Subject: Help with pointers
Posted by g.nacarts on Fri, 14 Aug 2015 14:36:01 GMT

Hi

I return a 2D array in a Function (A DOUBLE = Array[216, 216]).

I wanted to return that array as a pointer and I did the following

A_Ptr = PTR_NEW(A, /NO_COPY)

RETURN, A_Ptr

I call this pointer on a different function like this:

Diff = total((A[ind] - B[ind])^2.)

But I got the following error:
"Unable to convert variable to type pointer."

I typed help, A, B
<PtrHeapVar9>   DOUBLE   = Array[216, 216]
B   FLOAT   = Array[216, 216]

I tried this as well Diff = total((*A[ind] - B[ind])^2.) but still doesn't work.

Can anyone please help with this?

Subject: Re: Help with pointers
Posted by zacharyanorman on Fri, 14 Aug 2015 15:39:10 GMT

Your error is probably coming from referencing A when you should be referencing *A_ptr, which now contains the values of A. Here is an example of how to do this:


```
a = findgen(216,216)
b = 1.1*findgen(216,216)
A_ptr = ptr_new(a,/no_copy)
diff = total (*A_ptr - b)
print, diff
```

Subject: Re: Help with pointers
Posted by g.nacarts on Fri, 14 Aug 2015 15:52:41 GMT

This is in function 1

A_Ptr = PTR_NEW(A, /NO_COPY)

RETURN, A_Ptr

This is in function 2, A, B, ind

Diff = total((A[ind] - B[ind])^2.)

Subject: Re: Help with pointers
Posted by zacharyanorman on Fri, 14 Aug 2015 16:30:14 GMT

If you just have one index that you are taking the difference of, you need to use parenthesis around the pointer to access that index. Here is an example:

a = findgen(216,216)
b = 1.1*findgen(216,216)
A_ptr = ptr_new(a,/no_copy)
ind = 5
diff = (*A_ptr)[ind]-b[ind]
print, diff

Subject: Re: Help with pointers
Posted by g.nacarts on Mon, 17 Aug 2015 08:44:51 GMT

That was very useful.

Got another error when I am calling function 1 (the function where I returned the array as pointer) in another function.

"Pointer expression not allowed in this context: <POINTER (<PtrHeapVar20>)>."

Happens to know what does this mean?

Subject: Re: Help with pointers
Posted by zacharyanorman on Mon, 17 Aug 2015 16:13:50 GMT

Your best bet would be to go to the line where it says the error is coming from and see what the

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code is. Then you can do a HELP on the arguments for that line of code and see which one is incorrect. Maybe you are trying to use the pointer as the array, when you need to also use the asterisk (*) to properly get the pointer contents.