Joel Shortland

Joel.shortland1@gmail.com ❖ 0410 219 113❖ Woongarrah, NSW, 2259 ❖ GitHub

EDUCATION

University of Sydney **November 2024**

Bachelor of Advanced Computing / Science: Majors in Software Engineering & Physics *Sydney, NSW*

- **WAM:** 85, **Dean's List:** 2023, 2024, **Honours:** Class 1
- **Notable Subjects:** Object Oriented Programming, Natural Language Processing, Artificial Intelligence and Deep Learning, Algorithm Design and Data Structures.

TECHNICAL SKILLS

- **Languages:** Python, Java, C++, C, CSS, HTML, JavaScript
- **Databases and Tools:** SQL, SQLite, Git, Bash, Excel
- **Processes:** API Development, Full-Stack Development, Cloud Development

WORK EXPERIENCE

Tutoring Service **Aug. 2020 – Oct. 2023**

Tutor *Toukley, NSW*

- Improved student skills for HSC Level Mathematics and Physics through tailored instruction.
- Met with 1-2 students each term for personalized tutoring sessions.
- Promoted independent learning strategies, boosting student confidence.
- Collaborated with students on assignments, identifying and addressing weak areas.
- Engaged with parents to discuss student progress and concerns.

Gosford Software Firm **Dec. 2019 – Feb. 2020**

Intern *Gosford, NSW*

- Assisted in developing an indoor tracking program for Gosford Hospital, improving patient navigation and overall experience by enhancing accuracy in user location updates.
- My role primarily focused on utilising Java and HTML skills to integrate multiple Google Home device inputs, ensuring precise location updates by focusing on mathematical logic and filtering.
- Collaborated in a team using AGILE methodologies, contributing to the successful completion of the project.

PROJECTS

Augmented Reality Tracking Program | Python, OpenCV

- A program made for the purpose of answering my thesis questions, aimed to improve physics understanding by displaying the displacement, velocity and acceleration of an object in real time.
- The program allowed for 40% of existing misconceptions to be corrected by students after a practical.

Simple 2D Platformer | Java

- A 2D platformer made using OOP principles for a university course. Demonstrates the use and understanding of OOP design patterns, including Factory, Observer and Memento.
- Tested using Junit, with 80% code coverage and 100% correctness.