Subject: Re: Entry comparison between two arrays
Posted by juggernaut5k on Tue, 20 May 2008 16:04:14 GMT
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On May 20, 10:54 am, "crazywhiteboy...@gmail.com"
<crazywhiteboy...@gmail.com> wrote:
> Hello everyone,
>
> I'm new to IDL (started using last week for a summer research
> position), and have been working on a problem of comparing two
> structures of arrays. The concept is that each of the structures
> contain arrays of a year fraction, a day-of-year fraction, and other
> data that I need compare. However, to do this comparison I need to
> make sure both sets of data are corresponding to the same time (within
> a range of error). My initial thought was to do this in a loop (only
> have previous experience programming with Java and C doing small data
> sets) that records the array indexes of corresponding pairs, and use
> those indexes to build an another array that contains the two sets of
> data from the two structures of arrays side by side in an array. This
> idea works fine, but when I start trying to accomplish it on two
> arrays of roughly 1 million entries each, it spikes up to taking my
> whole summer to run. So what I'm looking for is how I might do this in
> array based calculations in IDL. If anyone can give me an idea, or
> point me in the direction of a good tool to use, I'd appreciate it
> much. Thanks

My guess as to how to solve this problem is to decide what your range
of error is and do something like this.
structure1 = {frac_year:[...], frac_day:[...], ...}
structure2 = {frac_year:[...], frac_day:[...], ...}

You can access the arrays in these structures either by name...(i.e.
structure1.frac_year) or by number...(i.e. structure1.(0))
Both have their usefulness for understanding code and ease of
automation.

diff = abs(structure1.(0) - structure2.(0)) ;- You can use numerical
structure indexing if you need to loop through a lot of structure
elements.
result = where(diff GT epsilon, count) ;- Epsilon is your error and
I'm guessing that you want to not continue if you surpass this error?
                                ;- Or maybe you just want to omit
these points...I'm not sure.

At any rate if count is greater than zero then you have elements in
your arrays that are not within your set error bounds.
Do with them as you will by using result to index each arrays "outside
the error bound" elements.

Not sure if this is even close to what you want but it would work for what I would envision I'd want....if I did something....