

SUMMARY

Ambitious and motivated Systems Engineer with solid leadership, teamwork, and creativity. Eager to learn cutting-edge technologies and passionate about HPC, distributed systems, big data, high-speed networking, machine learning and AI.

INDUSTRY EXPERIENCE

- **Hewlett Packard Enterprise** Fort Collins, CO
HPC Storage - Systems Software Engineer II June 2022 – Present
 - Created an automated, user-friendly, and scalable software upgrade procedure for DAOS storage cluster
 - Designed and implemented cluster bootstrapping process for DAOS storage product, using HPCM as a foundation
 - Triaged Kubernetes management issues in several customers' legacy storage products
 - Contributed bugfixes and LNet kernel module tuning improvements to community Lustre filesystem project
 - Benchmarked HPC Lustre filesystems against GPUDirect Storage and POSIX clients
 - Created Jenkins pipeline that builds DKMS-enabled Lustre clients for a variety of distros and kernels
 - Streamlined add-on data mover node discovery and software mapping process
- **Cray, Inc.** Longmont, CO
HPC Storage - Software Development Intern May 2020 – May 2022
 - Built Jenkins pipelines, Go unit tests, and Slack notifications for team's repositories
 - Improved gRPC communication strategy between data path microservices
 - Automated Lustre filesystem provisioning based on discovered NVMe/SCSI drives
- **Data Ductus, Inc.** Longmont, CO
Software Development Intern May 2019 – Aug 2019
 - Implemented administrative RBAC for Verizon APIs
 - Reduced end-to-end testing time from over 20 minutes to 6 minutes

EDUCATION AND RESEARCH

- **Colorado State University** Fort Collins, CO
M.S. in Computer Science; GPA: 4.000 Aug 2020 – May 2022
- **Colorado State University**
B.S. in Computer Science, Math Minor; GPA: 3.984 Aug 2016 – May 2020
- **Graduate Research Assistant**
Pallickara Lab Jan 2020 - May 2022
 - Published two papers to ACM and IEEE conferences, see *Projects*
 - Established procedures for ingesting and sharding datasets into MongoDB, and managing clusters of 200 nodes
 - Helped develop LSTM recurrent neural networks for point-cloud datasets generated from agricultural LIDAR equipment
- **Teaching Assistantships**
Data Structures and Algorithms, Software Engineering, Operating Systems Aug 2017 - Dec 2020
 - Facilitated learning as lead TA in multiple classes, teaching object-oriented design patterns, data structures, algorithms, operating systems, Agile software development, and version control

PROJECTS

- **Omniscient** Distributed resource monitoring for memory pressure, CPU usage, storage I/O, Ethernet and InfiniBand throughput. [github.com/inf0rmatiker/omniscient]
- **Validation Service** Validates spatiotemporal models on large datasets in a distributed fashion and visualizes metrics as a geospatial heatmap. [github.com/Project-Sustain/validation-service]
- **Research Papers**
 - ACM BDCAT 2021 — *Distributed Orchestration of Regression Models Over Administrative Boundaries*
 - IEEE ICCBE 2022 — *Resource Efficient Profiling of Spatial Variability in Performance of Regression Models*