
Subject: Is a point in a 4 vertex polygon?

Posted by [Nando Iavarone](#) on Fri, 12 Feb 1999 08:00:00 GMT

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Hi all,
does anyone know a function that check if
a given point is inside a 4 vertex polygon?

Cheers,

Nando

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Nando Iavarone

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Subject: Re: Is a point in a 4 vertex polygon?

Posted by [David Foster](#) on Tue, 16 Feb 1999 08:00:00 GMT

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Michael W Asten wrote:

>

> Nando Iavarone wrote:

>

>> Hi all,

>> does anyone know a function that check if

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>> Cheers,

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One method would be to use POLLYFILLV() to return array subscripts
for the points within a polygon defined by vectors X and Y, and
search this for your point. I'm sure there's probably a faster way,
I wasn't able to see David Fanning's "Math Tips" section (network
error).

Dave

--

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Subject: Re: Is a point in a 4 vertex polygon?

Posted by [David Kastrup](#) on Wed, 17 Feb 1999 08:00:00 GMT

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Nando Iavarone <f.iavarone@acsys.it> writes:

- > Thanks all.
- > I found another one algorithm.
- > It uses the vectorial product properties to check
- > if a point is above or below a line.

Presuming that you just do the cross product (which is just a determinant, really) of vector a-M and b-a to check whether M lies to the left of a-b, you should be aware that this algorithm, though fast, works only with convex polygons.

If you draw a quadrilateral that is like an arrow tip, or like a delta plane (namely two sharp triangles pointing backwards), then a point in one of the tips will fail the criterion.

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Subject: Re: Is a point in a 4 vertex polygon?

Posted by [wmc](#) on Wed, 17 Feb 1999 08:00:00 GMT

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- > http://www.dfanning.com/tips/point_in_polygon.html

This is sourced from Baard Krane <bard.krane@fys.uio.no>. It was posted to this NG on Wed, 01 Apr 1998.

I have a slightly upgraded version at <http://www.nbs.ac.uk/public/icd/wmc/idl>, which copes with vector input.

-William

--

William M Connolley | wmc@bas.ac.uk | <http://www.nbs.ac.uk/public/icd/wmc/>
Climate Modeller, British Antarctic Survey | Disclaimer: I speak for myself

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Posted by [Nando Iavarone](#) on Wed, 17 Feb 1999 08:00:00 GMT

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