About Me

- 🏡 samforeman.me
  - Data Science @ ALCF
- Undergrad (2010 — 2015):
  - UIUC:
    - Engineering Physics
    - Applied Mathematics
- Grad School (2015 — 2019):
  - University of Iowa
    - PhD. Physics
    - "A Machine Learning Approach to Lattice Gauge Theory"
- Postdoc (2019-2022) @ ALCF

- **Current Research:**
  - AI + Science:
    - *GenSLMs: Genome-scale language models reveal SARS-CoV-2 evolutionary dynamics**
    - Building better sampling methods for Lattice QCD
    - Foundation models for long term climate forecasting
  - Scaling Large Language Models
    - Optimizing distibuted training across thousands of GPUs
    - Building new parallelism techniques for efficient scaling
  - You can get a live view of some of my recent talks *here*

**ACM Gordon Bell Special Prize for HPC-Based COVID-19 Research*

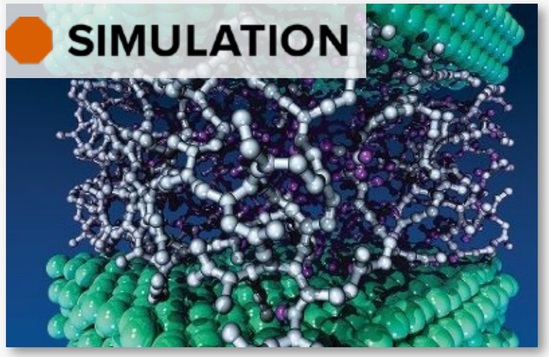
Argonne Leadership Computing Facility (ALCF)

The ALCF provides world-class computing resources to the scientific community.

- Users pursue scientific challenges
- In-house experts help maximize results
- Resources **fully dedicated to open science**

Architecture supports three types of computing:

1. **Large-scale Simulation**
   - PDEs, traditional HPC
2. **Data Intensive Applications**
3. **Deep Learning and Emerging Science AI**
   - Training + inference
   - Scalable pipelines



ALCF offers different pipelines based on your computational readiness.

(Apply to the allocation program that fits your needs)

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