

LUCA HAWTIN

MECHANICAL ENGINEERING STUDENT

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ABOUT ME

I am a motivated third-year Mechanical Engineering student at University of Canterbury, progressing toward a Bachelor of Engineering (Honours) in 2027. My academic work and hands-on design experience have built a strong foundation in mechanical design, manufacturing processes, and technical problem-solving.

Outside of university, I pursue competitive road cycling and a range of outdoor activities, which have strengthened my discipline, resilience, and practical understanding of mechanical systems. Combined with several years of high-responsibility lifeguard and supervisor work, I bring strong communication, teamwork, and leadership skills. I am now seeking an opportunity to apply my technical skills and professional approach in an engineering environment.

KEY SKILLS

Forward-thinking mentality and ability to problem solve

Strong communication skills

Confident to collaborate in a team

TECHNICAL SKILLS

Coding: Python, C++, LaTeX

Engineering Software: SolidWorks, HSMWorks

Microsoft Excel

Microsoft 365

Manufacturing Processes: FDM 3D printing, CNC milling, manual milling and turning, laser cutting

KEY SUBJECTS

Engineering Mathematics

Design for Manufacture

Production Management

Dynamics and Vibrations

Stress, Strain and Deformation

Thermodynamics

Material Science

Fluid Mechanics

Controls and Vibrations

EDUCATION

Bachelor of Mechanical Engineering (Hons)

University of Canterbury | 2024 - Present

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

EXPERIENCE

Academic Tutor

University of Canterbury | Commencing July 2026

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

University of Canterbury Human Powered Club

UHP | 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 optimize 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.

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.

Aquatics Lifeguard/Supervisor

Christchurch City Council | 2021 - Present

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

Manage and monitor pool plant room operations, including conducting filter backwashes and operating large-scale 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.

Work effectively in a team with other lifeguards and emergency services, strengthening communication and coordination skills.