

## INITIAL PROPOSAL

Deadline: June/2020

### HPO (3-4 months)

1. Design and implementation of the library RADICAL-Learning with a certain minimum of degrees of freedom
2. Design and perform an experiment using said library
3. Package and upload RADICAL-Learning

### Containers (1 month)

1. Presentation on Tuesday (Jan 28th) to update on results of initial experimentation
2. Performance characterization running Gromacs as a containerized MPI application

### FACTS (1-2 months)

1. Define initial set of unit tests
2. Benchmark framework performance
3. Transition to Python 3

### Convergence (4-5 months)

- Utilizing HyperSpace as the base structure, improve and expand into RADICAL-Learning with the goals of running containerized bag-of-tasks of optimizations this time, the ability to select different algorithms other than SMBO
- Write a technical report documenting all my work