

Exascale Science on Aurora


Sam Foreman

Argonne Leadership Computing Facility

foremans@anl.gov

2023-10-21

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 distributed 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](#)*