Subject: Re: Generating N random numbers that add to a TOTAL
Posted by markb77 on Mon, 11 Aug 2014 22:37:08 GMT
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On Saturday, August 9, 2014 12:00:03 AM UTC+2, Mike Galloy wrote:
> On 8/8/14, 1:32 PM, rryan@stsci.edu wrote:
>
>> Hi Mike, I might be interested in GPULib. I see it's quite pricey
>
>> (at least for my budget) and Tech-X offers a free trial. But before
>
>> I go through the trouble of even getting the free trial, what else
>
>> can you tell me about GPULib?
>
>
>
> A couple of resources:
>
>
>
> * documentation for GPULib routines:
>
> http://www.txcorp.com/images/docs/gpulib/1.6.2/html/index.ht ml
>
>
>
> * I write about GPULib on my website occasionally, see:
>
>
>
> michaelgalloy.com/index.php?s=gpulib&submit=Search
>
>
>
> * The official blog is at hgpulib.blogspot.com
>
>
>
>> Specifically, I was wondering about what hardware/software do I need
>
>> to use GPULib? I use Mac OSX 10.8.5 and IDL 8.2.3 at present, and
>
>> that sounded sufficient. But anything else I should be aware of?
>
>> Such as GPU cards, RAM, etc.?
>
>

>
> Currently, you absolutely need to have CUDA-enabled GPU (any modern
>
> NVIDIA graphics card). The better the card, the better the performance.
>
> Most laptop GPUs can get 2-5x speedup on our demos, while top-end GPUs
>
> can get 40x or better speedups.
>
>
>
> For software, IDL 8.2 and CUDA 5.0 on OS X (10.7+), Windows (7, Server
>
> 2008), or Linux (CentOS5, CentOS6, RedHat Enterprise Linux 5, Fedora
>
> 16). If your software doesn't quite match up, I can usually make a
>
> custom build for you.
>
>
>
>> Can you give any examples of the code usage? Like what will my IDL
>
>> code now look like?
>
>
>
> It could be as simple as:
>
>
>
> gpuinit
>
> dx = gpuFindgen(10)
>
> dy = gpuFindgen(10)
>
> dz = dx + dy
>
>
>
> That last line could also be done this way:
>
>
>
> dz = gpuFltarr(10)
>
> dz = gpuAdd(dx, dy, LHS=dz)

>
>
>
> which can be more efficient in certain situations.
>
>
>
> There are basically a bunch of routines with the "gpu" prefix that have
>
> a similar interface as the normal IDL library routine, but take GPU
>
> variables instead of normal ones. See the API documentation link I gave
>
> above for a list of routines available.
>
>
>
> There are also several demos in the trial that you can see speedups and
>
> browse example code.
>
>
>
>> What about if I need to port the code to another workstation?
>
>
>
> Should be fine (no modification) as long as the new workstation also
>
> meets the requirements above.
>
>
>
>> Anything else a GPU newbie (but seasoned IDLer) should know or should
>
>> ask?
>
>
>
> Not that I can think of, but feel free to ask if you have any more
>
> questions!
>
>
>
> Mike
>
> --

>
> Michael Galloy
>
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>
> Modern IDL: A Guide to IDL Programming (http://modernidl.idldev.com)
>
> Research Mathematician
>
> Tech-X Corporation

hi Mike,

A while back you were working on some Levenberg-Marquardt curve fitting examples using GPULIB. Are those ready to be made public?

thanks,
Mark
