

LUCA HAWTIN

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CAREER OBJECTIVE

Third-year mechanical engineering student at the University of Canterbury. Combines a strong foundation in mechanical design, manufacturing, and technical problem-solving with effective communication and leadership. Seeking an opportunity to apply a technical and professional approach in an engineering role.

EDUCATION

Bachelor of Mechanical Engineering (Hons)

University of Canterbury | 2024 - Present

NCEA

Shirley Boys' High School | 2019 - 2023

RELEVANT EXPERIENCE

Sheet Metal Fabrication Consultant

NZ Marine Stainless | 2025

Designed a marine radar mast using folded aluminium sheet, applying knowledge of material properties and CAD software.

Collaborated with skilled tradespeople to ensure designs were manufacturable and met client specifications.

University of Canterbury Human Powered Club

UCHP | 2026 - Present

Modifying and updating past human-powered vehicles, specifically *Maroro* (land speed record bike) and *Mako* (trike), implementing design improvements to increase overall speed and optimise them for easier operation by smaller teams.

Designed and built a wind tunnel for engineering outreach programs (*Children's University* and *KidsFest*) to provide interactive, hands-on demonstrations designed to spark children's interest in STEM and engineering.

WARMAN Design and Build Challenge

University Coursework | 2025

Awarded 2nd Place at the 2025 University of Canterbury Warman Design & Build Challenge, demonstrating resourceful innovation, problem-solving, and teamwork skills. Gained hands-on experience in the full engineering design process, including concept development, prototyping, and testing.

Aluminium Structure

University Coursework | 2026

Designed and fabricated an optimised aluminum structure, hand calculations and CAD design via destructive testing to earn an A+ grade on test day.

OTHER EXPERIENCE

Academic Tutor

University of Canterbury | July 2026

Tutoring engineering mathematics *EMTH271*. A course focused on applying coding in Python to mathematical numerical methods.

Aquatics Lifeguard | Supervisor

Christchurch City Council | 2021 - Present

Supervise lifeguard teams during shifts and ensure pool safety procedures are followed.

Manage pool plant operations, conduct backwashes, and run water circulation systems.

Respond to incidents with composure and clear decision-making in high-pressure environments.

Deliver high-quality customer service, resolving conflicts and ensuring patron safety in a public environment.

Collaborate with lifeguards and emergency services to build strong team communication and coordination.

KEY SKILLS

Interpersonal

Proven ability to lead teams, build strong working relationships, and communicate diplomatically in diverse environments. As a lifeguard supervisor, I direct active pool operations, manage staff, and deliver high-standard customer service. In university engineering projects, I collaborate with technical teams, incorporate feedback, and ensure aligned execution from design through fabrication.

CAD

Primarily utilised SolidWorks across numerous academic and consulting engineering projects to design complex parts and assemblies with meticulous attention to detail. Engineered a sheet metal radar mast for a commercial client and designed various custom 3D-printed components to solve specific functional and assembly challenges.

Coding

Developed a finite element analysis (FEA) solver and 2D conduction and convection using finite difference methods. Additionally, served as a Teaching Assistant for a university programming course using Python.

Manufacturing Processes

Efficiently fabricated functional engineering components using manual milling, turning, CNC machining, composites, FDM 3D printing, and laser cutting, applying rapid prototyping to projects such as the WARMAN competition.

COMMUNITY INVOLVEMENT

Helped organise and coordinated University of Canterbury outreach events to engage prospective students and the community.

Coached Shirley Boys' High School road cycling team.

Volunteer Surf Life Saving patrol duties and emergency response delivered over two years at North Beach Surf Life Saving Club.

INTERESTS

Active in competitive cycling, multi-sport adventure racing, and backcountry tramping, developing high discipline, physical resilience, and a practical understanding of mechanical systems. Experienced in managing route logistics, technical navigation, safety protocols, and equipment maintenance for multi-day alpine crossings, ski touring, and remote terrain exploration.

REFEREES

Dr Nicholas Lam

Lecturer, Faculty of Engineering
University of Canterbury,
Christchurch 8140

Contact details available upon request

Dr George Stilwell

Lecturer | UCHP supervisor, Faculty of Engineering
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