

ENOCH  
CHAU



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#### Programming Languages

- C
- C++
- Python
- JavaScript
- PHP

#### Web Development

- React
- Bootstrap
- HTML
- CSS

#### Software Tools

- Git
- KiCAD
- PSpice
- Mathematica

#### Firmware

- freeRTOS
- Arduino
- ESP
- Raspberry Pi

#### Operating Systems

- Linux
- Windows

#### Lab Tools

- Oscilloscope
- Soldering

#### Language

- Chinese:  
*heritage speaker,  
some reading and  
writing*

## EDUCATION

### M.Eng. Embedded and Cyber-Physical Systems

UC Irvine

Exp. Grad. Sept. 2021

### B.S. Electrical Engineering: Electronic Circuit Design

UC Irvine: 3.48 GPA

Sept '16–Jun '20

Course Work: Semiconductors, Power Electronics, Computer Networks

## EXPERIENCE

### Research Assistant

Apr '19–Jun '20

*California Plug Load Research Center, UC Irvine*

- Create Arduino firmware using freeRTOS to interface sensors (I2C, SPI, UART)
- Implement IoT using MQTT protocol on ESP32 micro-controllers
- Manage and on-board new members by dividing work into specific training tasks
- Perform hardware troubleshooting, PCB population, & SMD rework

### Peer Academic Advisor

Mar '18–Jun '20

*Henry Samueli School of Engineering, UC Irvine*

- Organize and present workshops addressing Engineering career pathways and study abroad
- Advise engineering students in curriculum planning and degree progress checks for ABET certification

### Hardware Engineering Intern

Jun '19–Aug '19

*Panasonic Avionics Corporation, Lake Forest, CA*

- Investigated hardware issues in Line-replaceable Units (LRU)
- Resolved component obsolescence by evaluating datasheets
- Completed FAA regulated ESD, thermal, and power cycle tests

## PROJECTS

### MP Recs (*Personal*)

July '20–Aug '20

- Get recommended climbs through the Mountain Project API
- Made with React and Material UI

### Coffee Grams (*Personal*)

Mar '20–Jun '20

- Used LAMP stack to store and display collected data on coffee

### GPS Sound Sensor (*UCI Senior Design*)

Sep '19–Mar '20

- Created a sound-based location sensor with Android app UI
- Linked the device to an Android App using a WiFi chip and MQTT protocol
- Developed Embedded Linux firmware for RS-232 connection to GPS

### Scale Up (*SD Hacks Hackathon*)

Oct '19

- Used Google Vision and a food scale to track calories of fruit
- Interfaced Raspberry Pi with HX711 load cell amplifier to weigh fruit
- Pulled caloric data from USDA food and nutrition API

### HC2: IoT Environment Sensor

Aug '19–Jan '20

- Developed Raspberry Pi and Arduino firmware libraries to interface with HC2 temperature probe
- Integrated HC2 into IoT network including LoRa and WiFi to generate email notifications during temperature fluctuations