

Drew Halverson

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EXPERIENCE

Staff Software Engineer (L4)

July 2022 – Present

Palo Alto Networks

Santa Clara, CA (Remote)

- Improved scalability of existing **Kubernetes** microservice in **GCP** by designing a **Go** reverse-proxy to enable sharding of tenant specific stateful API requests across multiple instances of the backend service
- Resolved customer facing production bugs shortly after onboarding to a new **Go** service exposed via **gRPC** that schedules agent software upgrades using **Temporal**, given ownership of this service as a result
- Improved scalability of the above service by ~5x more agents per tenant by refactoring **Temporal** workflows
- Reduced UI load time by ~25% by pre-computing values in **MongoDB** with an aggregation pipeline triggered by new document creation, removing the need for multiple joins on the database during every UI load
- Simplified SRE workflow for managing agent version upgrades of devices in 29 regions by revising **Gitlab CI/CD pipelines** and adding new functionality to backend service's APIs
- Enabled customers to purchase new product (ZTNA Connector) by integrating existing **AWS Lambda** customer onboarding workflow written in **Python** with product specific service in **GCP** via API requests
- Streamlined creation of new **BigQuery** datasets/tables and **PubSub** topics/subscriptions by adding jobs to **Gitlab CI/CD** deployment pipelines
- Enhanced observability of multiple services by adding tracing with **Lightstep**, alerting and dashboards with **Grafana**, and standardizing log message formatting

Software Development Intern

June 2021 – August 2021

Amazon

Seattle, WA (Remote)

- Streamlined deployment of datasets used to inform delivery drivers on tasks such as locating a mailroom, unlocking a door with a code, or finding the correct unit of an apartment/condo complex
- Developed **Java** code on **AWS Lambdas** to monitor deployment progress tracked in **DynamoDB**, used **SQS** to communicate these events between Lambdas and **AWS AppConfig** to serve newest versions to the mobile app

Software Engineer Team Lead

October 2020 – April 2021

Trulight Project

Cedarburg, WI (Remote)

- Led a team of interns working on backend algorithm and API development; organized the team's work using **Jira**, prioritized critical tasks for release of first major version of the backend
- Reduced TruLight safety score API runtime by ~25% by using concurrent APIs calls and refactoring existing code
- Added usage of **JWT tokens** to incoming API requests from TruLight mobile app for increased security

Software Engineer Intern

March 2020 – October 2020

Trulight Project

Cedarburg, WI (Remote)

- Designed UML modeling diagrams for the first version of backend TruLight algorithm implemented by the team
- Developed APIs hosted on **GCP App Engine**, **Cloud Run** and **Endpoints** with **Java Spring** framework that aggregates multiple external APIs' data to calculate a TruLight safety score for the user's location

PROJECTS

PDT Data Consolidator | *Java, data structures, algorithms*

June 2024 - July 2024

- Java command line tool to merge, sort, and de-duplicate lines from multiple text files, achieving efficient runtime performance by leveraging multi-way merge and hash set optimizations.

Fetch Receipt Processor | *Go, REST APIs, microservices, data structures, concurrency*

June 2024 - July 2024

- Go microservice with RESTful APIs for processing, storing, and retrieving receipt information, featuring concurrency-safe data handling, modular architecture, and comprehensive unit testing for enhanced reliability

File Backup Tools | *Java, data structures, algorithms*

January 2020 - August 2020

- File manager that uses a custom tree data structure traversed with an algorithm that chooses which folder to look in next based on the file name that is being searched

TECHNICAL SKILLS

Languages: Golang, Java, Python, C/C++, SQL, JavaScript

Frameworks: Swagger, Gorilla Mux, Go Testing, GoMock, Spring Boot, JUnit, Mockito, Python "unittest"

Other: AWS, GCP, Temporal, Docker, gRPC, REST, Protobuf, Git, GitLab, GitHub, Jira, Lightstep, Linux, Grafana

EDUCATION

University of Wisconsin - Madison

May 2022

Bachelor of Science in Computer Science – GPA: 3.67