



## About

I am a professional Go ("Golang") developer, Google Developer Expert (Go), and full-stack software engineer with over fifteen 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, streaming workflows, 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 Automation Team) Aug 2017 - Current**

- Architect, implement and maintain custom software and systems for an industry-leading research and intelligence team
- Primary author of Intel Organization Golang repo, as part of the effort in migrating an NSQ-backed data plane from Python. Maintain code quality and build consistency through standards and migration to Go Modules
- Part of a small, expert team designing a customized malware analysis system, supporting pluggable backends and flexible user code.
- Developed an automated rule-analysis system for YARA/Snort/Suricata rules for distribution, focusing on continued quality through rule performance analysis and labeled corpora of true and false positives.
- Part of the effort to develop and integrate the next generation of company-wide, ontology-driven intelligence graph database backed by Cassandra.
- Developed novel streaming intelligence analysis and remediation platform based on Apache Pulsar

**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 mass-mailing 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 Elasticsearch-backend intelligence APIs to allow flexible searching with entitlement-based authorization (later replaced with RBAC).

### 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)

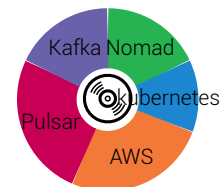
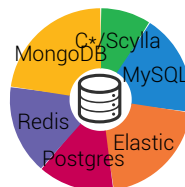
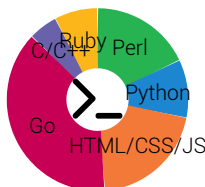
February 2006 - December 2007

**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/flowchartsman/resume>