Subject: Re: idl and R
Posted by George N. White III on Sat, 05 Apr 2008 16:19:39 GMT
View Forum Message <> Reply to Message

On Fri, 4 Apr 2008, rlayberry@hotmail.com wrote:

> Does anybody have a summary of the major differences between R and
> idl? I have been using idl for years and have never used R. I
> understand R is statistics orientated, but does it do anything that
> idl can't or does it do it better?

I use both IDL and R. The biggest advantage of R in my work is that it provides NA values that are distinct from NaN. Most operations have an na.rm option, e.g.

mean(c(1,2,3,NA),na.rm=FALSE) returns NA, but
mean(c(1,2,3,NA),na.rm=TRUE) returns 2

I've never been a fan of overloading NaN as a missing data value: a) it can't be applied to integer data, b) there are times when you need to know the difference between a computational error and missing inputs. I've spent way to much of my life coding tests for missing value flags, so I really appreciate a language that properly supports NA values.

R has very solid plotting capabilities, but tends to bog down when working with images. R (like Matlab, unlike IDL) tends to coerce everything to doubles for calculations, but (unlike Matlab and IDL) checks for NA add significant overhead for big calculations.

R is an implementation of the S-plus language. It has a large, active user community. R is widely available and has a nice system to manage packages (which are generally provided as binaries on Windows, sources on *X).

In my work I often use IDL to extract data (e.g, time-series) from remote sensing images and then use R to analyse the resulting data sets.

--
George N. White III <aa056@chebucto.ns.ca>