
Subject: Connected component analysis

Posted by [Dave Brennan](#) on Wed, 08 Nov 2000 08:00:00 GMT

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Hi,

I am currently trying to write a program in IDL to analyze brain MRI images. This involves using various morphological operations. I was wondering if anyone has any experience using connected component analysis in IDL.

I am trying to replicate results that I can produce using Analyze AVW's connect operator (this connects 3D binary structures and gives them a grey scale value relating to their size).

If anyone has any code or knows of a good way to go about this (or any good references) please could you let me know.

Thanks for your help

Dave Brennan

Subject: Re: Connected component analysis

Posted by [Jason P. Meyers](#) on Wed, 08 Nov 2000 08:00:00 GMT

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Dave,

This sounds like a 3-D extension of a problem we discussed in our graduate DIP class. One of our homework problems involved discussing an algorithm to do a 2-D analogy of what you are asking. Our professor, Dr. Rhody, has a rather extensive website which includes most of our class notes on the subject. His library of routines also has a program called HR_LABEL_REGION which is an improved version of IDL's LABEL_REGION routine which only works on binary images.

You can check out the website at: <http://www.cis.rit.edu/class/simg782/>

The textbook that we use in the class is Digital Image Processing, by Gonzalez and Wood, ISBN 0-201-50803-6. I don't know how useful it is for your problem because we have been relying mostly on the professor's class notes and only use the text as a reference from time to time.

Please let me know if you think I might be able to help you further.

Jason Meyers
Ph.D. Student, Center for Imaging Science
Rochester Institute of Technology

jpm7934@rit.edu

Dave Brennan wrote:

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> Hi,
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> Thanks for your help
>
> Dave Brennan

Subject: Re: Connected component analysis

Posted by [Dave Brennan](#) on Thu, 09 Nov 2000 08:00:00 GMT

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Hi Jason,

Thanks for the info Jason. Sometimes I can't see the wood for the trees and that is where the newsgroup comes to the rescue!

After looking through the IDL documentation, somehow I managed to miss LABEL_REGION. This is exactly what I am looking for. I have already binarised the data by this point so the function does what I need.

However, the new routine you mention does sound interesting and so I will have a look at it.

Thanks for the info.

Cheers

Dave Brennan

"Jason P. Meyers" wrote:

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