

# Cameron Hiroyuki Asaoka

El Segundo - California | +1 310-218-6068 | [chiroasaoka@gmail.com](mailto:chiroasaoka@gmail.com)

LinkedIn: <https://www.linkedin.com/in/cameronasaoka/>

## Education

**University of Hawaii at Manoa - 3.03**  
B.S Electrical Engineering

**Honolulu, Hawaii**  
May 2020

## Skill Highlights

**Programming Languages:** C/C++, Java, Python, MATLAB, SQL

**Technology:** Eagle PCB design, KiCad, ADS, Microwave Office, Ansys HFSS, CST, GNU radio, Windriver Workbench, Multi Integrity, Coverity, Real Time Operating System (RTOS), Software Defined Radio's

## Professional Experience

### Raytheon Intelligence and Space

System Engineer

**El Segundo, California**  
June 2020 – present

- Initiated and managed multiple feature developments. Tracked and fixed several high priority bugs in the built-in test software for *NGJ*, as well as the underlining core interface drivers. *Windriver Workbench* and *Green Hills Software Multi Integrity* was used to develop our *RTOS* cross-compiled software. Both have their respective debuggers for interpreting data real-time.
- Improved core software through analysis of the system I/O to the various registers with *I2C* and *SPI*.
- Wrote automation scripts in both *Python* and *VBA* to efficiently parse through our source code (*C++*) files: store filename/Path, function name, function exception locale, and line number.

### Hawaii Space Flight Laboratory

Satellite Electronics Assistant

**Honolulu, Hawaii**  
April 2019 – May 2020

- Collaborated with *SPAWAR* on delivering a preconfigured software defined radio for the *Army and Navy*.
- Worked with the *GNU Radio* free software development toolkit to transfer information between two separate *USRP SDR's*.
- Designed a *PC104* board to interface a flight radio (*XDL Micro*) to the on-board computer using *Eagle PCB* design software.

### Raytheon Space and Airborne Systems

Electrical Engineering Intern

**El Segundo, California**  
June 2019 – August 2019

- Developed automation scripts for various RF projects to more efficiently interpret class data. Developed parsing scripts to parse for specific text in Excel files.
- Designed a *NGJ Pod* in *HFSS* for end of internship project. Learned about *Phased Array* antenna design and specifications.

### Worldwide Technology

Electrical Engineering Intern

**Honolulu, Hawaii**  
May 2018 – August 2018

- Researched various *DOS* attacks and other domain attacks. Learned file transfer protocols and *Hypervisors*. Programmed *Cisco* servers.
- Learn packet sniffing techniques and how to analyze internet traffic for usable data. Sniffed company traffic as an intern project.

### Instrumentation & Development Research Lab

Scientific Research Assistant

**Honolulu, Hawaii**  
January 2017 – May 2018

- Constructed and manufactured *high voltage (low current) modules* to work with a scintillator block to detect high energy particles.
- Instrumentation and developed the software in *C*. Led migration to *C++* code through the introduction of classes and methods as a student project. Further development allowed for the modules to have a steady voltage and current display through efficient averaging of the data.

## Electrical Engineering EEX96 Projects

### Hawaii Space Flight Laboratory

Low-Cost Satellite 1-U CubeSat Mission

**Honolulu, Hawaii**  
August 2019 – December 2019

- Lead team on writing the *HSFL's NASA CubeSat Launch Initiative Proposal*. Worked closely with professor and students to manage cost, materials and schedule of development. Presented to several university grant organizations and received funding.
- Versed with *PCB* design through *Eagle*, manufacturing, and the ordering of parts. Engineered and developed a working prototype radio board that talked through serial *COM*.

### Micromillimeter Research Lab Liquid Metal Reconfigurable Electronics

LM-Pixel Team | LM-Reconfigurable Via Team | Reconfigurable TR - SPDT Switch

**Honolulu, Hawaii**  
June 2017 – May 2019

- Simulated and built normal Transmission lines, Amplifiers, Filters, Antenna's. As well as designed with reconfigurable - Galinstan and Gallium.
- Lead developer on team creating a TR switch with 3 RF ports at 50-Ohms using Liquid Metal for switching.
- Simulated using different methods: *Method of Moments (MoM)*, *finite element analysis (FEA)*, *boundary element method (BEM)*.

### Hawaii Space Flight Laboratory

Remote Sensing – Planets

**Honolulu, Hawaii**  
September 2016 – June 2017

- Captured images using Monochrome *CCD* camera. Measured porosity of the moon soil using *MATLAB* and determining whether the reflectance of light on the soil is based on wavelength.
- Create a *QE* curve for camera. Understand monochrome vs Color *CCD* camera. Using Dark Current and White reference to subtract noise from image.