ERIC SOLOMON

FULLSTACK ENGINEER & TECHNOLOGY GENERALIST

EXPERIENCES

2020

Senior Fullstack Engineer

Upstack — (remote)

- Work dynamically and autonomously with independent clients to create fullstack applications in NodeJS, ReactJS, Go, Python, SQL, and NoSQL (incl MongoDB)
- Maintain ownership of and accountability for CI/CD pipelines, including with Docker, and AWS EC2, S3, IAM, Lambda, and others

2019 | 2018

Fullstack Engineer

Boid: Social Supercomputer — (remote)

- Design, implement, and manage blockchain-based system to run a medium-scale distributed computing cluster using Python, Javascript, C++, SQL, Docker, and AWS EC2, S3, IAM, and RDS
- Perform blockchain simulations, migrations, and audits using Python (incl Pandas), NodeJS, C++, and Docker
- Participate in startup funding proposal and business outreach processes

2018 | 2016

Graduate Research Assistant

Alfred Gessow Rotorcraft Center — College Park, Maryland

- Create state-of-art, resource-constrained aerial robotics systems, including computer vision, controls, and artificial intelligence using Python (incl Tensorflow and Pandas) and C++ (incl ROS, FreeRTOS, and Snapdragon SDK)
- Manage engineering pipeline for undergraduate, graduate, and third-party collaborators including the U.S. military
- Publish papers, write contract proposals, and speak at technical conferences

SELECTED PROJECTS

2020

GatsbyJS

GatsbyJS

- Contribute to the GatsbyJS static-site generator using NodeJS, ReactJS, Github Actions, and CircleCI
- Document & demonstrate asynchronous plugin usage
- Update to image components to maintain HTML validation

2020

Linkerd

Linkerd

- Contribute to the Linkerd service mesh using Go, Rust, and Github Actions
- Incorporate RSA-based PKI certifications
- Validate compatibility of Kubernetes service accounts

2020

Personal projects

Personal

- Create serverless and microservice-based projects with modern techniques using ReactJS, Typescript, NodeJS, Go, Python (incl Django), SQL, NoSQL (incl MongoDB), Docker, Kubernetes, and AWS EC2, S3, IAM, Lambda, RDS, and others
- Fractalooze: Compress images up to 15x compression rate using fractals. Integrate with JAMstack-based display and API.
- Graphtools: Create a general purpose graph for visualizing and testing algorithms using Go, websockets, and ReactJS
- AAAB: Create a serverless webapp for dataset source validation to experiment with quantum computing using IBM Qiskit, Python, and ReactJS

2019 | 2018

BOID-EOS

Boid

- Manage the effectiveness of BOID teams, which sell personal computing power and compete for prizes using EOSIO and World Community Grid platforms for secure, distributed, redundant cluster computing
- Create API endpoints based on the EOSIO public blockchain and Boid-run, customer-facing NodeJS servers served with AWS-VPC and backed by managed SQL databases

2018

Metaltail Hybrid VTOL Vehicle

Alfred Gessow Rotorcraft Center

- Design and analyze avionics and controls systems for a hybrid hover & forward-flight vehicle for use in urban environments
- Perform flight simulations and vehicle tradeoff analysis using Python (incl Tensorflow and Pandas) and C++ (incl ROS)
- Collaborate with a team of aerospace engineers to analyze budget, weight, and technology-readiness of the entire vehicle

SOCIAL INFO

errcsool.com

github.com/han-solomon

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SKILLS

Web design
Serverless
Microservices
Javascript & Typescript
Go
NodeJS & ReactJS
HTML5 & CSS3
SQL & NoSQL
GraphQL & REST

Container orchestration
Docker & Kubernetes
Service mesh (incl Linkerd)
Blockchain (incl EOSIO)

Data science
Machine learning & AI
Vehicle control
Computer vision
Python
C++
Tensorflow

Git
CI/CD
Linux
Bash

This résumé was wholly typeset with HTML/CSS — see git.io/vVSYL

EDUCATION

2018 | 2016

M.Sc. in Aerospace Engineering

University of Maryland — College Park, Maryland

- Focus in aerial robotics
- GPA: 3.47

2016 | 2012

B.Sc. in Aerospace Engineering

University of Maryland — College Park, Maryland

- Minor in Computer Science
- GPA: 3.40

PUBLICATIONS

2019 "Reinforcement Learning Control for Quadrotors using Snapdragon Flight". E. Solomon, A. Shastry, V. Hrishikeshevan, I. Chopra. 8th Biennial Technical Meeting on VTOL Unmanned Aircraft Systems and Autonomy. Mesa, AZ. Jan 2019

2018 "Autonomous Quadrotor Control and Navigation with Snapdragon Flight". E. Solomon, V. Hrishikeshevan, I. Chopra. 74th American Helicopter Society International Forum. Phoenix, AZ. May 2018

2017 "Visual Odometry Onboard a Micro Air Vehicle Using Snapdragon Flight". E. Solomon, C. Vorwald, V. Hrishikeshevan, I. Chopra. 7th American Helicopter Society Technical Meeting on VTOL Unmanned Aircraft Systems and Autonomy. Mesa, AZ. Jan 2017.

AWARDS

2018 2018 American Helicopter Society Graduate Design Prize