.edu> wrote:
>
>> I think you need to use TRIGRID with the XOUT and YOUT keywords.
>
>> Ken Bowman
>
> That may not work either. You will have to do some experimentation,

> and I bet you can fool TRIGRID into doing what you want.
>
> Ken Bowman

TRIGRID with XOUT and YOUT will output to an irregularly spaced grid.
If you need to output to scattered points, use GRIDDATA with the XOUT
and YOUT keywords.

Subject: Re: irregular-to-irregular interpolation
Posted by Jeremy Bailin on Sun, 15 May 2011 19:15:29 GMT
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Aha! Yes, GRIDDATA with XOUT and YOUT is a winner!

-Jeremy.
