

Enoch Y. Chau

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Technical Skills

Programming: TypeScript, JavaScript, Go, C, C++, Python

Technologies: React, Express, MongoDB, SQL, Jest, Cypress, Git, HTML, CSS, SCSS, Markdown, Deno, Vite

Experience

Full Stack Software Engineer | *GoSite, San Diego, CA (remote)* Apr '21 – Jul '21

- Utilized React, Node, TypeScript and MongoDB to build retention products increasing user conversion by 30%.
- Investigated AWS Lambda microservice to identify areas for performance improvement.
- Created a command line tool and library to easily interface with the GoSite API outside the core application
- Used Jest and Cypress to implement unit, integration, and E2E testing.
- Refactored JS React class components into TypeScript hook based functional components.

IoT Research Assistant | *California Plug Load Research Center, UC Irvine, CA* Apr '19 – Jun '20

- Developed C++ firmware on Tensilica architecture for IoT appliances to monitor and reduce energy consumption.
- Implemented a Real Time Operating System to improve performance by utilizing a multi-core processor.
- Maintained concurrency with messaging queues and semaphores to prevent race conditions.
- Refactored a complex code base into understandable chunks by splitting code and updating documentation.
- Trained new members by delegating project work based on each individual's strengths and weaknesses.

Hardware Engineering Intern | *Panasonic Avionics, Lake Forest, CA* Jun '19 – Aug '19

- Reported hardware investigation by capturing data using oscilloscope, multimeter, and proprietary test machines.
 - Verified safety requirements using ESD, thermal stress, and power cycle tests to identify hazardous hardware.
 - Evaluated potential replacement components for obsolete parts by analyzing datasheets and writing test scripts.
 - Saved over 100 Engineering hours by introducing automated power cycle testing using Python and Raspberry Pi.
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Education

B.S. Electrical Engineering | UC Irvine, CA | GPA: 3.48/4.0 Sep '16 – Jun '20

Projects

Chat App Mar '21 - Apr '21

- Used TypeScript, Node.js, React, and PostgreSQL to build a chat app similar to Facebook Messenger
- Maintaining project integrity with Jest and React Testing Library by writing unit and integration tests
- Developed a custom Websocket handler and tracking system for active chat groups.

Mosaic Jan '21 - Feb '21

- Mosaic is a platform for creating and sharing mosaic style images.
- Managed user data flow by deploying a Node, Express, and MongoDB REST API server on Heroku.
- Implemented React front end to create, edit and share mosaic images between users.
- Maintained security with JSON web tokens and route authorization to API endpoints.

MCutie Jan '21 - Feb '21

- Used WebSockets, SQLite3, Express, and Node to develop a RESTful web server for real time sensor logging.
- Created a web interface with React to graph and visualize real time data sensor data sent over MQTT protocol.
- Forked into a cloud deployment on Heroku with a PostgreSQL database.

Buddy Projects | *UCI: California Plug Load Research Center* Apr '19 – Jun '20

- Built internet connected power management systems for office appliances to provide data on energy usage.
 - Developed C++ firmware using freeRTOS and Arduino to interface sensors using I2C, SPI, and UART protocols.
 - Saved over \$50 per PCB by populating and repairing custom PCBs using a reflow oven, hot air, and soldering.
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Additional Skills

- **OS:** Mac OS, GNU/Linux, Windows
- **Language:** Conversational Mandarin Chinese with some reading and writing
- **Interests:** Bouldering at the crag