UTEP-PNNL-DDL meeting

September 27, 2024

Agenda and Notes

1. Overleaf invites for papers
   1. Tools evaluation paper
   2. Performance modeling of MLPerf HPC benchmarks

Currently have title and abstract.

One or both would be suitable for ISPASS 2025 (deadline will be in December).

2. Planning November 8 kickoff for new H100 DGX and HGX systems

3. Working session next Monday 11am-1pm in our lab using cyPAPI to collect data for NVIDIA GPU Roofline models of PyTorch deep learning models (start with Resnet)

4. Updates from students

* 1. Briana - working on cyPAPI, draft of poster hopefully end of next week
  2. Aaron - organized roofline working meeting, reading roofline papers provided by Irvin
  3. Irvin - submitted PyTorch CNN job on Perlmutter, working on thesis outline
  4. William - tried larger batch size and number of clients, still got most of time spent in NCCL and CUDA stream synchronization. Will try finer grained instrumentation using NVTX and doing warmup before starting profiling.
  5. Alejandro - looking into how Tensorflow does resources management and uses Horovod, will try to get Horovod to use MPI backend so that we can use Score-P