

# AI for Science and Engineering

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## OVERVIEW

There exists a need for students to be familiar with **cyberinfrastructure**, **Science applications**, as well as **artificial intelligence**. Instead of learning all these concepts separately, it is important that a holistic approach is chosen that integrates these concepts. The outcome will be a well-educated workforce useful for research, government, and industry.

Due to the rapid change in any of the areas, it is important that the **teaching material can and is updated regularly** to address the newest developments. We have implemented such an approach over several years and focused on particular subtopics to arrive at a state that allows us to teach AI for science.

Focused topics include:

- Introduction of Python for AI for Science
- Cloud Computing,
- HPC Computing,
- Big Data Applications and Analytics,
- Artificial Intelligence/Machine Learning.

We utilize open-source technologies such as GitHub to manage the growing list of educational material. Teaching could be conducted in courses but has been found most effective in research experiences.

Meetups and hackathons enhance these activities.

Material can be reused in other educational activities

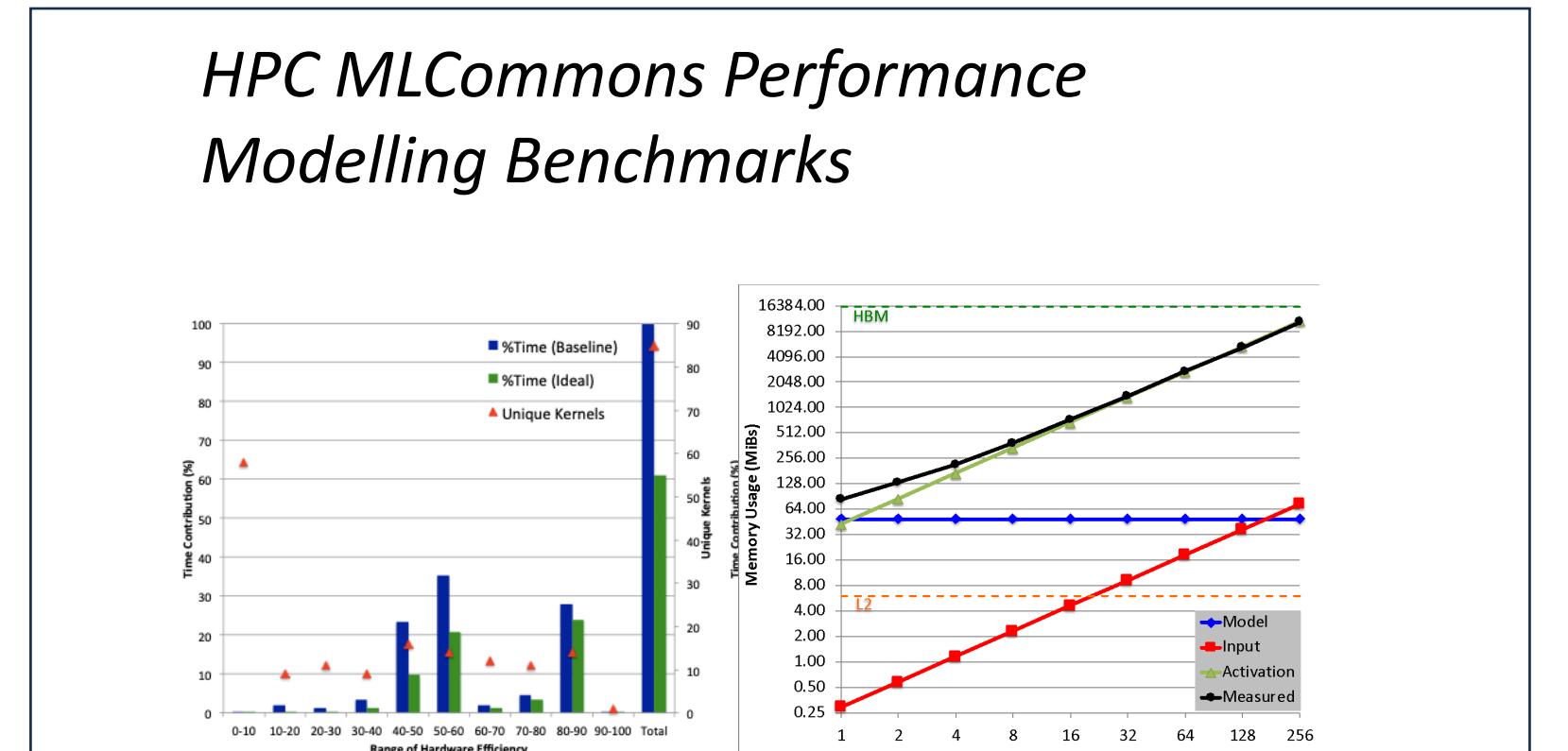
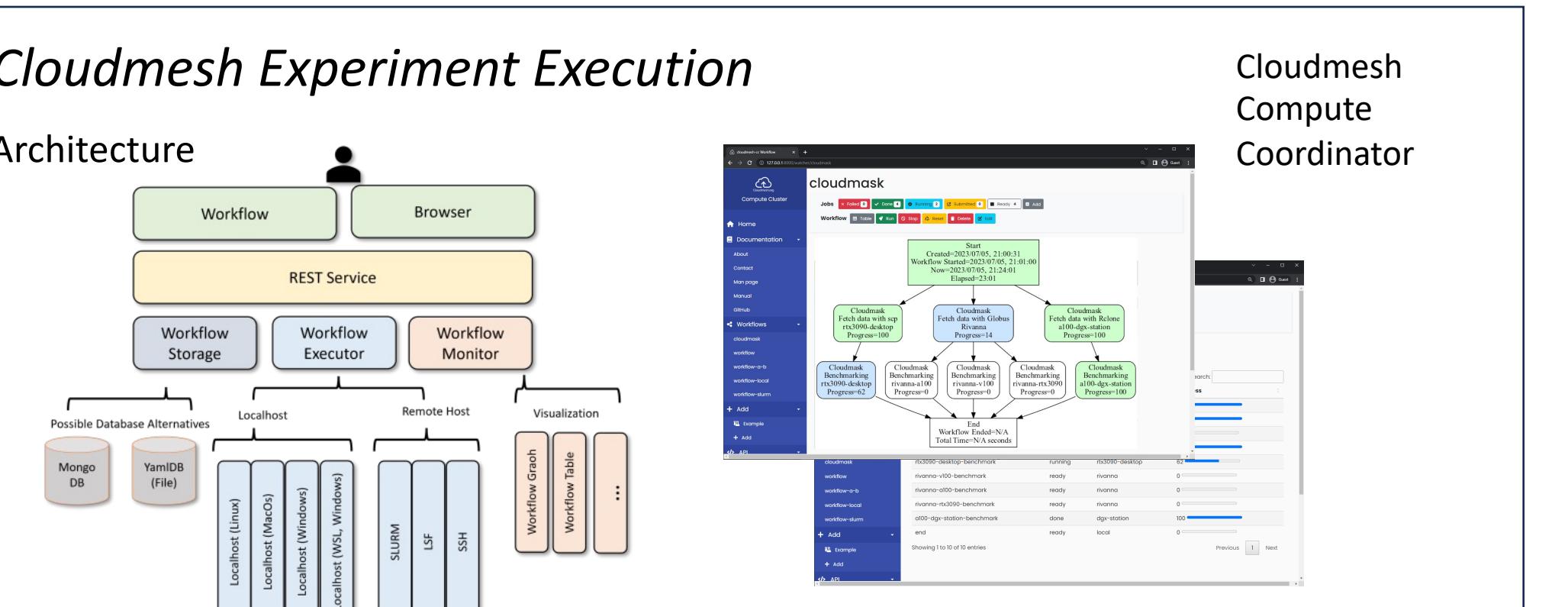
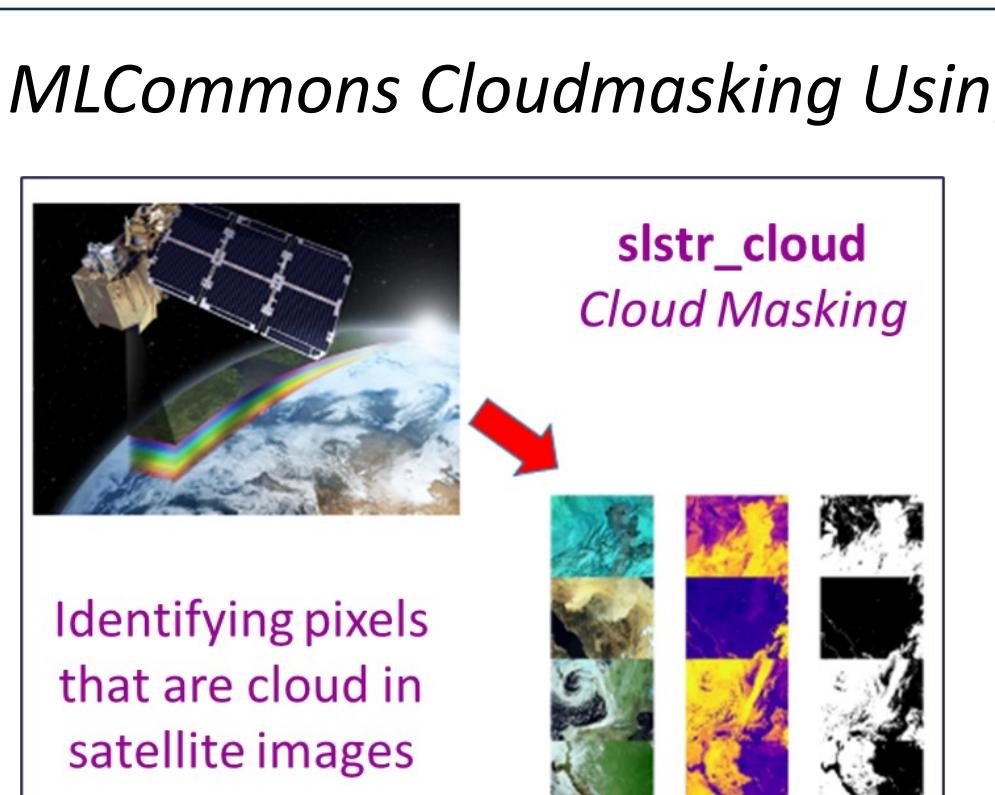
as our contributions to nanoHub

and FAMU REUs demonstrated.

Participants are encouraged to improve the content of the material.

All material is publicly available under Open-Source License.

2000 pages of material in the focus topics



### MLCommons Earthquake using Terville

