Brendan Engh

Salt Lake City, UT
brendanengh@gmail.com
(858) 344-2793

OBJECTIVE

Seeking a growth opportunity within an innovative space company performing Digital Systems (ASIC/FPGA, Embedded, or PCB) engineering to advance my career and gain expertise within advanced space systems

EDUCATION

Santa Clara University, Santa Clara, CA

B.S., Electrical & Computer Engineering — *June 2020*
Minor: Computer Science & Engineering
Pursuing M.S., Electrical & Computer Engineering, Digital Systems — *Expected June 2023*

Skills & Licenses:

Coding Languages: C/C++ (6 years), Verilog (4 years), JavaScript (4 years), Python (3 years), ARM Assembly (1 Year)
Software: Synopsis, Vivado, MATLAB, EAGLE, LabVIEW, LTspice, Keil, IAR, STM32CubeMX
Licenses: FAA Small UAS License, Technician Class Amateur Radio License

WORK EXPERIENCE

Security Clearance: SECRET adjudicated January 2021

Northrop Grumman Space Systems – Hill AFB, UT — *December 2020 - Present*
Electrical Engineer – Lead Battery Project Engineer – Excellent Performer (2021 Review)

- Created battery load profiles and test plans; researched 500+ technical documents – led to creation of new specifications
- Conducted Power Study on Launch Facility and Missile Flight Systems; led multifunctional AGILE team to final delivery
- Sustained Missile Guidance Set Umbilical, designed mechanical, electrical, and software test equipment—increased spares
- Updated AF drawings; coordinated priorities with AF and vendors – presented to Systems Engineering Review Boards
- Rapidly responded to AF Missile Wing requests; thorough research and analysis reduced failure and maintenance downtime
- Created first-ever data flow diagram of Emergency Launch Power Systems; used daily during system reviews and training

SCU – Robotics Systems Lab, Santa Clara, CA — *June 2019 - March 2020*
Satellite Operator and Engineering Intern

- United MATLAB and Software Defined Radios – enabled ground communication to NASA and private industry satellites
- Maintained antenna motors; performed calibration tests to ensure reliable uplink; learned the basics of orbital mechanics
- Assisted PCB design and layout; used EAGLE to integrate low power digital I/O to be used for environmental monitoring
- Coordinated with the Campus Safety Director to develop an emergency communication network between SCU facilities

Underwriters Laboratory, Fremont, CA — *June 2019 - August 2020*
Web Development Intern

- Developed project management web app using JavaScript; usage by all UL facilities enabled streamlined task management
- Created automated test scripts using Python and the Selenium Library; user activity was simulated—identified 200+ bugs

RELEVENT PROJECTS & COURSEWORK

Embedded Systems and PCB Projects

- Built grill probe; integrated microprocessor, GPIO peripherals and circuit components – learned digital systems architecture
- Wrote code control for LED light strip; DSP transformation for microphone inputs determined LED light pattern outputs
- Designed portable speaker PCB; traced all audio and battery components using EAGLE – met rigid board size constraints

Adaptive Navigation Utilizing a Drone Cluster, Senior Design

- Researched, designed & integrated GN&C communication hardware systems – multiple drone simultaneous flight control
- Worked with group members to document, present & demonstrate drone system – researched adaptive navigation technology

Machine Learning & Digital Signal Processing Using FPGAs

- Created 28 x 28 pixel number classifier using an FPGA simulation – used C++ & Vivado HLS; achieved 98% accuracy

Additional Coursework

- Adv. Computer Architecture, Real-Time Embedded Systems, Design for Testability, SoC Verif., and Hardware Security

INTERESTS

Space Exploration, Astronomy, Chaos Theory, Skiing, Traveling, Fishing, Surfing, Options Trading, Podcasts, and Audiobooks