Zoe Hay

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Work Experience

Software Engineer, Contract @ Lavender   **Summer 2023**
- Wrote end to end test suite in TypeScript using Selenium WebDriver
- Checked core user flows for a Chrome extension and a React web application

Senior Engineer, Design Evaluation Engineering @ Analog Devices   **2018 - 2022**
- Developed automated test suite in Python to replace manual bench evaluation
- Supported development of new power product integrated circuits, detected and resolved issues, performed failure analysis
- Collected datasheet characterization curve measurements, coordinated and debugged with test engineers
- Designed and built boards for lab evaluation (schematic drawing, component selection, assembly)

Design Engineer Intern @ Linear Technology, Analog Devices   **Summer 2017**
- Investigated dielectric characteristics for use in high performance linear regulator applications, characterized effect of set capacitor on low dropout regulator performance
- Used a thermal chamber to study the effect of temperature on a circuit, performed technical investigations for the LDO team, reworked demo circuits for novel applications, integrated off-the-shelf components into real-world applications

Electrical Engineering Intern @ Rantec Power Systems   **Summer 2016**
- Assisted electrical engineering team in the design and manufacturing of power supplies and power conversion products
- Updated assembly procedures and testing documentation
- Simulated and analyzed circuits, sized components based on system requirements
- Investigated and resolved issues involved in manufacturing power supplies

Skills

JavaScript, Python, AWS EC2 and IAM, React, NGINX, HTML, CSS, Angular, TypeScript, Jest, C, Java

Software Experience

Python Automated Bench Evaluation   *Analog Devices*
Built a test suite in Python to automatically evaluate integrated circuit products. This process was previously performed manually. Developed a library to set up test conditions by controlling equipment, such as power supplies and a microcontroller, then collect and process measurements.

Personal Website www.zoemhay.com   *Ongoing personal project*
Set up an AWS EC2 instance, configured NGINX to serve personal portfolio site over SSL/TLS. Configured NGINX to serve my E-Commerce React app and act as a reverse proxy for the backend Node server.

E-Commerce Application   *Ongoing personal project*
Building an e-commerce web application that supports a shopping cart for authenticated users and a separate admin interface for managing products and users. Backend: ExpressJS, Prisma ORM, PostgreSQL, Jest for unit and integration tests. Frontend: React, React Router, Styled Components. Functional testing with Playwright.

Angular E-Commerce Application   *Ongoing personal project*
A rewrite of E-Commerce Application's frontend using Angular and TypeScript. Connects to same Node server as E-Commerce Application.

Publications

Kappa Switching DC-DC Converter with Continuous Input and Output Currents   **Summer 2019**
Physically implemented and performed testing for new converter topology invented by colleagues. Collected waveform captures, efficiency and EMI measurements.

Multiphase Implementation of Modified Boost Converter   **Fall 2017 - Spring 2018**
Designed and implemented a 95W, two-phase interleaved, modified boost converter with reduced input current ripple. Performed performance comparison with standard boost converter.

DC House Energy Management System   **Fall 2016 - Spring 2017**
Implemented and improved an energy management system adding a bidirectional DC-DC converter. Designed to integrate into the DC House project.

Education

California Polytechnic State University, San Luis Obispo
B.S + M.S. Electrical Engineering, June 2018