



SAMUEL BAIN

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Professional Profile

I am a highly organised and dedicated student, with a passion for solving complex issues with unintuitive solutions. Sensitive to feedback, I possess a reputable aptitude, demonstrating an ability to learn quickly and adapt to a range of scenarios. I have attained a solid academic background and a comprehensive skill set, which shall make me well equipped for a graduate engineering role.

Relevant Work Experience

Nov 2021 – Feb 2022

Product Development Intern • Plant Research Limited

- Developed an autonomous ground-based robot to combat labour shortages for weeding and crop management roles.
- Fused GPS and image data to achieve path following with simultaneous obstacle detection and avoidance.
- Implemented python software using a Robot Operating System (ROS) architecture on a Linux device.

Feb 2021 – June 2021

Product Developer • Sybotic Milking Systems

- Designed and prototyped a gripper arm to be used as part of a robotic milking system.
- Implemented rapid design and test cycles to validate concepts.
- Communicated with client remotely, and juggled work requirements with university workload.

Education

2019 - Present

Bachelor of Engineering, Mechatronics - University of Canterbury

- 8.84 GPA (out of 9)
- University of Canterbury Senior Scholarship (One of the top 25 highest GPAs in 3rd year)
- Part of winning team for the solar car competition, where team of three compete to manufacture the most efficient circuitry to power a mini car from a solar panel.

2014 – 2018

Cambridge High School, Waikato

- Proxime Accessit (2nd Dux) of CHS
- NZQA Scholarships in Calculus, Physics, Chemistry and Geography
- Ian and Helen Rogers Scholarship for Academic Excellence
- Math199 Uni Paper Participant – A+ grade awarded.

Industry Specific Skills

Python		Java		ROS	
Solidworks/CAD		HTML		PCB Design	
Arduino		C++		Practical skills	

Other Work Experience

Nov 2020 – Feb 2021

Summer Intern • Hutec Engineering

This position focused mainly on database creation, while also involving a range of practical workshop experience, electrical wiring and testing, and maintaining a range of valves on an industrial mill site. This employment allowed me to apply a range of engineering skills, as well as exposing me to the processes of a large engineering company.

Feb 2020 – Present

Bike Mechanic • University of Canterbury Sustainability Office

A friend and I offer a free bike service to university students once a week throughout term times. This experience has allowed me to interact with a wide range of people and contribute to a sustainable cause.

Nov 2019 – Feb 2020

Sole-charge Relief Milker • Bain McQuade Trust, Waotu

This role consisted of running and managing a small dairy farm for periods of up to two weeks at a time with no assistance. This included daily milking and general farm and stock management. This job was essential towards my development of personal attributes such as responsibility and initiative. Being in a sole charge environment meant I had to be highly observant, pro-active, and assertive when faced with unexpected issues.

Dec 2018 – Feb 2019

Milker • Ian Bayes Trust, Waotu

To fulfil this position, I had to be dependable, resourceful, and calm under pressure. Communication was critical in this role in order to work effectively with my team of co-workers.

Extracurriculars

- Vice President of the UC Bike Club
- Avid mountain biker, skier, and climber
- Introductory level Spanish speaker