

SEVAN DALZELL

Final Year Mechatronics Student

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EXPERIENCE

Industrial Engineering Intern

Elitepac NZ Ltd

Dec. 2024 – Jan. 2025

Returned Dec. 2025 – Mar. 2026

- Designed and established a WorkSafe-compliant segregated hazardous substance storage system, & coordinated regulatory approvals and audits for WorkSafe & BASF SE
- Set up key factory infrastructure (security systems, waste management, Wi-Fi, PPE/signage) & conducted market research for chemical formulation
- Developed HACCP, VACCP, TACCP H&S frameworks and supported MPI registration (RMP, NP3) for foodstuff and chemical production
- Led ISO 11137 sterilisation planning with third-parties, including bioburden testing, ongoing validation & standard operating procedures
- Designed and planned procurement of production processes and workflow development for new products
- Produced GMP documentation, Certificates of Analysis, assisted chemical reformulation, and presented technical updates in stakeholder meetings

Research Assistant

The University of Auckland

Oct. 2024 – Dec. 2025

- Conducted acoustic measurements in real-world environments (e.g. large halls), analysing frequency response characteristics of different spaces
- Developed automated methods to synchronise misaligned acoustic datasets, restoring usability of experimental data
- Acted as a technical liaison between research groups, coordinating data processing approaches and ensuring effective cross-team communication

Engineering Tooling Assistant

Trade Tools Ltd

Jan. 2025 – Mar. 2025

- Assisted with engineering supply procurement, managed inventory, and collaborated with multiple teams to support efficient throughput

VOLUNTEERSHIP & COMMUNITY INVOLVEMENT

FoED & Mech. Staff-Student Consultative Committee

The University of Auckland

2025 – Present

- Rainbow Engineering representative at faculty-wide staff meetings

Video Director, Writing & Video Team Executive

The Engineering Revue

2024 – Present

- Oversee full production workflow from concept to filming, for screening of two industry-standard short films at the Engineering Revue, coordinating operations, budgeting, scheduling and thorough interdepartmental collaboration

General & Marketing Executive

Rainbow Engineering UoA

2024 – Present

- Executive involvement in events and marketing planning for UoA's LGBTQIATakatāpui+ Engineering faculty. Oversaw a **64%** increase in peak-time sign-ups during marketing tenure

Event Photography & Videography

Various Organisations

- Event photographer for Hardware Meetup NZ, UoA's MECHA, AUDA, AUES, Rainbow Engineering, Engineering Revue, and Women in Engineering Network

Volunteer

Know Your Stuff NZ

2022 – Present

- Provide community drug-checking services for harm reduction and education, developing practical experience with FTIR spectroscopy

TECHNICAL SKILLS

Practical / Mechanical: Data Processing & Analysis, MIG Welding, Turning & Milling, CAD, 3D printing, FTIR Spectroscopy, Photogrammetry

Electrical: Soldering, Circuit Design, Microcontrollers, Analog Sensor & Digital Signal Processing

Documentation: Technical Writing, SOP Writing, Technical drawing

Coding Languages: C, C++, MATLAB, R, $\text{\LaTeX}$

Software: Adobe Creative Cloud, Autodesk Inventor, Blender, Simulink, Git, Ansys

SOFT SKILLS

Teamwork: Team Cohesion, Conflict Resolution, Cross-Team Communication, Relationship Building, Collaboration, Leadership, Mentorship

Problem Solving: Initiative, Resilience, Analytical Thinking, Adaptability, Creativity, Proactive Learning

Organisation: Time Management, Organisation, Critical Thinking, Attention to Detail, Flexibility, Strong Drive for Excellence

EDUCATION

BE(Hons) Mechatronics Engineering, Ongoing

The University of Auckland

2023 – Present

PROJECTS

2025 DTRG Indoor Drone Competition

- Competed in a team drone navigation and payload mechanism design competition

2025 MECHA Design Challenge, 2nd Place

- Designed and built an aquatic robot to specification in a one-day team engineering challenge

Personal Project: RPi Wi-Fi Access Point

- Set up a Raspberry Pi as a custom internet access point to connect older devices to University Wi-Fi

University Project: 2-Axis CNC Controller

- Developed in C++, a Ziegler-Nichols tuned PID controller for a G-code pencil plotter, achieving **0.012 mm** resolution via precise voltage control

LANGUAGES

English Native
Japanese Intermediate (~JLPT N5)

REFERENCES

MORE ON REQUEST

Dr Justine Hui

Senior Lecturer, Department of Mechanical & Mechatronics Engineering

The University of Auckland

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