

Zach Brogan

zachbrogan@gmail.com • (952) 855-2220 • linkedin.com/in/zachbrogan

EDUCATION

BS Computer Engineering, Computer Science minor

Expected April 2018

Brigham Young University

Provo, UT

- GPA: 3.91
- Awards: Dean's List (4 semesters), Tau Beta Pi, Eta Kappa Nu, Golden Key Honor Society, Brigham Young Scholarship, Wings Financial Scholarship, National Eagle Scout Association Scholarship
- Relevant Coursework:

Computer Programming	Data Structures & Algorithms	Digital Systems
Computer Organization	Real-Time Operating Systems	Signals & Systems
Computer Security	Embedded Programming	Circuit Design

SKILLS

- Programming Languages: C, C++, Python, Java, Node.js, Verilog, MATLAB, Assembly
- Technologies: Arduino, Raspberry Pi, Amazon Web Services, MongoDB, Android, iOS, Git

EXPERIENCE

Undergraduate Research Assistant

October 2016 – Present

BYU Internet of Things Lab

Provo, UT

- Program IoT devices to connect to the internet using REST APIs.
- Design and test microcontroller-based HVAC controllers with solid-state relays.
- Utilize AWS API gateway to develop APIs for each IoT device.

Software Engineering Intern

May – September 2017

Digi International

Lindon, UT

- Contributed to firmware development of next generation XBEE zigbee radio.
 - Implemented microcontroller features: ADC, temperature sensor, calibration commands.
 - Wrote new and fixed existing test code using python framework.
- Maintained and optimized back end and front end of online database tool using MEAN stack.
 - Added TLS capability (HTTPS) for website security.
 - Created email subscription system for notifying changes of database items.
 - Authored scripts to manipulate database structure in order to enable new website features.
- Gained experience with Scrum software development processes and version control systems.

PROJECTS

Car Keyless Entry System

Intel Hacks 2017

- Designed, built, and programmed system using relays, Arduino, and Bluetooth libraries.
- Wrote companion BLE iOS key fob app for unlocking vehicle.

Laser Tag

BYU Junior Team Design Project

- Planned, designed, and tested a laser tag system using signal processing on an embedded system.
- Constructed and integrated custom circuits from other classes in collaboration with team members.

LEADERSHIP / VOLUNTEER WORK

- Secretary, BYU IEEE Student Branch, February 2017 – Present
- Full-time Volunteer Representative, São Paulo, Brazil, September 2013 – 2015
- Eagle Scout, November 2011