

# Franklin O'Sullivan

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## Skills

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**Software** Python, C/C++, JAVA, HTML, JavaScript, CSS, Git

**Hardware** Soldering, Simulating, Circuit and PCB Design

**Languages** English, German

## Personal Projects

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TO VIEW MORE INFO ABOUT ANY OF THESE PROJECTS AND TO SEE MANY MORE, GO TO  
FRANKLINO0808.GITHUB.IO

### Designed and build an SR-Latch (One bit memory) using passive components

*Hardware*

- 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, bread boarding and soldering skills while teaching me about power usage and selecting optimal components.

### Simple HTML calculator

*Software*

- This project allowed me to make multiple iterations of the same calculator to practice JavaScript.
- This project helped me better understand positioning and helped solidify my understanding of how helpful a table can be in HTML and how versatile they are for some applications.

### Arduino coding for individually addressable LEDs)

*Firmware*

- Throughout this project, I learned how the Atmega328P works and how it can easily connect to external inputs and outputs.
- I learned how to best use an infrared remote and how to account for noise.
- If I were to remake this project, I would write it with interrupts and use the onboard Timer/Counters for more complex light shows.

## University Projects

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### Smart energy monitor

*Firmware, Hardware, Software*

- Worked with a team to develop a smart energy monitor, reading the voltage across and current through a load and displaying current, voltage and power to a display.
- I learned how to use many simulating and verifying software, as well as many skills related to circuit design and firmware development in C.
- This project also taught me how to work well in a team and how to handle a lack of accountability professionally and without escalating issues.

### Many other purpose specific projects

*Software*

- Linear probing and Double hashing algorithms
- Finding cycles in a directed graph
- Determining the number of connected components in a graph
- Finding the length of the longest directed cycle in a graph
- Command line store in Java
- Command line BlackJack game in Java

## Work Experience

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### ICT Tutor

*Albany, North Shore*

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

*Browns Bay, North Shore*

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

*Browns Bay, North Shore*

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

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### Bachelor of Engineering (Honours)

*Specialising in Computer Systems*

*Engineering*

UNIVERSITY OF AUCKLAND

*- Nov. 2024*

### Rangitoto College

*NCEA Lvl. 1-3*

*- 2020*

## Hobbies / Interests

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**Taekwondo - Black belt**

**Science and Technology**

**Rock Climbing**