Franklin O'Sullivan

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Personal section

I am a Third-year Computer Systems Engineering student at the University of Auckland. I am very passionate about electronics and software development, leading to my taking a degree in which I can learn both. I am looking for an internship opportunity where I can learn one of these in much greater detail, allowing me to utilize it to its full ability. I would ideally like a position where I could return for subsequent years and even a full-time position upon graduation.

Skills

- **Software:** Python, C, HTML, CSS, JavaScript, Git
- **Hardware:** Soldering, Simulating, Circuit and PCB Design
- **Limited Experience:** Java, React, Next.js, C#, C++, Linux, Exiting Vim

Projects

SR-Latch

Hardware

- I created an SR-Latch (one-bit computer memory) using passive components.
- I was interested in this project because of its usefulness in applications such as computer memory and registers. It also helped me further develop my simulating, breadboarding and soldering skills while teaching me about power usage and selecting optimal components.

HTML Calculators

Software

- I built a basic HTML calculator to verify and brush up on my Javascript skills. This project then allowed me to make a more complex iteration of the same idea to work on multiple different skills using both HTML and JavaScript.
- A further iteration of this project led me to create a calculator that was based on finding accurate resistor pairs for a wanted input value. The calculator would then display the accuracy of both series and parallel resistor combinations so the user could select a favourite; based on resistor series, resulting accuracy or simply values used.

Smart Energy Monitor

Firmware, Hardware, Software

- Worked with a team to develop a smart energy monitor. By reading the voltage across and current through a load using a shunt resistor, we could find and display the root mean square and peak values of current, voltage and power. We then wrote these

values to a 4-bit 7-segment display, UART transmission to a computer and python application.

To view more info about any of these projects and to see many more, go to Franklinosullivan.github.io

Work Experience

Installer and technician - Internship

Hot spring spa pools - Nov. 2022, Feb. 2023

- This internship allowed me to gain a familiarity with electrical systems in use within the comsumer market. My tasks involved: connecting and verifying both mains lines up to 15Amps, and peripherals/ interfaces, testing and troubleshooting of damaged electrical and electronic systems or repairs of such systems.

ICT Tutor

Scratchpad - Aug. 2022, PRESENT

- This position gives me a platform to share my knowledge of Software and Hardware with curious children who wish to learn more. Through tutoring them, I am able to better grasp on software concepts I have learned as I am able to describe them in a simpler and more effective way.

Shift Runner

Domino's - Dec. 2019, Jun. 2022

- This position allowed me to guide other employees to use their time efficiently so that we could collectively have tasks completed by, or before their deadline. This taught me about people management as well as organising time for a group of people.

Kitchen Hand

Aria Bay - Jan. 2017, Sep. 2019

- This position allowed me to gain experience in a working environment. I had a very specific set of jobs that were my responsibility to complete on time and without supervision so I learned how to do them all to a high standard within the set time, without the requirement for someone to guide me.

Education

Bachelor of Engineering (Honors)

Specialising in Computer Systems Engineering

University of Auckland - Nov. 2024

NCEA Lvl. 1-3

Rangitoto College - Nov. 2020

Hobbies/Interests

Taekwondo - Black Belt
Rock Climbing
Bouldering
Science and Electronics