

Education

University of California, San Diego
B.S. Computer Engineering

Expected Graduation: June 2018
GPA: 3.65

Experience

Cubic Transportation Systems (San Diego, CA)
Software Engineering Intern

June - September 2016

- Optimized and tested software and hardware aspects of bus tracker system based on STM32 Nucleo-F401RE development board with MEMS IR, VOC sensors, X-Nucleo-IKS01A1 motion and environmental sensor board.
- Used oscilloscope and voltmeter to track down rogue noise affecting MEMS sensors on the board.
- Currently working towards prototype dead reckoning system for buses during GPS dead zones in urban canyons using corrected accelerometer, gyroscope, magnetometer data.

Leidos Inc. (San Diego, CA)
Technical Software Intern

June - August 2015

- Led a guided research effort on developing a secure firmware update turret system for Internet of Things devices. Extensively utilized embedded ARM Cortex devices such as Banana Pro.
- Implemented proof of concept for the over-the-air turret system mentioned above. Communications secured with proprietary TLS/SSL libraries, compressed and optimized for RTOS usage on Particle Photon boards.
- Penetration testing with Kali Linux and its installed tools: nmap, hydra, john the ripper, etc., on dummy servers and routers. Retrieved and cracked hashed data.

Students for the Exploration and Development of Space (SEDS)
Embedded Systems specialist on Triteia CubeSat team

October 2015 - current

- Part of university team for CubeQuest, a NASA initiative to design and send a satellite into lunar orbit in 2018.
- Integrated ARM Cortex A9 board with other components of CubeSat, utilizing GPIO, SPI, I2C, UART protocols.

Projects & Activities

Eventory

March 2016— June 2016

Project Manager

- Led a 10 person team through need-finding, planning, production phases of 10 week software development cycle.
- Eventory is an events aggregator on the Android platform that connects students to popular nearby events at UCSD.
- Backend implemented with Firebase, UI with Material Design, system architecture with MVC model.

Pill-osophy

October 2015 — June 2016

Team Lead

- Designed prototype concept of device that improves seniors' quality of life by automating the pill consuming schedule process, using Tesseract and OpenCV to retrieve pill container information.

PeerMentor

March 2016

- Mobile web app with HCI focus that connects users in order to facilitate exchange of skills and knowledge.
- Utilized Bootstrap, Javascript, CSS, HTML for front end, along with Node.js, jQuery to handle server side.

Skills

- Experienced with C++, C, Java, vim, git, SPARC assembly, Linux (Ubuntu, Lubuntu), HTML/CSS, VMs
- Familiar with Android development, Python, Bootstrap, Javascript, Swift, ARM assembly, Node.js, JQuery