

# Liam Faulkner-Hogg

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## Education

### Bachelor of Engineering (Honors) Diploma in Professional Engineering Practice

#### University of Technology Sydney (UTS)

Feb 2021 - Dec 2025 (Expected)

- Majoring in Mechanical and Mechatronic Engineering
- Major Events CO-Ordinator for Mechsoc a UTS Society
- UTS Tech Fest 2024 presenter for my Tetris AI

#### Waverley College Senior School

Jan 2014 - Nov 2019

- 80.5 Atar
- One of Eight DaVinci Decathlon members

#### Cadet Under Officer (CUO)

Jan 2015 - Nov 2019

- Awarded the Cosgrove Shield for most efficient Commander
  - Completed Corporal, Sergeant, and CUO leadership training
  - Specialty Commander of Cadets
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## Experience

### Sofraco Engineering Systems

23rd Jul 2024 - 10 Oct 2024

#### Mechanical Engineering Intern

- Developed 3D models and engineering drawings for components on Australia's guided missile destroyers (DDGs). Demonstrating proficiency in using engineering software (e.g., CAD) and producing detailed technical documentation.
- Prepared detailed Work Instructions for ship issues. Demonstrating technical writing, problem analysis and effective communication skills.
- Organized and updated the entire company asset register, ensuring data accuracy and completeness. Demonstrating attention to details and organisational skills.

**Atlantic & Peninsula****5th Sep 2023 - 30 June 2024****Mechanical Engineering Intern**

- Coordinated and led multiple projects during the production period of HMAS Choules 2024, demonstrating strong management and problem-solving skills.
- Designed a new piping addition for the Diesel Generator Fresh Water Cooling System, involving extensive head loss calculations and system research.
- Assisted in load testing and repairing the ship's mexefloat winches during sea trials, which required boarding the ship at sea and conducting tests in challenging conditions.

**Windtech Consultants****Jan 2023 - June 2023****Intern**

- Constructed and tested wind probes and pressure readings for scale model city buildings inside windtunnels.
- Managed teams of other new interns showing effective time management and meeting deadlines.

**Palmer & Co.****May 2022 - Jan 2023****Cocktail Bartender**

- Led and coordinated the venue's bar during multiple functions, displaying organization and leadership skills.
- Shown teaching skills through the training of new employees in correct bartending.

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**Core Skills**

**Leadership Skills**, acknowledged by the Waverley College Cadet unit when receiving the Peter Cosgrove shield for the most efficient commander in the unit at the end of 2019 for leading a team of 12 cadets during a 10-day annual camp at Douglas Park.

**Problem-solving**, I demonstrated strong problem-solving skills during the production of HMAS Choules. Issues like incorrect parts or contractors blocking work areas caused delays. Despite these challenges, I consistently found solutions and ensured all my tasks were completed on time.

**Creativity**, creativity is crucial for designing parts and improving systems. I demonstrated this while working on the freshwater cooling system of HMAS Choules. I devised a cost-effective and minimally intrusive solution, showcasing my ability to think creatively and implement improvements.

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## Technical Skills

**Coding C++**, I have created multiple projects using C++ and integrated my code with ROS2 to control virtual cars and drones. This involved developing functions for speed determination, movement, laser scanning, and other essential operations.

**Coding Python**, I developed a Tetris AI in Python that outperforms human players. This AI, which utilizes neural networks and reinforcement learning, was selected for showcase at the UTS Tech Festival 2024.

**Excel**, I have a solid understanding of creating and using equations in Excel, gained from the "Engineering Computations" course and extensive hands-on experience during internships.

**3D Cad Software**, I used SolidWorks to create multiple model parts and assemblies for the 2023 Warman Robot Challenge. I have also used Fusion 360 extensively in designing parts for my at-home hobbies

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## Additional Information

- RSA certified (May 2021 - May 2025)
  - White card
  - Working at Heights Certificate
  - Working in Confined Spaces Certificate
  - Member of Engineers Australia
  - Member of MechSoc Society
  - Member of BoulderSoc Society
  - First Aid Certificate for CPR and Advanced Resuscitation (December 2019)
  - Captain of Waverley College 1st Waterpolo (June 2018 - Mar 2019)
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## Interests

- Waterpolo
  - 3D Printing
  - Hobby Electronics
  - Bouldering
  - Golf
  - Camping
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## Referees

Available Upon Request.

