Subject: Announcing GDL 0.7, now with PLOT command

Posted by marc schellens[1] on Mon, 01 Mar 2004 10:31:52 GMT

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GDL - GNU Data Language, an IDL 6.0 compatible incremental compiler.
Version: 0.7

Now supporting graphics (PLOT command for X windows and postscript -
multi plots are supported as well). Check it out. It's amazing how
similar the results look.

DOWNLOAD:

http://sourceforge.net/projects/gnudatalanguage/

FEATURES:

Full syntax compatibility with IDL 6.0

All(!) IDL language elements are supported, including:

Pointers,
Objects,
Structs,
Arrays,
System variables,
Common blocks,
Assoc variables,
All operators,
_EXRA and _REF_EXTRA keywords...

The file input output system is fully implemented
(Exception: For formatted I/O the C() sub-codes are not supported yet)

Graphical output is partially implemented. The PLOT command (along with
WINDOW, WDELETE, SET_PLOT, WSET) works (important keywords, some !P
system variable tags and multi-plots are supported)
for X windows and postscript output.

So far only some library routines are implemented (among them the
EXECUTE function). For a list enter HELP,/LIB at the command prompt.

GUI (widgets) are not implemeted yet.

Please see the README file for more details.

Check it out!

marc

Subject: Re: Announcing GDL 0.7, now with PLOT command
Posted by Karthik on Thu, 04 Mar 2004 19:07:53 GMT

I have some difficulty in installing GDL.

Debian system. gcc version 3.3.3 (Debian)
[karthik] ~/gdl-0.7> uname -a
Linux physics 2.4.22-1-686 #6 Sat Oct 4 14:09:08 EST 2003 i686 GNU/Linux

Here is the error message:
physics:/home/karthik/gdl-0.7# make
make all-recursive
make[1]: Entering directory `/home/karthik/gdl-0.7'
Making all in gdl
make[2]: Entering directory `/home/karthik/gdl-0.7/gdl'
Making all in antlr
make[3]: Entering directory `/home/karthik/gdl-0.7/gdl/antlr'
make[3]: Nothing to be done for `all'.
make[3]: Leaving directory `/home/karthik/gdl-0.7/gdl/antlr'
make[3]: Entering directory `/home/karthik/gdl-0.7/gdl'
g++ -DHAVE_CONFIG_H -I. -I. -I..   -O2 -fno-check-new -c gsl_fun.cpp
gsl_fun.cpp:25:25: gsl/gsl_sys.h: No such file or directory
gsl_fun.cpp:26:28: gsl/gsl_linalg.h: No such file or directory
gsl_fun.cpp: In function `BaseGDL* lib::invert_fun(EnvT*)':
gsl_fun.cpp:62: error: `gsl_matrix_complex' undeclared (first use this
   function)
gsl_fun.cpp:62: error: (Each undeclared identifier is reported only once for
   each function it appears in.)
gsl_fun.cpp:62: error: `mat' undeclared (first use this function)
gsl_fun.cpp:62: error: `gsl_matrix_complex_alloc' undeclared (first use this
   function)
gsl_fun.cpp:63: error: `inverse' undeclared (first use this function)
gsl_fun.cpp:63: error: `gsl_matrix_complex_calloc' undeclared (first use
this
   function)

Marc Schellens wrote:
> GDL - GNU Data Language, an IDL 6.0 compatible incremental compiler.
> Version: 0.7
>

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> multi plots are supported as well). Check it out. It's amazing how
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> WINDOW, WDELETE, SET_PLOT, WSET) works (important keywords, some !P
> system variable tags and multi-plots are supported)
> for X windows and postscript output.
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> So far only some library routines are implemented (among them the
> EXECUTE function). For a list enter HELP,/LIB at the command prompt.
>
> GUI (widgets) are not implemeted yet.
>
> Please see the README file for more details.
>
>
> Check it out!
>
> marc
>

Subject: Re: Announcing GDL 0.7, now with PLOT command
Posted by hcp on Fri, 05 Mar 2004 09:16:46 GMT
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In article <Hu2FzA.DKC@sysadm.physics.uiowa.edu>, Karthik <karthik@none> writes:
|> I have some difficulty in installing GDL.

|> g++ -DHAVE_CONFIG_H -I. -I. -I..   -O2 -fno-check-new -c gsl_fun.cpp
|> gsl_fun.cpp:25:25: gsl/gsl_sys.h: No such file or directory
|> gsl_fun.cpp:26:28: gsl/gsl_linalg.h: No such file or directory

This is because you do not have gsl (the GNU scientific library) installed.
At the moment, GDL's configure script checks for gsl, but it doesn't
exit with a fail when it doesn't find it. Doubtless this will be fixed
at some point. For now, you have to note what the above compile error
is about, install gsl and try again.

You will also need plplot installed. If you are running Debian testing or
unstable, you can just apt-get install it, but make sure you have
plplot9-driver-xwin and libplplot-dev installed as well as libplplot.
GDL's configure script makes some sort of check for plplot but it is
insufficient, given the way Debian has split plplot up.

Remember, GDL is still pretty incomplete. Don't expect your IDL code to run
unaltered yet. Based on the fortunes of R (which is now the most widely used
S implementation) and of ANA, octave, yorick, Rlab, Tela (all stagnating or
abandoned) I believe that two things are needed for GDL to succeed.

[1] It needs to be as compatible with IDL as possible. That is Marc's
intention. R succeeded because lots of extant S-Plus code works in R with
little or no change. "Vaguely similar" (as ANA is to IDL and
octave to Matlab) isn't enough.

[2] It needs people like you and I to keep trying it out and reporting
what is missing or broken (and fixing it, if we have the time and skills.)
R has a core committee of developers and lots of contributers. ANA, octave,
yorick, Rlab, Tela are all one-man projects to a greater or lesser extent.

HTH!

Hugh

--
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The University of Edinburgh, EDINBURGH EH9 3JZ, Scotland
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Subject: Re: Announcing GDL 0.7, now with PLOT command
Posted by Karthik on Fri, 05 Mar 2004 19:55:18 GMT

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Hugh,

 Thanks for your instructions. I installed several applications on my
Debian machine one by one after reading the error messages from the make
command. The final place were make stopped was here:

gsl_fun.o(.text+0x5c5): In function `lib::invert_fun(EnvT*)':
: undefined reference to `gsl_matrix_alloc'
gsl_fun.o(.text+0x5d9): In function `lib::invert_fun(EnvT*)':
: undefined reference to `gsl_matrix_calloc'
gsl_fun.o(.text+0x5ea): In function `lib::invert_fun(EnvT*)':
: undefined reference to `gsl_permutation_alloc'
gsl_fun.o(.text+0x69c): In function `lib::invert_fun(EnvT*)':
: undefined reference to `gsl_linalg_LU_decomp'
gsl_fun.o(.text+0x6a4): In function `lib::invert_fun(EnvT*)':
: undefined reference to `gsl_linalg_LU_lndet'
.
.
.
gsl_fun.o(.text+0xd84): In function `lib::invert_fun(EnvT*)':
: undefined reference to `gsl_linalg_complex_LU_invert'
collect2: ld returned 1 exit status
make[3]: *** [gdl] Error 1
make[3]: Leaving directory `/home/karthik/gdl-0.7/gdl'

 Any suggestions?

Karthik.

Subject: Re: Announcing GDL 0.7, now with PLOT command
Posted by hcp on Wed, 10 Mar 2004 09:45:16 GMT

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In article <Hu4CuE.BI0@sysadm.physics.uiowa.edu>, Karthik <karthik@none> writes:

|> Thanks for your instructions. I installed several applications on my
|> Debian machine one by one after reading the error messages from the make
|> command. The final place were make stopped was here: [snip]
|
|> gsl_fun.o(.text+0xd84): In function `lib::invert_fun(EnvT*)':
|> : undefined reference to `gsl_linalg_complex_LU_invert'
|> collect2: ld returned 1 exit status

[snip]
|> Any suggestions?

I'm afraid not -- that didn't happen when I built it. It is clearly a
problem with linking to gsl, but I don't know how one would fix it.
I would check that you have a new enough release of GSL and then ask the
author of GDL.

Sorry not to be more help,

Hugh

--
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Subject: Re: Announcing GDL 0.7, now with PLOT command
Posted by John Mariska on Wed, 10 Mar 2004 12:15:19 GMT
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I had this problem on a Redhat Fedora machine. Solved it by
first installing all the required applications, then cleaning out
the gdl directory (I just blew it away and untarred again).
Configure and make then ran to a successful completion. It
appears that if you try to build gdl and it is missing something,
the link commands end up missing key information.

John M.

hcp@newsread.ed.ac.uk (H C Pumphrey) writes:

> In article <Hu4CuE.BI0@sysadm.physics.uiowa.edu>, Karthik <karthik@none> writes:
>
> |> Thanks for your instructions. I installed several applications on my
> |> Debian machine one by one after reading the error messages from the make
> |> command. The final place were make stopped was here: [snip]
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> |> gsl_fun.o(.text+0xd84): In function `lib::invert_fun(EnvT*)':
> |> : undefined reference to `gsl_linalg_complex_LU_invert'
> |> collect2: ld returned 1 exit status
> | [snip]
> |> Any suggestions?
>

> I'm afraid not -- that didn't happen when I built it. It is clearly a
> problem with linking to gsl, but I don't know how one would fix it.
> I would check that you have a new enough release of GSL and then ask the
> author of GDL.
>
> Sorry not to be more help,
>
> Hugh
>
>
> --
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Subject: Re: Announcing GDL 0.7, now with PLOT command
Posted by hcp on Wed, 17 Mar 2004 09:37:12 GMT
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In article <Pine.LNX.4.58.0403141421410.1704@cerberus.cwmannwn.nowhere>, "George N.
White III" <aa056@chebucto.ns.ca> writes:
   [highly perceptive analysis snipped]

|> I started using R for statistical summaries and reports because it has
|> excellent support for dealing with missing values as well as the
|> statistical tools. Recently I've been doing more things in R because they
|> can be used by more people than if they are done in IDL, but GDL could
|> reverse that trend.

Too right. It's a case of "Here's my code: you'll need to install this
free package to use it" versus "Here's my code: You'll need to cough up

but that doesn't help if you want the person you are giving your code to to
do anything with it apart from run it.)

Hugh

--
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