Subject: Looking for a search routine
Posted by jvkepner on Tue, 21 Nov 1995 08:00:00 GMT
View Forum Message <> Reply to Message

I have two 1D floating point vectors X and Y.
Y contains values sorted in increasing order. I am
looking for a function that for each element in the
X array, X(i), will return the index of the element in the
Y array that is nearest to X(i). Ideally it would
be a function that would look something like

y_ids = SEARCH(X,Y)

-Jeremy Kepner
Dept. of Astrophysics
Princeton University

Subject: Re: Looking for a search routine
Posted by Liam Gumley on Mon, 27 Nov 1995 08:00:00 GMT
View Forum Message <> Reply to Message

jvkepner@airy.Princeton.EDU (Jeremy Kepner) wrote:
> I have two 1D floating point vectors X and Y.
> Y contains values sorted in increasing order. I am
> looking for a function that for each element in the
> X array, X(i), will return the index of the element in the
> Y array that is nearest to X(i). Ideally it would
> be a function that would look something like
>
> y_ids = SEARCH(X,Y)

For each element of X, to find the index of the closest value in Y, do

D = MIN(ABS(Y-X(I)),LOC)

where I is the loop index for X, and LOC is the index of the closest value in
Y.
You might be able to do this without a loop, but I'm not sure exactly how.

Cheers,
Liam.