

Andrew J. Walker

Software Engineer

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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. (Cloud Team)

November 2015 - Current

Senior Software Engineer

- Helped develop the Role-Based Access Control (RBAC) Authorization system to allow 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 (Vulnerability Research Team) August 2011 - October 2013

Senior Research Systems Engineer

- 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.

Sourcefire (Engineering)

February 2008 - August 2011

Senior Research Systems Engineer

- 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.

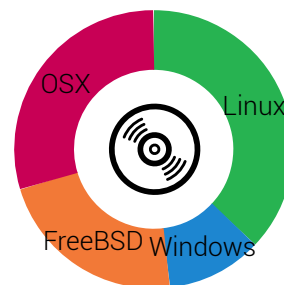
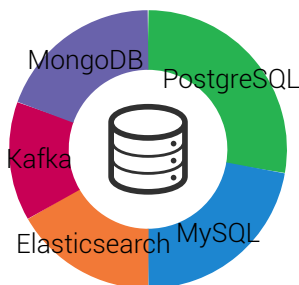
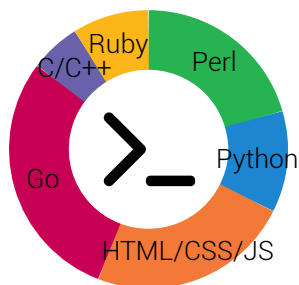
State of Alaska (Dept. of Revenue)

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.
- Developed online garnishment system for state and official use.
- Implemented section 508 standards for usability, with additional focus on colorblindness and the visually impaired.

Skills



(references available upon request)