Subject: Already written function to find if a point is within a rectangle?
Posted by Jacare Omoplata on Mon, 20 Feb 2012 21:29:32 GMT
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Hi,

I'm working with some data that has been extracted from astronomical images. All the stars in the images have been identified and their x and y positions are recorded among other information. (these x and y position can be converted the Right Ascension (RA) and Declination (DEC), so the position of the star in the sky can be found)

These images overlap. I want to plot the positions of all the stars from all the images, but because of image overlaps, some points are going to be counted twice. Since the RA and DEC are floating point numbers, for the same star in two images they might be slightly different. So using the RA and DEC to identify double counts is not going to work.

I've come up with the following plan.

Start reading in stars by file. After reading each file, get the boundaries of each image (they are rectangular) and store them. For each star, check whether it is within the region of images already read. If it is, don't read it in. If it does not lie within the regions already read, read it in.

So I need a way to find out if a point (position of a star) is within a rectangle (image boundary). The rectangle edges are not strictly horizontal or vertical.

I've found several methods of doing this, and can write a function. But I can save some time if someone knows if there's already one available out there.

Thanks.