



# Scott Hitchcock



MECHATRONICS GRADUATE

## Links

[LinkedIn](#)

[GitHub](#)

## Skills

**Software:** Python, C, C++, Full

Stack Web Development,

MATLAB, Bash, Git, LabVIEW,

PLC Ladder Logic

**Electrical:** PCB design (Altium, KiCad), Soldering

**Mechanical:** CAD (SOLIDWORKS), Lathes, Milling Machines, Arc Welding, 3D Printing

**Extra:** Workplace First Aid Certificate, Forklift (F + OSH), Intermediate Conversational Spanish, Microsoft Office

## Profile

I am a determined, hardworking, and friendly person who loves a challenge. One of my best qualities is my eagerness to learn new things, and my ability to learn them quickly. I'm not afraid of heavy workloads and am constantly pushing myself to be the best I can. I thrive in team environments, finding them highly rewarding.

## Education

***B.E. in Mechatronics (Hons) Undergrad, University of Canterbury, Christchurch***

FEBRUARY 2020 – NOVEMBER 2023

GPA of 8.09 - First Class Honours.

***High School, St. Pauls Collegiate, Hamilton***

JANUARY 2017 – NOVEMBER 2018

Endorsed NCEA level 2 and 3 with excellence.

## Employment History

***Software Development Intern, Trimble, Christchurch***

NOVEMBER 2022 – FEBRUARY 2023

As a software developer at Trimble in Christchurch, I contributed to the development and testing of Earthworks, a grade control product for earthmoving machinery. This internship strengthened my ability in Scrum methodology utilising JIRA, as well as in C++, JavaScript, and effective communication within a large development team. Additionally, I gained valuable experience in software development using Visual Studio, Visual Studio Code, and Android Studio.

***Production Insight Engineering Intern, Bluelab, Tauranga***

NOVEMBER 2021 – FEBRUARY 2022

I developed a full-stack web app to provide Bluelab visibility into their production performance. This project involved meeting with key stakeholders, mapping and prototyping the system, documenting development and critical decisions, and delivering a functional product. The technologies involved in the project included React for frontend design, PostgreSQL and FASTapi for the backend, AWS for hosting, and Asana and Confluence for project management and documentation.

## Achievements

- B.E. First Class Honours (2023)
- Rochester and Rutherford Recognition of Grades (2020)
- UC Undergraduate Entrance Scholarship (2020)
- Year 13 House Prefect (2018)

## Personal Interests

In my free time, I take great pleasure in engaging in various sports activities, including hockey, golf, squash, surfing, skiing, and running. I also have a huge passion for travelling and exploring new destinations. I also thoroughly enjoy socialising with friends. Additionally, I actively participated in university culture being the treasurer of Opsoc, a university club.

## Volunteer Work

### *Opsoc (2022, 2023):*

I hosted the Charity Art Auction with proceeds going to Ukraine war relief, Waiheke penguins support and Gisborne flooding relief.

### *Rochester and Rutherford*

#### *(2020):*

Ronald McDonald House Charity Dinners.

### *Student Volunteer Army*

#### *(2020):*

Queenstown Reforestation project.

## Relevant Projects

### *Golf Swing Tracer*

APRIL 2023 – JUNE 2023

In my final year computer vision course, I designed an automated method for detecting and tracking the head of a golf driver throughout a swing sequence. In this project, I utilised PyTorch to train a YOLOv8 model for detecting the head of the driver. I also employed additional methods to enhance the swing tracing, such as morphological operations, frame differencing, and cubic spline interpolation all using OpenCV in Python.

### *Wacky Racers*

MARCH 2023 – MAY 2023

In a four-member team, we designed, assembled, and programmed PCBs for 'Wacky Racers' in our final year embedded systems course. Our goal was to create a 'racer' and a 'hat' for control. The hat transmitted accelerometer data to the racer via radio, steering the racer's motors. The project encompassed Altium-based PCB design and assembly, circuit design and programming two microcontrollers in C. This project refined my reasoning and debugging skills.

### *Robocup*

APRIL 2022 – OCTOBER 2022

In a three-person team during our third-year mechatronics design course, we created an autonomous robot for a class competition. The robot autonomously navigated, detected objects, and collected target weights. The project encompassed software design using Arduino, mechanical design with SOLIDWORKS, and control algorithm and circuit design to develop this mechatronics system.

### *Wordle Solver*

JANUARY 2022 – FEBRUARY 2022

In my free time, I created a Python solver for the popular online game Wordle. This project emphasised abstract thinking and problem-solving. This project showcases my ability to strategically approach challenges and demonstrates my passion for creative problem-solving.

## References

*References are available upon request.*