UTEP-PNNL-DDL meeting

June 21, 2024

Agenda and Notes

1. NERSC Perlmutter Office Hours

<https://www.nersc.gov/users/training/events/2024/perlmutter-office-hours-junejuly-2024/>

1. NERSC allocation – use it or lose it, premium QOS not working?

batch together runs in the same job once we have things working

1. Updates
   1. Briana – MLPerf Benchmarks, FamilySeer

Got Cosmoflow to run, took 9+ minutes

Put data in Community directory, Steven Ferrell recommended putting data in scratch to run, Briana recommends using Globus to transfer data

Will try to get OpenCatalyst and DeepCAM to run

Installing packages for FamilySeer, having problems with dependencies

* 1. Christopher – Score-P

Stuck on scorep binding error

* 1. Aaron – CyPAPI

Got torch\_cuda.py test program to work

Wrote README with steps to use CyPAPI

Next step – VGG example roofline metrics

* 1. Alejandro – memory usage of DNNs

Working on histogram program for Josh, task in gradient boosting algorithm

* 1. William – communication overhead

Running FL baseline on Perlmutter

Josh suggested Optuna Bayesian optimizer for figuring out best hyperparameters

Setting up FL environment with 10/100 nodes

How measuring communication?

* 1. Shirley – TAU
     1. TAU support for Pytorch and Tensorflow uses modified TensorBoard callback mechanism
     2. TAU has a new instrumentor that uses LLVM

<https://systems.nic.uoregon.edu/internal-wiki/index.php?title=Tau_clang_plugin>

1. Plans for the next week