

Gabriel Thien

Undergraduate Mechatronics Engineer @ Asiga 3D Printers (Part-Time)
Bach. Mechatronics Engineering/Bach. Computer Science UGRD @ UNSW

SUMMARY

Tech-passionate student interested in embedded devices, computer vision, IoT and automated robotic systems. Loves tinkering, researching and prototyping devices with a strong technical portfolio to match. Highly involved in various technical projects & endeavours. Currently looking for internships in mechatronics/software engineering.

EDUCATION

UNSW Sydney – Undergraduate, 2021~2025

Degree: *Bach. Mechatronics Engineering/Bach. Computer Science*

Societies: *UNSW CREATE, UNSW CSESoc, UNSW CompClub*

EXPERIENCE

Undergraduate Mechatronics Engineer @ Asiga 3D Printers (March 2023 ~ Present)

- Developed prototype & proof of concept sensors, electronics and systems
- Wrote driver control software for embedded platforms
- Created reliability testing & internal tooling platforms for current & upcoming products
- Involved robotic automation and product development

Machine Technician @ Archie Brothers Alexandria (June 2022 ~ October 2022)

- Fault diagnosis & repair of various electrical, mechanical systems
- Fault finding, reporting, equipment testing and verification
- Parts procurement, replacement & servicing
- Regular maintenance, on-call technical support

VOLUNTEERING

CREATERLabs Projects Director, Treasurer @ UNSW CREATE (September 2022 ~ Present)

- Managing teams' workflows, coordinating meetings, liaison with sponsor companies
- Directing projects involving robotics, drones & automated systems, mechanical systems, mechatronics, software development, computer vision

Internals Subcommittee & Mentor @ UNSW CompClub (May 2022 ~ Present)

- Teaching introductory code, programming concepts, logical thinking, program control in workshops for high school students
- Organised slides, coordinated teaching strategies & content retention, classroom leadership

Peer Mentor @ UNSW CSESoc, EngSoc (January 2022~ Present)

- Social leadership amongst uni students, new students
- Organised bonding events, provided general academic support, promoting uni culture

PROJECTS

Various Product Development Projects @ Asiga 3D Printers (March 2023 ~ Present)

- Developed prototype hardware & software, QC & assembly tooling for production

Computer Vision Subject Detector (June ~ August 2023)

- Developed traditional & deep learning methods for detecting penguins & turtles in a dataset
- Implemented various image processing techniques for an overall 80% accuracy
- Used OpenCV Python


Autonomous Droid Racing Challenge @ QUT (May 2022 ~ July 2023)


- Developed autonomous computer vision navigated racing car for inter-university competition

Competitive Robotics @ RoboCup Junior (2017 ~ 2019)

- Team lead on engineering & testing of autonomous competitive robots with various sensors and interactive mechanisms
- Involved mechanical/electronics assembly, 3D printing, laser cutting, workshop hand tools
- NSW State & Australian National Finals 2017-2019. International 2019.

(More projects detailed in GitHub Portfolio & Repositories)

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[LinkedIn Profile](#) 

[GitHub Portfolio](#) 

QUALITIES

Empathetic, understanding, easy going and supportive individual

Strong collaboration, teamwork, leadership skills

Motivated, self-managing with workload, capable of working independently

Proactive, forward thinking work ethic

Strong communication, presentation, networking skills

Outgoing, friendly, approachable personality

TECHNICAL SKILLS

*C, C++, Python, Java
Object Oriented Programming
HTTP, JUnit, blackbox testing
Agile Development, Git, Postman*

Computer Vision with OpenCV

*Embedded software development in C, C++,
Arduino, ESP32, STM32 frameworks with
PlatformIO*

*Microcontroller electronics experience with
Arduino, ESP32, Raspberry Pi*

*PCB design, prototyping electronics, circuit
design, soldering, testing & debugging*

*3D CAD, 3D printing, laser cutting, hands on
workshop skills*

PC building & installation, desktop support

HOBBIES & INTERESTS

Bouldering, rock climbing, hiking & camping

Enthusiast PC building

Jigsaw puzzles, Lego, Gundam

3D printing, IoT, smart home electronics