Subject: Re: Migrate away from idl?
Posted by Michael Galloy on Wed, 18 Nov 2009 23:56:28 GMT

I used Python/PyQt/matplotlib/TVTK a couple years ago for a project.
Things may (probably) have changed as I have only used Python to do
shell scripting type things since then.

Brian Larsen wrote:
> Sames:
> array based a = a+1 for arrays
> multiplatform
> command line to test things out
I would give Python's IPython command line a significant edge over IDL's
> all the same plots are there (or at least all I do)

> +idl:
> I already know it
> code library that I am familiar with
> Coyote's Guide to IDL Programming
* you get more scientific functionality with a base IDL install, to get
Python up to the equivalent of IDL for scientific programming requires a
lot of 3rd party packages (some of which are a pain to build, i.e., I'm
looking at you VTK); even worse is getting something that your
clients/customers can install on their systems

> +python:
> no licensing fee
> easier scriptable (like into web pages etc)
> interactive plots that make iplot look like 1980
> super easy export of plots to png, pdf, ps whatever even interactively
> from the plot
> seems like its up and coming
* more 3rd party package options, especially if not all your work is
"scientific"
* bigger/more participatory user community, even just in the scientific
Python community

Mike
--
www.michaelgalloy.com
Research Mathematician
Tech-X Corporation

Subject: Re: Migrate away from idl?
Posted by penteado on Thu, 19 Nov 2009 00:58:30 GMT

I am currently studying Python, specifically to know how useful it is
compared to IDL, and identify which one is better for what. I will
later do the same with R. But I am still at least several months away
from getting to know enough Python to make a decent assessment.

Anyway, the major advantage of Python I noticed and did not see
mentioned in this thread is the other container types that are built-
in, including the ability for nesting and putting different types into
the same container, because all variables are actually object
references. However, ITTVIS has been promising some more containers in
the next IDL releases.

Subject: Re: Migrate away from idl?
Posted by Ivan Zimine on Thu, 19 Nov 2009 03:36:07 GMT

On Nov 19, 8:29 am, Brian Larsen <balar...@gmail.com> wrote:
> Hey all,
>
> I have a quick poll for the experts out there. I recently learned
> about (and was wowed) scipy and all the other python stuff that
> basically make it a viable substitute for idl. I am wondering if
> anyone has made the switch (if so why are you still on this usenet?)
> or came away from python or has any advice at all?

you may also be interested in http://www.sagemath.org/ , which is
basically all foss scientific packages glued together with python that
can be run both on- or off-line.

- Ivan

Subject: Re: Migrate away from idl?
Posted by Mort Canty on Thu, 19 Nov 2009 09:41:55 GMT

Brian Larsen schrieb:
> Hey all,
>
> I have a quick poll for the experts out there. I recently learned
> about (and was wowed) scipy and all the other python stuff that
> basically make it a viable substitute for idl. I am wondering if
> anyone has made the switch (if so why are you still on this usenet?)
> or came away from python or has any advice at all?
>

> Here is a gallery of plots and code from python matplotlib
> http://matplotlib.sourceforge.net/gallery.html
>
> I am seeing some cool advantages and some disadvantages too, ill list
> a few to try and start a bit of discussion,
>
> Sames:
> array based a = a+1 for arrays
> multiplatform
> command line to test things out
> all the same plots are there (or at least all I do)
>
> +idl:
> I already know it
> code library that I am familiar with
> Coyote's Guide to IDL Programming
>
> +python:
> no licensing fee
> easier scriptable (like into web pages etc)
> interactive plots that make iplot look like 1980
> super easy export of plots to png, pdf, ps whatever even interactively
> from the plot
> seems like its up and coming
>
>

Havn't tried serious programming, but I love the syntax (and the
license). Now if someone were to write an ENVI.PY ...

Mort

Subject: Re: Migrate away from idl?
Posted by Maarten[1] on Thu, 19 Nov 2009 12:25:41 GMT
View Forum Message <> Reply to Message

On Nov 19, 12:29 am, Brian Larsen <balar...@gmail.com> wrote:

> I have a quick poll for the experts out there. I recently learned
> about (and was wowed) scipy and all the other python stuff that
> basically make it a viable substitute for idl. I am wondering if
> anyone has made the switch (if so why are you still on this usenet?)
> or came away from python or has any advice at all?

For a new project we have/will switch(ed) to Python + scipy + numpy +
matplotlib + pytables + pyhdf + ...

> Here is a gallery of plots and code from python
> matplotlibhttp://matplotlib.sourceforge.net/gallery.html

In some cases the plots from matplotlib require less fudging to become
publication quality. Changing the graphs interactively, and then
produce pdf/eps at a later moment really help. Perhaps the same can be
done with the itools, but I can't be bothered, matplotlib is just
easier. The IDL plots require quite a bit of work to get to
publication standards (mine anyway - no Hershey fonts for me).

> I am seeing some cool advantages and some disadvantages too, ill list
> a few to try and start a bit of discussion,
>
> Sames:
> array based a = a+1 for arrays
> multiplatform
> command line to test things out
> all the same plots are there (or at least all I do)

There are some plots that I would have to think hard to produce, where
matplotlib produces them with ease (a box plot comes to mind:
http://en.wikipedia.org/wiki/Box_plot).

iPython is easily better than the IDL commandline

> +idl:
> I already know it
> code library that I am familiar with
> Coyote's Guide to IDL Programming

The latter is very valuable. Without it I would have gone python quite
some time ago.

> +python:
> no licensing fee
> easier scriptable (like into web pages etc)
> interactive plots that make iplot look like 1980
> super easy export of plots to png, pdf, ps whatever even interactively
> from the plot
> seems like its up and coming

Python is big, way bigger than IDL. Using SWIG it is generally easy to
include C-code in python, easier in my limited experience than it is
to do the same with IDL. Since for loops aren't quite as devastating
for performance as they are in IDL, you generally end up with code
that is easier to maintain (human-readable code).

Python is also a general programming language, with neat objects and

fully dynamic arrays and fully automated memory management (no object
or pointers to forget). Oh, the scripts and the run-time environment
use the same rules, no more for i=0,10 do & begin & j=j+i^2 & endfor
on the command line, and something subtly different in the script, and
python is smart about end of lines, so no
file_list = file_search(dir, $
pattern)

Docstrings are probably the best idea: have your documentation ready
for interactive use.

One disadvantage of Python: to install all the science code you need,
you'll be busy for a while, and some are just hard to get running
(scipy is one example, there are others).

Maarten

Subject: Re: Migrate away from idl?
Posted by David Fanning on Thu, 19 Nov 2009 14:26:57 GMT
View Forum Message <> Reply to Message

Maarten writes:

>> Coyote's Guide to IDL Programming
>
> The latter is very valuable. Without it I would have gone python quite
> some time ago.

Oh, oh. As someone interested in progress, I'll be shutting
the site down on Friday, so we can all get on with it... :-(

This whole discussion is depressing to me. Not because I
am such a huge fan of IDL, but because it all seems so
predictable to me. I understand this feeling of wanting to
look around for something else. Personally, I feel like I
haven't gotten anything of value for my IDL maintenance
dollars in the past five years or so. By "value" I mean
something I actually use in my IDL work. (24-bit PostScript
support is the exception.)

More iTool geegaws is unlikely to stem this tide of
interest in finding tools that are intuitive and simple
to use. Frankly, resizeable graphics windows and decent
fonts in direct graphics would have kept a lot of people from
looking around for something else. The best you can say
about IDL these days is that it isn't bad. I can see why
that's not generating a fanatical following.

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Migrate away from idl?
Posted by Nikola on Thu, 19 Nov 2009 15:43:26 GMT
View Forum Message <> Reply to Message

> The best you can say about IDL these days is that it isn't bad.
> I can see why that's not generating a fanatical following.
>

I'd say it's a bit more than that. Of course new things will come from time to
time but the ultimate value of IDL is the IDL community and amount of work that
has been made to built numerous useful libraries available today. In my field -
solar physics - there is a suite of routines called solarsoft that integrates
hundreds of necessary functions for a range of solar instruments and telescopes.
I wouldn't ever trade that for nicer fonts, interactive plots or any similar
cosmetics. :)

Actually, beside IDL I use only two more things in my work - Fortran/C for
numerics and TecPlot/ParaView for 3D visualization (though there is also IDL
based Vapor for that).

Cheers,

Nikola

Subject: Re: Migrate away from idl?

"David Fanning" <news@dfanning.com> wrote in message
news:MPG.256f0392482b948698a7ce@news.giganews.com...
> Maarten writes:
>
>>> Coyote's Guide to IDL Programming
>>
>> The latter is very valuable. Without it I would have gone python quite
>> some time ago.
>
> Oh, oh. As someone interested in progress, I'll be shutting
> the site down on Friday, so we can all get on with it... :-(
>
> This whole discussion is depressing to me. Not because I
> am such a huge fan of IDL, but because it all seems so
> predictable to me. I understand this feeling of wanting to
> look around for something else. Personally, I feel like I
> haven't gotten anything of value for my IDL maintenance
> dollars in the past five years or so. By "value" I mean
> something I actually use in my IDL work. (24-bit PostScript
> support is the exception.)
>
> More iTool geegaws is unlikely to stem this tide of
> interest in finding tools that are intuitive and simple
> to use. Frankly, resizeable graphics windows and decent
> fonts in direct graphics would have kept a lot of people from
> looking around for something else. The best you can say
> about IDL these days is that it isn't bad. I can see why
> that's not generating a fanatical following.
>
> Cheers,
>
> David

Agree 100%. The their vision is not the same as mine, in
where IDL should go. The workbench is sort of a nice try at
being an IDE, but all I really notice about it is that the hot keys
have changed, and now ctrl W does not go to the command line,
instead it closes my editing window, and then i have to search my
1Tb harddrive for the file I was working on. (it doesn't even go to
the 'recent file' list).

So, that is what I have paid thousands of dollars for. Sneak attacks
on my file. lol.

cheers,

bob