Phylanx Meeting Notes

November 30, 2017

* Adrian, Hartmut, Bibek, Ali, Shahrzad, Rod, Steve, Stefan, Chris, Kevin, Monil, Kate
* Hartmut-
  + We have a new undergrad who can act as an intermediary between us and Stefan
* Chris-
  + Cleared many of the test for the space filling curve I am working on
    - Morton ordering series
  + Hope to have 5 more curves done next week
  + Stack overflow issue
    - Still looking into it
* Kate-
  + Trying to compare two traces
  + Plan to look to see if HPX infrastructure is there to do the visualization we want
    - Will be looking to add task data into the trace
* Kevin-
  + Started looking into the Intel issues
    - Turned out to be configuration issues
    - Pulling the wrong standard library
    - Building on x86, Power8, and KNL (Clang, GCC, Intel)
      * Except Intel on KNL
    - Problems running tests
      * Only working on GCC in debug
* Monil-
  + Looking at Spartan, TensorFlow, and Phylanx
    - Comparing data from running a logistic regression
    - Writing code for each system and comparing the results
    - Hartmut- We should probably look a PyTorch as well
* Stefan-
  + Watched Rod’s presentation
  + Will be busy next week, but I will devote time after that
* Steve-
  + Getting back into things
    - Fought with CMake
  + Chris, I am interested in your Agave connections
    - Chris- I would like to look at TACC as a place to deploy the project
    - Hartmut- Steve why don’t you give a talk about it?
      * Ok
* Hartmut-
  + We have finished restricting one of the data structures
    - Let’s us express differences between scalar, vector, and matrix
  + We have a working example in the repo
    - We have a DSL which can be compiled into arbitrary expression trees which can be executed by HPX
  + Discovering and fixing some performance regression in HPX
* Rod-
  + Getting behind
    - Have issues with building repo
      * Fixed issues in documentation
        + Should build on Mac and Linux
* Ali-
  + Finished qualifying exam
* Shahrzad-
  + Working on adding SIMD support to Blaze Map
  + Hartmut- Would you talk to Klaus about SIMD’ing the element wise comparison
  + Hartmut- Should we start thinking about GPUs
    - Chris- We are thinking about this in year two... but I would be fine starting early
      * Does Blaze support GPUs?
        + We are not sure
        + We should be able to use CUBLAS
* Bibek-
  + Logistic Regression
    - Made some changes to the CSV
    - Worked with slicing
    - Hartmut- performed some performance analysis
  + Plan to write a second, more complex version of the LG
* For Next Week
  + Bibek-
    - Current LG version
    - Create LG version 2
  + Shahrzad-
    - Write some more SIMD tests
    - Testing perforce
  + Ali-
    - I will try to implement the ALS algorithm
  + Rod-
    - Plan to implement one function using a NumPy interface
  + Hartmut-
    - Not certain how things will go over the next two weeks
  + Steve-
    - Talk next week
  + Monil-
    - Continuing to compare
  + Kevin-
    - Working on Buildbot
    - Look to see where to add task data to trace
  + Chris-
    - Space filling curves and tree transducers
* Next Meeting: Thursday December 7th at 3pmET/2pmCT/1pmMT/12pmPT via Webex