

Samuel Warfield

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WORK EXPERIENCE

Senior Software Engineer (Data Team)

June 2024 — Present

Todyl

Denver, CO

- Lead the project to adopt Clickhouse as a Datalake at a 100TB/month scale for analytics and billing along with maintaining data pipelines on the Data Team.
 - Migrating away from a legacy ELK stack to a Databricks Medallion architecture.
 - **Decreased query latency by 99.94%.**
 - Reduced the resting size of Todyl's data by 60%.
- Created a new Detections engine based on the Alpha nodes of a [Rete Network](https://en.wikipedia.org/wiki/Rete_algorithm), reducing our detections cluster from thousands of cores to two.
- Developed several new services written in **Go** and helped to standardize the process as Todyl transitioned to a microservice architecture from a monolith.
 - Added **distributed tracing (Open telemetry) and Prometheus Metrics** to many of Todyl's projects.
- Created a service, deprecating an old enrichment pipeline using RabbitMQ, transitioning it to using Kafka. Overall **reducing AWS egress by \$5k/month and server resources by 10X.**

Software Engineer (Workers Runtime)

Jan 2022 — May 2024

Cloudflare

Denver, CO (Remote)

- Worked on the **Workers Runtime**, a high performance, asynchronous runtime for running javascript and web assembly based on V8, globally distributed on Cloudflare's Edge. Workers had zero tolerance for downtime and is a lynchpin system for Cloudflare.
- Implemented several Spectre/Meltdown mitigations to secure the Workers Runtime.
- **Written in low level C++** tasks included things such as **implementing network RFCs.**
- Maintained the billing pipeline for all of the Workers Ecosystem (**Clickhouse**)
- Maintained an custom testing framework based on a next event simulation for verifying the Runtime.
- Duties also included integrating with other systems, all of which were written in **Go**
- **Had on-call responsibilities for the most critical infrastructure at Cloudflare.**

Junior Software Engineer

Jan 2020 — Dec 2021

Fanatics

Boulder, CO

- I worked on a **Go** Backend service full time starting January 2020. I was responsible for a 16x speed up in our original codebase. Additionally I was responsible for my team's cloud infrastructure, deployments, and was the CI/CD expert for my office (Gitlab). Additionally had on-call responsibilities.

Software Engineering Intern

May 2019 — Aug 2019

Fanatics

Boulder, CO

- Worked as a full stack developer intern at Fanatics Boulder office, Creating a RPC framework for WebAssembly in Rust.

SKILLS

- **Programming Languages:** Go, Python, C++, C, Rust, Java, JavaScript, TypeScript, Haskell, Lisp
- **Technologies:** Kafka, Redpanda, Kubernetes, Helm, ArgoCD, Terraform, AWS, Clickhouse, Grafana, Prometheus, Alert Manager, Workers, Isolates, Astro

EDUCATION

Colorado School of Mines

Golden, CO

Bachelor's of Science, Computer Science and Mathematics

Stanford

Stanford, CA

University Innovation Fellow