Subject: Re: Nearest neighbors
Posted by Chris[6] on Thu, 08 Oct 2009 02:00:25 GMT
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On Oct 7, 2:01 pm, "N. Johnson" <evilish...@gmail.com> wrote:
> I have a set of latitude/longitude pairs and I need to find the n
> closest neighbors for all of them. I'm trying to use the
> nearest_neighbors() function found on this
page:http://www.dfanning.com/code_tips/slowloops.html
>
> However, when I attempt to run the function, I get an error on the
> line:
> p=c[c[point]:c[point+1]-1] ;start with this point's DT neighbors
>
> because c[point] is equal to c[point+1]. Since I don't know exactly
> what the function is doing, I don't know how to fix it. If it matters,
> I have a lot of lat/lon pairs (~1e6) and there may be duplicates.
>
> Any suggestions?
> Nathan Johnson

I have an alternative nearest neighbors routine that doesn't use
triangulation - it may be useful (it assumes a euclidian space, so it
won't work if your points are very spread out or near a pole)

Documentation:
http://www.ifa.hawaii.edu/~beaumont/code/nearestn.html (look at
nearestn, not nearestn_findneighbors)

Library:
http://www.ifa.hawaii.edu/~beaumont/code/beaumont_library.ta r

Chris

Subject: Re: Nearest neighbors
Posted by penteado on Thu, 08 Oct 2009 02:31:25 GMT
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On Oct 7, 9:01 pm, "N. Johnson" <evilish...@gmail.com> wrote:
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>
> Any suggestions?
> Nathan Johnson

I do not know if this is the problem, but if you need to remove
duplicates, you can use grid_input.

Subject: Re: Nearest neighbors
Posted by N. Johnson on Fri, 09 Oct 2009 00:08:12 GMT
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On Oct 7, 7:00 pm, Chris <beaum...@ifa.hawaii.edu> wrote:
> On Oct 7, 2:01 pm, "N. Johnson" <evilish...@gmail.com> wrote:
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> Documentation:http://www.ifa.hawaii.edu/~beaumont/code/neare stn.html(look at
> nearestn, not nearestn_findneighbors)
>
> Library:http://www.ifa.hawaii.edu/~beaumont/code/beaumont_li brary.tar
>
> Chris

Chris,

Thanks that works well. Is there a way to get the nth nearest points
by calling that function just once? Or do I have to call it n times?

Thanks,
Nathan

Subject: Re: Nearest neighbors
Posted by Chris[6] on Fri, 09 Oct 2009 01:55:06 GMT
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On Oct 8, 2:08 pm, "N. Johnson" <evilish...@gmail.com> wrote:
> On Oct 7, 7:00 pm, Chris <beaum...@ifa.hawaii.edu> wrote:
>
>
>
>> On Oct 7, 2:01 pm, "N. Johnson" <evilish...@gmail.com> wrote:
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>> Chris
>
> Chris,
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> by calling that function just once? Or do I have to call it n times?
>
> Thanks,
> Nathan

Yes, if you set the /all keyword, it will return a 2d array of the nth nearest neighbors for each point. Note that it starts counting from zero, so if you set n = 3, the resulting array will by (4, n_points)

chris
