Subject: Re: Thinning algorithm without for loops
Posted by Jeff N. on Mon, 06 Aug 2007 19:55:13 GMT
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On Aug 6, 3:31 pm, nathan12343 <nathan12...@gmail.com> wrote:
> Hi all-
>
> I'm trying to impliment the Zhang-Suen thinning algorithm in IDL.
> This particular algorithm decides whether a pixel needs to be deleted
> or not based on properties of the pixels immediately surrounding the
> pixel we are concerned with (i.e. a pixel's 8-neighbors). This
> naturally lends its self to for loops. Let's say I have an image, a
> 512X512 array of bytes. The code iteratively scans over each pixel
> and determines whether it needs to be set to 0 based on the Zhang-Suen
> thinning rules. What I can't figure out is how to scan the images
> without for loops. If I use for loops I can easily index the pixels
> immediately surrounding image[i,j] by saying image[i-1,j] or image[i
> +1,j-1], etc.
>
> Does anyone know of a way to do this kind of indexing in an image
> without the use of for loops?
>
> -Nathan Goldbaum

I've never done this myself, so someone else will probably have to
give you details if you need more help, but I think the function you
need is the SHIFT() function. Have a look at the help files for that
and see what you think.

Jeff