

Franklin O'Sullivan

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Personal section

As a penultimate Computer Systems Engineering student at the University of Auckland, I am passionately engaged in acquiring a diverse skill set that spans electronics, software engineering, and computer architecture. I am inspired by the potential of embedded systems to revolutionize industries through smart design and I am excited to pioneer this in my career journey.

Skills

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

Projects

VHDL Flappy bird

HDL

- Using VHDL I was able to learn the basics of Hardware Description Languages (HDL) in a fun and entertaining way.
- The final version of this game featured four levels, each of which had a new challenge. The user progressed through these levels by avoiding pipes and acquiring powerups as they tried to set a new high score.

AI Sign-language recognition

Software

- The purpose of this project was to help support people who do not understand American Sign Language (ASL), to get an understanding of what the basic signs mean.
- This project was implemented using Python, along with PyQt, PyTorch and data processing tools. The final project had an accuracy of 96%.

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](https://franklinosullivan.github.io)

Work Experience

Field Engineer - Internship

IOTVentures - [Apr. 2023](#), [Present](#)

- Throughout this internship I have been working with Embedded C and electronic circuits to write, test and deploy firmware for LoRaWan technologies.

ICT Tutor

Scratchpad - [Aug. 2022](#), [Nov. 2022](#)

- 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.

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