

Cameron Hiroyuki Asaoka

El Segundo - California | +1 310-218-6068 | 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

El Segundo, California

System Engineer

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

Honolulu, Hawaii

Satellite Electronics Assistant

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

El Segundo, California

Electrical Engineering Intern

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

Honolulu, Hawaii

Electrical Engineering Intern

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

Honolulu, Hawaii

Scientific Research Assistant

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

Honolulu, Hawaii

Low-Cost Satellite 1-U CubeSat Mission

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

Honolulu, Hawaii

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

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

Honolulu, Hawaii

Remote Sensing – Planets

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.