

ENOCH
CHAU



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Programming Languages

- C
- C++
- Python

Web Development

- HTML
- CSS
- JavaScript
- PHP

Software Tools

- Git
- KiCAD
- Cadence Virtuoso
- PSpice
- Mathematica

Firmware

- freeRTOS
- Arduino
- ESP32
- ESP8266
- Raspberry Pi

Operating Systems

- Windows
- Linux

Lab Tools

- Oscilloscope
- Soldering

Language

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

EDUCATION

B.S. Electrical Engineering: Electronic Circuit Design

UC Irvine: 3.43 GPA

Exp. Grd Jun '20

Course Work: IC Design, Power Electronics, Semiconductors

EXPERIENCE

Research Assistant

Apr '19–Current

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–Current

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

Coffee Grams (Personal)

Mar '20–Current

- Experimenting with an IoT coffee scale
- Using LAMP stack to store and display collected data on a website
- Design a schematic and PCB for internet connected digital scale

Workout Timer (Personal)

April '20

- Created interval training timer web app using Java Script

GPS Sound Sensor (UCI Senior Design)

Sep '19–Mar '20

- Created a sound-based location sensor with Android app UI
- Implemented RS-232 masters-slave connection between microcontroller and WiFi module to communicate with Android App over MQTT
- Developed Embedded Linux firmware for RS-232 connection to GPS

Scale Up (SD Hacks Hackathon)

Oct '19

- Used machine vision and weight to track calories of fruit
- Enabled Google Vision with Raspberry Pi Camera to capture fruit types
- 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 Python firmware and Arduino firmware libraries to interface with Rotronics HC2 temperature probe
- Integrated HC2 into IoT network including LoRa and WiFi to generate email notifications during temperature fluctuations