Quad Chart for:

CC* Integration-Small: Unifying and Accelerating Campus Computational Science with *Ray* (NSF #OAC-2429485)
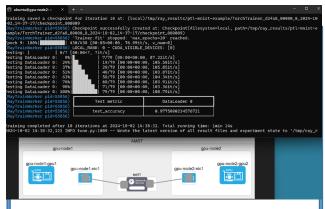
Challenge Project Seeks to Address:

- Support mix of conventional HPC and AI/ML workloads across campus platforms and beyond.

- Simplify AI/ML research and training as demand grows rapidly in Humanities and Social Sciences.

Solution:

- Investigating RAY to provide a single python framework to support on the widest range of target platforms:

- IoT systems (Nvidia Jetson)
- Desktops
- Campus HPC clusters
- NSF testbeds (e.g., FABRIC)
- Hybrid clouds (e.g. GCP)

Pytorch Lightning MNIST training run on 2 A30 GPU nodes at FABRIC Amsterdam site

Scientific Impact:

- Characterizing RAY performance across multiple, diverse GPU clusters and experimental testbeds.

- Understand how RAY can streamline teaching distributed systems to a growing cohort of students spanning multiple disciplines.

Learn More:

https://www.cs.princeton.edu/~jbrassil/public/projects/ray