

# KATIA STEPHAN

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## CAREER OBJECTIVE

Undergraduate Mechatronics Engineering student seeking a **Graduate Position** in which I can apply my interdisciplinary software, electrical and mechanical skills and further my expertise in **mechatronic engineering**. I am committed to channel my technical capabilities, enhanced by my **creativity and enthusiasm**, into achieving **Indutrus Engineering's** mission to reimagine engineering.

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## EXPERIENCE

### Ergo Consulting Ltd, New Zealand

FEB 2025 - JUN 2025

#### Mechatronic Engineering Intern

- Created a custom GUI to generate, run and extract Finite Element Analysis simulations using python and the software FEAP
- Programmed custom buttons in Autodesk Inventor to automate engineer's design processes
- Compiled an excel calculator to predict forces from HV cables undergoing thermo-mechanical expansion or short circuit forces

### University of Technology, Sydney (UTS)

AUG 2024 - PRESENT

#### Mechatronics Course Tutor

- Tutors classes of up to 300 engineering students in class weekly in Introduction to Mechatronic Engineering.

Guides students through **challenging mechatronic problems**, providing tailored explanations and solutions.

### UTS Formula SAE Motorsports Autonomous Team

AUG 2023 - DEC 2025

#### Mechanical Team Leader (1 year)

- Mentored and **managed a team of 15** students through various **mechanical, mechatronic, software and electrical** engineering projects.
- Collaborated with **interdisciplinary subgroups** within the team ensuring projects are completed with efficiency.

#### Mechanical Team Member (1.5 years)

- Exercised skills in **fibreglass** mold preparation, layup and finishing to construct a race seat within a small time frame, ensuring completion for the car reveal at the Sydney SXSW **exhibition**.

### Australian Youth Space Academy

OCT 2023 - JAN 2025

#### STEM Camp Activity Leader

- Leads and assists activities during 4-day camps for **more than 50 students** ages 12-18.
- Applies mechatronic and team management skills to host activities to design, build and launch solid fuel rockets.
- Networks with engineers** from organisations involved with Australian and international space industries.

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## TECHNICAL SKILLS

**Mechatronic:** Sensor Integration (*ROS, MATLAB, Ubuntu*), Soldering (*Through-Hole, Reflow SMT*)

**Software:** Programming (*MATLAB, C/C++, Java, Python, Arduino, Quartus Prime*), CAD (*SolidWorks, Blender, Inventor*)

**Mechanical:** Manufacturing (*Metal-working, 3D Printing, Laser Cutting, Fibreglass*), Design (*Stress-testing, FEA*)

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## EDUCATION

### Bachelor of Engineering, Mechatronics (Honours)

FEB 2023 - DEC 2026 (expected)

#### University of Technology, Sydney (UTS)

- Majoring in Mechatronics with **high distinction average (87%) GPA: 7.82/9 (NZ) 6.08/7 (AUS)**
- Recipient of \$10,000 Scholarship through the UTS Women in Engineering and IT Faculty Award.

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## REFEREES

Available on request.