Alec Scott

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Computer Scientist at Lawrence Livermore National Laboratory, working on cloud & distributed computing puzzles.

EXPERIENCE

2021 – present
Lawrence Livermore National Laboratory *Computer Scientist*
- Develops CI/CD infrastructure for the Spack package manager.
- Develops Hubcast, which securely mirrors GitHub repositories to GitLab so scientific CI/CD can run on HPC systems.

2020
LTX, a Broadridge Company *DevOps Intern*
- Architected and implemented monitoring to track application deployments across environments.
- Helped build automation to routinely rebuild virtualized infrastructure in high-security environments.

2019 – 2021
University of Arizona HPC Center *Research Systems Developer*
- Built Autamus, a semi-autonomous container build system that automates research software updates.
- Developed applications and systems to improve scientific workflows and cluster efficiency.
- Coordinated and led a team of undergraduate students.

PROJECTS

2024 – present
Hubcast | github.com/llnl/hubcast
An event-driven, authenticated GitHub-to-GitLab mirror for scientific CI/CD testing on HPC architectures.

2021 – present
Spack | github.com/spack/spack
A flexible package manager for supercomputers, Linux, and macOS that builds many software configurations side by side.

2020 – 2022
Hyprspace | github.com/alecbcs/hyprspace
A lightweight peer-to-peer VPN built on libp2p, with no central server. Creator; 500+ GitHub stars, packaged in nixpkgs.

PUBLICATIONS

2023
Olga Pearce, **Alec Scott**, Gregory Becker, Riyaz Haque, Nathan Hanford, Stephanie Brink, Doug Jacobsen, Heidi Poxon, Jens Domke, and Todd Gamblin. *Towards Collaborative Continuous Benchmarking for HPC*. Workshops of SC23 (HPCTESTS), Denver, CO.

2021
Vanessa Sochat and **Alec Scott**. *Collaborative Container Modules with Singularity Registry HPC*. Journal of Open Source Software, 6(63):3311.

EDUCATION

2018 – 2022
University of Arizona *B.S. Computer Science, Minor in Mathematics*
Dean's List 2019, 2020, and 2021.

AWARDS

2022
Excellence in Undergraduate Research, University of Arizona

2021
U.S. Department of Energy Science Undergraduate Laboratory Internship (SULI)

SKILLS

Languages	Go, Python, C, Rust
Infrastructure	Spack, Singularity containers, GitLab CI, GitHub, libp2p
Practices	CI/CD, distributed systems, peer-to-peer networking, functional programming