Stephen Wayne

Experience

Josh.ai | Software Engineer III | April 2017 - Present
- Developed a cross-platform date and timezone library
- Designed software architectures for multiple complex, widely-used internal technologies
- Developed REST API for Josh Micro device interaction
- Built various internal tools in Golang and Python
- Built support for multiple complex device integrations
- Currently building machine learning predictive platform based on user interaction and contextual data
- Designed hardware for embedded Linux platform (Josh Micro)

SEELab, UCSD | Graduate Researcher | 2016-17
- Developed intelligent frequency-hopping algorithms to maintain wireless communication in noisy environments
- Created drone-based distributed network, with emergency responders as a primary use case
- Developed distributed drone system to detect anomalous chemical signatures
- Developed real-time data visualization tools

First RF | Embedded Systems/RF Intern | Summer 2016
- Designed, built, tested and analyzed novel X-Band radar
- Built internal signal processing algorithms and testing software

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Lowry Engineering | Python Developer | Fall 2014 - Summer 2015
- Developed software tools to interface with ArcGIS for data capture and export
- Automated cost analysis for building trails across variable changes

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NASA Jet Propulsion Laboratory | Engineering Intern | Summer 2013-14
- Developed models and architecture for small satellite communication in deep space
- Designed experiment to characterize Martian atmosphere by Doppler-tracking balloon-borne probes
- Analyzed multipath signals from GRAIL spacecraft for lunar surface characterization

Projects

showCal | Easily add TV showtimes to your Google Calendar
- React.js front end - OAuth2, showtime data display, calendar add options (in progress)
- Golang backend - implement REST API for React.js client (in progress)
- Hosted on AWS (in progress)
- Work towards full CI/CD (in progress)

Guided Parafoil System | A novel small-payload delivery system for planetary orbiters
- Sponsored and mentored by NASA Ames Research Center
- Presented the project at the IPPW research conference in Cologne, Germany
- Team lead, designed electrical systems architecture, built embedded software
- Developed control and data acquisition software for Teensy 3.1

Contact

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Education

M.S.
Electrical/Computer Engineering
UC San Diego | 3.8 GPA
CS Research Lab

B.S.
Electrical/Computer Engineering
Univ. of Idaho | 4.0 GPA
Summa Cum Laude

Skills

Languages/Frameworks
C++14
Python 2/3
Golang
React/Node.js (learning)
C# 3.0
Matlab

Other Technologies
SQLite Database
MySQL Database
Google test framework
AWS S3 (learning)
Git/Jira

Relevant Courses

Probabalistic Learning
Machine Learning
Data Structures and Algorithms
Distributed Control Networks
Computational Simulation
Digital Logic
Calculus I/II/III
Differential Equations
Linear Algebra
Digital Signal Processing
Embedded Security
RF Circuit Design
Low Power Circuit Design
Advanced Electromagnetics
Antenna Theory/Design