

# Seth Smith

Software Engineer | Infrastructure Expert | Tech Generalist

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## Skills

- Go / Golang | Python | SQL | NoSQL | Rest | GRPC | Git | Bazel | Gazelle | S3 | GCS | GCP | AWS | OCI | CDNs
- Docker | Kubernetes | Cloud-Computing | On-Prem | CI/CD | Buildkite | Jenkins | Starlark | Django | Flask
- Microservices | Distributed Systems | Security | Cryptography | PKI | EDR | Security & Network Engineering

## Experience

### Senior Software Engineer [Uber](#) *Seattle, WA.* **2021-Now**

- Currently leading multiple initiatives at the nexus of production security & reliability.
- Led the design of production hardware remediation, reducing hardware spend by \$22M annually for Uber's on-premise datacenter using microservices orchestrated by a control plane, developed with Go, Postgres, docker and kubernetes.
- Enriched Uber's production lifecycle strategy for compatibility with OCI & GCP, driving over \$25M annual savings.
- Led ransomware detection and mitigation initiatives end-to-end, managing tradeoffs for production stakeholders and implementing systems that block thousands of potentially malicious activities daily.
- Designed and implemented Uber's PKI infrastructure by completely refactoring how ssh certificates are utilized. Developed internal bastions and certificate authorities which handle production authorization at Uber.
- Implemented zero trust and JIT access for Uber's production fleet, developed an auditing and approval system with MySQL and a Slack bot, reducing ad-hoc production access by >90%.

### Senior Systems Engineer [Uber](#) *Boulder, CO.* **2017-2021**

- Designed and developed Uber's network flow monitoring system, using C, Go, Java, Javascript, and Elasticsearch to implement an enterprise solution recording 2M flow records/second with 90-day retention.
- Collaborated extensively with the developer of what eventually became [elastiflow.com](http://elastiflow.com). I presented this network monitoring solution at the 2022 [kentic.com](http://kentic.com) annual general meeting in Hawaii.
- Led the development of multiple network monitoring and remediation products, responsible for identifying system requirements ensuring network engineers ability to identify network optimizations and vulnerabilities.
- Developed a full-stack host remediation platform integrated with Jira and Hipchat, decreasing failure TTM by ~50%.

### Network Engineer [Uber](#) *Boulder, CO.* **2016-2017**

- Developed a global Push/Pull CDN serving a thousand concurrent mapping operators 20 hours a day with 99.99% uptime.
- Developed and automated a "cache warming" system that increased global map-making efficiency by 18%, saving >\$10M over the life of Uber's map-making efforts.
- Migrated a 5000 server datacenter with 500PB of map data from Windows to Ubuntu on Mellanox Infiniband in 6 months.

### Lead Tech Consultant [Fast Enterprises](#) *Juneau, AK.* **2014-2016**

- Reported directly to the CTO: led a team of developers orchestrating the electronification of Alaska Department of Revenue's tax processing systems. Responsible for migrating 15 developers' changes to production tax systems.

### IT Manager [Schnee](#) *Bozeman, MT.* **2012-2014**

- Led tech expansion into three new physical stores and a manufacturing plant, while integrating new CRM/POS and VOIP.
- Facilitated digital sales by integrating a web platform, currently comprising >60% of revenue.
- These updates were primary contributors to annual profit increases of ~20% year-over-year.

## Education

### BSEE: Electrical Engineering [Montana State University](#) *Bozeman, MT.* **2014**

- Led a design team in development of an [optical attenuator](#) for an international laser company; [quantel-laser.com](http://quantel-laser.com).

## Mentorship

- Tenured member of Uber Mentors. Formally mentored multiple interns and colleagues in a results-driven fashion.
- Participated in [Montana First](#) educational outreach for multiple years.

## Projects

- AK Tax; [dor.alaska.gov](http://dor.alaska.gov) is a full-service portal for taxpayers and processors. Developed in collaboration with a small team.
- [Optical laser attenuator](#) for industrial applications.

Available online at [sethsmith.net/resume](http://sethsmith.net/resume)