

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

Skills

Languages: Go, Python, Scala, Typescript
Relevant Technologies: Airflow, Docker, K8s, Azure/GCP/AWS,
Bazel, Terraform

Experience

Senior Software Engineer

Zillow Group, Inc.

July 2023 - Present

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, CICD, tooling, and automation that empowers our product teams with seamless operations.

- Developed the 1 year roadmap to align with company and org leadership needs while also addressing tech debt priorities. Defined the on-call, tenant support, and engagement policies; created a design process (lightweight RFC), rewrote and improved internal onboarding documentation.
- Created tooling to deploy services that reduced bad kubernetes deployments due to configuration errors by 20%, which also gives post-apply feedback for tenants to easily debug without intervention.
- Rewrote EKS cluster definitions and cluster bootstrap process, added functionality to allow for ephemeral compute and easier A/B testing with our kubernetes stack and faster iteration on platform changes, disaster recovery and kubernetes version upgrades.

Senior Software Engineer

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

Dec 2018 - Nov 2022

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.

- 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.

Software Engineer

Microsoft Corporation - Dynamics 365

Aug 2015 - Nov 2018

Seattle, WA

Worked remote to a Switzerland-based infrastructure team that developed Microsoft Social Engagement (a social media sentiment analysis) product's backend and large Elasticsearch clusters. Later moved to a backend product team developing the account management api for Dynamics CRM.

- Owned infrastructure and agent tooling for the product.
- Owned livesite operations, infrastructure automation, observability for the product.

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.