
Subject: Newbie question
Posted by J. Allen Brandt on Thu, 21 Mar 1996 08:00:00 GMT
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As a potential buyer of IDL/PV-Wave, I am new to this newsgroup and had hoped to use it to help me make a purchasing decision. Without starting a flame war, let me ask, "Is there a FAQ available that shows the similarities and differences between the two products?" I have been considering the following Windows packages: Matlab, Hi-Q, IDL, and PV-Wave. There is a considerable price span for these products.

I am a researcher who needs a tool to help me develop mathematical convolutions and statistical analyses for image processing. I work with 2-D and 3-D image data and I need to perform things like texture analysis, color segmentation, object counting, morphology, etc. I would ideally like a package that would allow me to output "C" code. I could then build a Visual C++ GUI front-end for it and distribute it for use within my organization. Alternatively, I could simply use the native interpreted code to prototype my techniques and once proven, re-write them in C.

Can anyone offer any guidance as to the appropriate package for my stated needs?

JB

Subject: Re: Newbie Question
Posted by Craig Markwardt on Mon, 23 Aug 1999 07:00:00 GMT
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Dan Fletcher <djfletcher@ucdavis.edu> writes:

>
> Coeff=DIGITAL_FILTER(Flow,Fhigh,50,40)
> FilteredTestDataSub=CONVOL(Data[0,*],Coeff)
>
> When I do this, I get an error that says
>
> CONVOL: Kernel's dimensions are incompatible with operand's.
>
> I think this is because the Data[0,*] gives a 1xm array rather than a
> vector of length m. I can't figure out any way to change that 1xm array
> into a vector without a FOR DO loop. Is there some simple way to solve
> this problem?
>

I don't know much about the digital filtering, but if you want to convert a matrix to a vector, it's pretty simple. Like this:

FilteredTestDataSub=CONVOL((Data[0,*])[*] ,Coeff)

Any vector or matrix with a [*] after it will be converted to a
one-dimensional vector. The parentheses are needed because Data[0,*]
is an expression.

Craig

--
 -- --------------
Craig B. Markwardt, Ph.D.   EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
 -- --------------

Subject: Re: Newbie Question
Posted by davidf on Mon, 23 Aug 1999 07:00:00 GMT

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Dan Fletcher (djfletcher@ucdavis.edu) writes:

> I'm new to IDL and am implementing some signal processing code. I have
> an array corresponding to a set of n time series, each with m points. I
> want to filter each time series so I'm using the following code to
> filter the first time series
>
> Coeff=DIGITAL_FILTER(Flow,Fhigh,50,40)
> FilteredTestDataSub=CONVOL(Data[0,*],Coeff)
>
> When I do this, I get an error that says
>
> CONVOL: Kernel's dimensions are incompatible with operand's.
>
> I think this is because the Data[0,*] gives a 1xm array rather than a
> vector of length m. I can't figure out any way to change that 1xm array
> into a vector without a FOR DO loop. Is there some simple way to solve
> this problem?

```
   data = Reform(data[0,*])
```

The trailing dimension of 1 will be dropped by IDL and you
will end up with the row vector you are looking for.

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting
Phone: 970-221-0438 E-Mail: davidf@dfanning.com
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: Newbie Question
Posted by Matthew J. Sheats on Mon, 23 Aug 1999 07:00:00 GMT

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Dan Fletcher wrote:

> I think this is because the Data[0,*] gives a 1xm array rather than a
> vector of length m. I can't figure out any way to change that 1xm array
> into a vector without a FOR DO loop. Is there some simple way to solve
> this problem?

Ooh. One I can answer. Heh.

Use REFORM(...) to trim off extra dimensions. For Ex:

```
 Coeff=DIGITAL_FILTER(Flow,Fhigh,50,40)
 FilteredTestDataSub=CONVOL(REFORM(Data[0,*]),Coeff)
```

It will strip off that extra 1 dimension. Check out the help for more info.

> Thanks for any help,
> Dan Fletcher
> UCD Vet Med Class of 2002

Matthew Sheats
Los Alamos National Laboratory and
UCD Computer Science Grad Student, Class of God Only Knows....

Subject: Re: Newbie Question
Posted by Nando Iavarone on Tue, 24 Aug 1999 07:00:00 GMT

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<HTML>
Dan Fletcher wrote:
<BLOCKQUOTE TYPE=CITE>Coeff=DIGITAL_FILTER(Flow,Fhigh,50,40)

FilteredTestDataSub=CONVOL(Data[0,*],Coeff)

<P>When I do this, I get an error that says

<P>CONVOL: Kernel's dimensions are incompatible with operand's.

<P>I think this is because the Data[0,*] gives a 1xm array rather than
a</BLOCKQUOTE>
ok.see the reform function.

try:

FilteredTestDataSub=CONVOL(reform(Data[0,*], $

n_elements(Data[0,*])), $

Coeff)

<PRE>--
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