

Senior Software Engineer ◇ Platform, Storage, Infrastructure  
he/him ◇ Seattle, WA

## Skills

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**Languages:** Go, Python, Scala, Typescript

**Relevant Technologies:** Scalding (MapReduce), Airflow, Docker, K8s, Azure/GCP/AWS, gRPC, Bazel, Terraform

## Experience

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### Senior Software Engineer

July 2023 - Present

Zillow Group, Inc.

*Seattle, WA*

Leading the transformation of Zillow's MLS data and product DevOps team into a self-service compute platform for >200 engineers. Our team of three owns and manages the cloud infrastructure, networking, observability, pipelines, tooling, and automation that empowers our customer teams with seamless operations.

- Set clear team goals, roadmap and milestones for 6 months to 1 year with deadlines and accountability owners. Defined the on-call policy, the service and project design process (lightweight RFC), rewrote and improved internal and customer onboarding documentation.
- Developed pipeline tooling to improve the reliability and UX of writing and deploying services; implemented post-apply feedback mechanisms for customers to easily debug failing deployments without our intervention.
- Consolidated many disparate repos into fewer purpose built monorepos (services and tooling, infrastructure, tenant resources) making development and dependency maintenance faster and easier.

### Founder

April 2023 - Present

hcf labs LLC

*Seattle, WA*

Early stage startup developing SaaS apps.

### Senior Software Engineer

Dec 2018 - Nov 2022

Twitter, Inc. - Blobstore (Distributed KV Object Storage)

*Seattle, WA*

As a team of nine, we managed over 70PB of user data, handling 100 million requests per day in an on-premises, multi-datacenter, eventually consistent distributed system developed in-house. As the infrastructure lead, I oversaw approximately 8,000 physical machines, managed compliance and chargeback reporting, hardware provisioning and automation, observability, tooling, deployments, anti-entropy services, and delivered critical service features.

## Accomplishments

- Developed and automated chargeback reporting for customer data, transforming a manual and annual process into a daily automated metric covering network, API usage, storage class, and data locality charges.
  - Customers could now make informed decisions and assess how service changes impact cost.
  - Helped the team prioritize features to help teams improve performance and cut costs like allowing customers to choose replica count per dataset or which datacenter to write to.
- Developed a state-aware locking service that would approve operations on the dataset allowing operators to work safely and independently without impacting service health or causing downtime.
  - This enabled no-touch deployments and hardware failure remediation, saving weeks of developer operational toil annually.
  - Oncall pages reduced from 90/wk to 4-5/wk

- Deployment frequency increased from several times a quarter to weekly for stateful services and twice a week for stateless.
- Compliance automation rolled 8k hosts in less than 25 days with no manual intervention and negligible service impact. As a result Blobstore was consistently in the top 5 of patched fleets across the company.
- Implemented anti-entropy services to scan large metadata dumps, billions of keys processed via MapReduce fed a key-list to repair workers to patch production datasets every week.
- Migrated stateless services from baremetal to Aurora Mesos compute to ease operational burden, improve developer velocity and service reliability as well as cut \$100k from annual COGS.

## Education \_\_\_\_\_

### Bachelor of Science, Computer Science

Gonzaga University, Spokane WA

### Clubs and Activities

Computer Science Club	ACM ICPC, PNW	3rd On-Site two years running
Men's Rowing, Div. 1	Math Club	
Cycling Club	WSU Hackathon	

## Leadership \_\_\_\_\_

- Mentored two cohorts of new grads and interns with weekly 1:1's, adhoc sessions and code reviews to help them ramp up into Twitter Engineering!
- Ambassador for Twitter Seattle 2021-2022. Responsible for planning events, creating opportunities for colleagues to socialize in a hybrid environment, as well as assisting onsite operations management.

## Extra-Curricular Activities \_\_\_\_\_

- King County Search and Rescue Team member since 2024! "So that others may live!"
- Avid mountain climber and adventure traveler! Summited Mt. Baker, Mt. Shuksan, and Mt. Hood; hiked the Salkantay Trail in Peru!
- 3d Printing enthusiast! I solve my everyday problems with plastic.