

Alexander Mark Cunio

CONTACT

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EDUCATION

Bachelor of Computer Science / Mechatronic Engineering (University of New South Wales Sydney)

5th year

Expected graduation: 2023

- WAM: 92.185
- Awarded coveted Engineering Dean's award in 2019, 2020, and 2021 for being in the top 100 students enrolled across engineering at UNSW

Higher School Certificate (Cranbrook School)

Graduated: 2017

- ATAR: 98.85
- Finished high school in the top two per cent of New South Wales students
- Placed on both the distinguished achievers list and all-rounders list

NOTABLE COURSES

- Data structures and algorithms (Lang: **C**, Mark: 99)
- Algorithms and programming techniques (Mark: 100)
- Object-oriented design and programming (Lang: **Java**, Mark: 92)
- Computer networks and applications (Lang: **Python**, Mark: 94)

REFEREES

Available upon request

WORK EXPERIENCE

Junior Software Engineer

Dec 2021 – Present

Hullbot

- Advanced the industry-leading underwater robotic platform as an intern on the software team, and was subsequently invited to stay on part-time
- Performed field testing to validate the performance of advancements completed by myself and others
- Sped up robot assembly workflows over ten-fold by designing a real-time tool that reads and analyses sensor data and provides feedback to team members
- Revamped the robot's user interface to simplify and streamline control and monitoring of essential onboard systems for all future robot operations missions

Casual Academic

Jun 2020 – Present

UNSW Sydney

- Supported students in project-focused courses across mechatronic engineering, developing robot controllers in **C++**, and biomedical engineering, producing functional medical device prototypes
- Mentored classes of 15-40 students to ensure students received individualised support
- Collaborated with tutors and lecturers to generate an online course (including material, student projects, and assessments) for distance learning during COVID-19
- Coordinated with students and teachers to support the rapid transition of course delivery and assessment online that enabled students to continue their existing projects with minimal disruption
- Assisted in empowering and increasing the outcomes of indigenous students studying at UNSW through the Nura Gili Indigenous Tuition Program
- Accomplished an overall 95.9% satisfaction rate from students

Robotics Educator

Aug 2018 – Dec 2021

Cranbrook School

- Engaged a class of 15 high school students in an extra-curricular program
- Created and led a program to develop students' skills in mechanical design and programming utilising LEGO's educational platform
- Extended mechatronic and software engineering into the classroom through the school's STEM program to aid in students finding a passion in the field

TECHNICAL PROJECTS

Education Algorithm Visualiser

Mar 2021 – Dec 2021

Computer Science and Engineering Society, UNSW Sydney

- Collaborated to build a software system from the ground up, allowing for the visual representation of technical computer algorithms to support student education
- Reviewed features and advancements through monthly synchronous and weekly asynchronous meetings of six, to combine perspectives for a solution that will be released to over 4000 students enrolled annually across two courses at UNSW
- Spearheaded the creation of a server back end in **Typescript** and **MongoDB** for content management and front end components within **React**, **Javascript**, **Typescript**, **HTML**, and **CSS** containing lesson content and review quizzes
- Undertook challenges through new software tools enabling me to enhance my skills

Simulated Wheeled Robot Controller

Jun 2021 – Aug 2021

Mechatronic Engineering course, UNSW Sydney

- Applied skills in robotics controllers, pathfinding algorithms, and computer vision to implement a controller in **C++** and **Python** for a mobile robot to map out a maze and find the shortest path through it, all completed within a 10-week required time frame
- Developed extensions for control over TCP/IP with live video feed, autonomous maze mapping, obstacle avoidance, and a graphical user interface
- Awarded first place as a group of three for the best project implementation