Subject: Re: Doing a DFT in IDL
Posted by Kenneth P. Bowman on Mon, 02 Apr 2012 21:24:15 GMT

In article < 22647522.376.1333369882343.JavaMail.geo-discussion-forums@yn gr3 >,
 Helder <helder@marchetto.de> wrote:

> Dear all,
> I've been looking for this around, but couldn't yet find anything.
> I would like to made a (discrete) Fourier transform by directly typing in the
> code. The target is not performance, but eventually modifying the source
> (integrated) function from [f(x)exp(-j2piux/N)] to something different.
> Has anybody written such a code in IDL that can be modified? Or can anybody
> give me a working link to such a code?
>
> Many thanks and sorry for wasting your time.
> Cheers, Helder

A DFT is just a set of dot products. (And an FFT is an efficient way to
carry out the DFT calculations.)

Compute the basis functions that you want at the tabulated points,
then multiply by the function you are transforming and sum.
You can write it as a matrix-vector multiplication.

Ken Bowman