Sam Graham

✉ segrah@gmail.com   ⬡ SamGrah   ⚓ samgraham.dev

PROFESSIONAL EXPERIENCE

Aria, *CO-CREATOR, SOFTWARE ENGINEER* 🔗   2021

Created Aria, a self-hosted, "quick-start" framework which automates and manages canary deployments infrastructure utilizing production traffic within existing AWS environments
- Designed, prototyped, and built Aria using Amazon Web Services (CFN, EC2, ELB, S3, IAM)
- Wrote Node.js based API enabling deployment of CFN infrastructure stacks to existing VPCs
- Engineered custom deployment pipeline using Docker, CDK core, & SDK libraries
- Created Svelte based SPA enabling deployments lifecycle management and observeabiltty
- Researched and prototyped Aria monitoring and analysis tooling: Prometheus and Kayenta
- Co-authored technical case study and technical presentation (aria-deploy.github.io)

General Motors Inc. 🔗

SENIOR SYSTEMS ENGINEER   2017 – 2021
- Tech Lead of 5+ safety engineer team, responsible for all product-line steering systems
- Created Flask based application to manage 70 person org workflow and work products
- Defined AV, Steer-by-Wire, & Fail Operational steering safety strategies

STEERING SYSTEMS ENGINEER   2014 – 2017
- Authored Hazard Analysis, Safety Concept, FTA, & STPA work products
- Ensured dFMEA alignment with Safety processes
- Defined safety requirements for AV and automated features

Westinghouse Electric Company, *CONTROLS ENGINEER* 🔗   2008 – 2013
- Designed control logic for nuclear power systems
- Coordinated design processes with Hw, Sw, and HMI groups
- Authored control algorithms (ANSI C) for fluid system processes

PATENTS

"Multi-stage voting control", *US Patent No. 123,456,789 - Date of Patent: Dec 8, 2018*

EDUCATION

M.S. Embedded Systems, *Oakland University* 🔗   2014

B.S. Electrical Engineering, *Michigan Technological University* 🔗   2007

SKILLS

Languages *(TypeScript | JavaScript, Go, Python, SQL, Ansi C, Assembly)*

Frameworks *(Node.js, Flask, React, Svelte)*

Tooling *(Docker, Postman, Git, Prometheus, Grafana)*

Database Management *(Postgres, SQLServer, SQLite, MonogoDb, SQLAlchemy, Redis)*