ERIC SOLOMON

FULLSTACK ENGINEER & DATA SCIENTIST

EXPERIENCES

2018 | 2019

Fullstack Engineer

Boid: Social Supercomputer — (remote)

- Smart contract development
- Design, implementation, and management of EOSIO-based system for managing a medium-scale distributed computing cluster

2016 | 2018

Research Assistant

Alfred Gessow Rotorcraft Center — College Park, Maryland

- Investigations into aerial robotics, control systems, and artificial intelligence
- Design and application of small-scale, intelligent aerial vehicles using solely on-board processors
- Practical application of optic-flow (computer vision) for aerial vehicle control
- Design and simulation of reinforcement learning controllers for aerial vehicles

SELECTED PROJECTS

2020

Concierge Intranet Manager

Personal project

- Role-based process management system for local compute clusters
- Intranet manager following JAMstack philosophy to optimize usage of limited compute resources
- Built on ExpressJS-PostgreSQL with JWT-based authentication & ReactJS frontend

2018

BOID-EOS

Boid

- Design of advanced, stake-based cryptocurrency on EOSIO mainnet blockchain
- Design of distributed database schema for managing Boid-associated computers and their computational contributions to the Boid distributed compute cluster

2018

Metaltail Hybrid VTOL Vehicle

Alfred Gessow Rotorcraft Center

- Design of a hybrid hover & forward-flight vehicle for use in urban environments
- Design of controls system using a hybrid of conventional LQR techniques and experimental reinforcement learning techniques for suitability in hover, forward, and transition flight
- Design of avionics system, focusing on (1) maximal data throughput and network connectivity, (2) robust sensing, control, and mapping, and (3) maximal weight margins
- 2018 American Helicopter Society Graduate Design Prize

2016 | 2018

Micro-aerial Vehicle Control using Snapdragon Flight

Alfred Gessow Rotorcraft Center

- Designing and applying micro-aerial system composed of modern techniques in simultaneous localization and mapping (SLAM) using only onboard, embedded processing
- "Autonomous Quadrotor Control and Navigation with Snapdragon Flight". E. Solomon, V. Hrishikeshevan, I. Chopra. American Helicopter Society Forum. Phoenix, AZ. May 2018
- "Visual Odometry Onboard a Micro Air Vehicle Using Snapdragon Flight". E. Solomon, C. Vorwald, V. Hrishikeshevan, I. Chopra. American Helicopter Society Technical Meeting. Phoenix, AZ. Jan 2017.

EDUCATION

2016 | 2018

M.Sc. in Aerospace Engineering

University of Maryland — College Park, Maryland

Vehicle and control design of small-scale, autonomous aerial robots

2012 | 2016

B.Sc. in Aerospace Engineering

University of Maryland — College Park, Maryland

Minor in Computer Science

PORTFOLIO

errcsool.com/blog

han-so1omon.github.io

CONTACT INFO

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SKILLS

Javascript
React & Gatsby
HTML5
CSS3 & SCSS
SQL (PostgreSQL & MySQL)
GraphQL
Drupal 8

C++ (incl C++11 & C++14)
Python
Scientific Computing
Control Theory
Tensorflow & Apache MXNet

Container Orchestration
Docker & Kubernetes
Distributed Storage
Cryptocurrency

Bash
Linux
Git