Subject: weighted average for label_region
Posted by rpertaub@gmail.com on Wed, 24 Oct 2007 15:17:02 GMT
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Hi,
I need to perfect a working algorithm to make it more accurate. I have an image that consists of many spots. I need to find where the center of each spot is. This is the algorithm I am using:

```
ncol=image_size[0]
regions = label_region(SpotsMask, /All_NEIGHBORS)
n_spots=max(regions)
print,"There are",n_spots," spots on image"
 window,4,xsize=image_size[0],ysize=image_size[1], title="Positions of
Spots on Image"
 tvscl,final_image

temp=0
spotscoord = make_array(2,n_spots)

  for j = 1, n_spots DO BEGIN
    ind = where(regions eq j, count)
    spotscoord[0,temp]=(mean(ind) mod nCol)
    spotscoord[1,temp]=(mean(ind) / nCol)
    temp=temp+1
    endfor
```

This leaves me with my spotscoord array with x,y coordinates. However, I need to find the center of each spot with some weighted average...i.e. if the cluster of pixels (for one spot) is more bright on one side, then the center will be skewed there...is there a way for me to do that?

Thanks,
RP

Subject: Re: weighted average for label_region
Posted by ben.bighair on Wed, 24 Oct 2007 21:01:06 GMT
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On Oct 24, 11:17 am, "rpert...@gmail.com" <rpert...@gmail.com> wrote:
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>  on one side, then the center will be skewed there...is there a way for
>  me to do that?
>
>  Thanks,
>  RP
```

Hi,

I think you want to weight in your sportscoord calculation by the (presumably) grayscale value of the original image pixels for that blob. Brighter pixels will carry more weight. I don't know if it is the correct term, but I call this "center of mass" as opposed to the unweighted "centroid". Thus you would change

```
spotscoord[0,temp]=(mean(ind) mod nCol)
```

to

```
spotscoord[0,temp]=mean((ind mod nCol) * origImage[ind])
```

Cheers,
Ben
