



About

I am a professional Go ("Golang") developer and full-stack software engineer with over ten years of experience, most of it in the security industry. I believe in the aesthetics of software design, and that better security is a proxy to better quality of software overall. I am interested in the future of programming languages as the industry embraces security, concurrency and machine learning as more prominent paradigms.

Other areas of professional interest: Julia, Rust, human/computer interaction, parallel computing, big data, and the structured visual representation of data.



Education

Hiram College, class of 2002

Double Bachelors: Computer Science / Philosophy



Interests

In no particular order: martial arts, zymurgy, metalwork, 3D-printing, electrical engineering, physical security, cat psychology, and the search for the perfect pizza.



Experience

CrowdStrike Inc.

November 2015 - Current

Senior Research Engineer (Intelligence Team) Aug 2017 - Current

- Design and maintain custom systems and software for an industry-leading research and intelligence team
- Primary author of a team-wide Golang repo, as part of the effort in migrating an NSQ-backed data plane from Python.
- Part of a small, expert team designing a customized malware analysis system, supporting pluggable backends and flexible user code.

Senior Software Engineer (Cloud Team) Nov 2015 - Aug 2017

- Backend developer for the Role-Based Access Control (RBAC) Authorization system, allowing for fined-grained control over what actions and data a customer is given access to, while allowing them greater control over their own data.
- Designed and implemented the Mailstrike service, which acts as a central broker for intelligence and detection-related email notifications. This project touched on a lot of the technologies we use in the cloud, including Kafka, Protobuf and AWS SES.
- Completely redesigned and re-implemented our Elasticsearch-backend intelligence APIs to allow flexible searching with entitlement-based authorization (later replaced with RBAC).
- Numerous small helpers and routines to improve developer experience in testing and usage of our internal microservices standard (MSA).

Sourcefire Inc. ⇒ Cisco Systems

February 2008 - October 2015

Senior Research Systems Engineer (TALOS Group) Aug 2011 - Oct 2015

- Designed the initial concept of what eventually became our product-level automated malware analysis system and related services. System is now in production and handles hundreds of thousands of samples per day. This project involved several technologies, including Joe Sandbox, and ActiveMQ with MySQL as a datastore.
- Designed and implemented the IP/URL reputation services from end to end, including data collection, storage and deployment. This data is used throughout the company and is deployed into the field to thousands of devices. This project was originally written in Perl (later Go), with a MongoDB backend which was later replaced by Postgres.

Software Engineer III (Engineering Team) Feb 2008 - Aug 2011

- Full-stack UI and backend developer for Sourcefire 3D system of sensors and defense centers.
- Developed the granular RBAC system for the entire product line.
- Made major improvements to backend code and build system, including parallelizing the firstboot process for a 1000% speed increase.
- Responsible for bringing the SFLinuxOS up to IPv6 compliance.

State of Alaska (Dept. of Revenue)

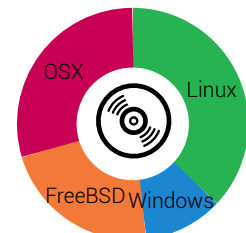
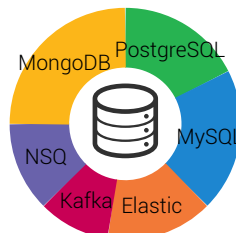
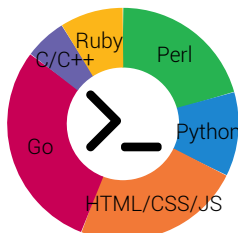
February 2008 - August 2011

Analyst Programmer II

- One of two primary developers of the online Permanent Fund Dividend application system in .NET and powerbuilder. At the time of departure, 70-80% of the state were users.
- Implemented section 508 standards for usability, with additional focus on colorblindness and the visually impaired.



Skills



(references available upon request)

the source of this resume is available at <https://github.com/alaska/resume>