Zoe Hay

zoemhay@gmail.com www.zoemhay.com www.linkedin.com/in/zhay github.com/zoehay

About

I am an electrical engineer seeking a role in software development. As an evaluation engineer with Analog Devices, I completed a Python bootcamp and wrote test programs to control lab equipment and take hardware measurements. I am studying a full stack engineer curriculum through a course offered by Codecademy.

Skills

AWS EC2 and IAM, React, JavaScript, Python, NGINX, HTML, CSS, 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 *Personal side 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 *Personal side 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

Work Experience

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 including controllers and gate drivers
- Evaluated first silicon functionality, detected and resolved issues, performed failure analysis
- Collected datasheet characterization curve measurements, performed lab bench testing to verify automated tester results, coordinated and debugged with test engineers to ensure consistent results
- 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

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