Subject: Using "tie points" in rasters
Posted by GB on Wed, 11 May 2016 21:35:02 GMT
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Hello,

I am working with a digital elevation map raster and ran into a problem that I am unsure how to approach.

Once I get the spatial reference object of my DEM raster, I then get the tie_point_pixel, the tie_point_map, and pixel_size from the spatialref. I then seek to transform the map coordinates of a set of LiDAR points into the pixel indices of my raster. The thing I am confused about is how rounding plays into this problem.

For instance, lets say that I use the following function to convert the x-coordinate of my lidar point into pixel coordinates:
(lidar_point_x-tie_point_map[0])/pixel_size[0]
But, I get a decimal place in the outcome. Lets say that the decimal point is 0.64. Would this decimal point translate into the point belonging to index 0 or to index 1?

I suppose I am confused about if the tie_point_map is centered on the tie_point_pixel such that it extends a range of -0.5*pixel_size to 0.5*pixel_size. If anyone could elaborate on this I would be very thankful.

Subject: Re: Using "tie points" in rasters
Posted by jiashenyue on Thu, 12 May 2016 03:21:30 GMT
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On Wednesday, May 11, 2016 at 2:35:04 PM UTC-7, GB wrote:
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>
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very thankful.

Usually I just round the decimal points to the closest pixel. If I got a index of 1.64, I go for 2. I would say this is quite fair, since in this case, the pixel you are trying to locate is closer to the next pixel.

Shenyue

Subject: Re: Using "tie points" in rasters
Posted by GB on Thu, 12 May 2016 12:52:52 GMT

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On Wednesday, May 11, 2016 at 11:21:31 PM UTC-4, SHENYUE JIA wrote:
> On Wednesday, May 11, 2016 at 2:35:04 PM UTC-7, GB wrote:
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>
> Shenyue

That is what I was thinking. I was just confused about whether or not the tie_point_map was centered on the pixel or denoted the upper left-hand corner of the pixel.

Thanks for the help.