WEICHEN TIE

Phone: 0426-893-866 | weichentie1@gmail.com | linkedin.com/in/weichentie | github.com/WeichenTie
weichentie.github.io/Portfolio

EDUCATION

University of New South Wales — Sydney, NSW
B.Sci. Computer Science / B.Eng. Mechatronics Engineering(Hons) — *Feburary 2020 – August 2025*

- **Computer Science Courses**: Data Structures and Algorithms, OOP, Database Systems, Computer Graphics, Web Applications, C++, Neural Networks and Deep Learning, Human Computer Interaction, User Interface Design.
- **Mechatronics Courses**: Robotics, Digital Circuit Design, Circuits and Signals, Engineering Design, Linear Systems and Control, Computing Applications in Mechatronic Systems, Engineering Mechanics.
- **Current WAM**: 79.970

EXPERIENCE

IT Director — June 2024 – Present
UNSW – MTRNSoc — *Sydney, NSW*

- Updated primary website to reflect the current goals of the society.
- Reduced page load speed for home page and events page by 70%.
- Designed and implemented Sumobots website to drive engagement and provide resources to event attendees.
- Communicated and worked extensively with executives to seamlessly deliver websites before deadlines.

Receptionist — February 2022 – Present
No Gaps Dental — *Sydney, NSW*

- Greeted and assisted patients, managed appointments, and maintained records using management software.
- Developed workflows greatly reduced time to task by 30% and improved overall employee satisfaction.
- Saved thousands of dollars by resolving hardware and software issues including payment and autoclave systems.
- Resolved conflicts, addressed patient inquiries, and handled unexpected situations calmly and efficiently.

Private Computer Science Tutor — April 2022 – November 2023
Self Employed — *Sydney, NSW*

- Provided individualised instruction to students of varying skill levels.
- Adapted teaching methods to match individual learning styles.
- Explained complex technical concepts across different languages and paradigms in a clear and concise manner.
- Guided students through debugging exercises and promoted critical thinking skills.
- Evaluated student progress through university assessments and improved grades by an average of 18%.

PROJECTS

Portfolio | *Nuxt3, Typescript, GSAP, Tailwind, Github Pages* — January 2024 – April 2024

- Created a personalised portfolio to showcase my projects.
- Deployed to Github pages at weichentie.github.io/Portfolio.

Unmanned Ground Vehicle | *C++, PLC, CLR, MatLab* — September 2023 – November 2023

- Devised and implemented PLC logic to control an unmanned ground vehicle, enabling autonomous navigation.
- Implemented heartbeat protocol in C++ to ensure system reliability and fault tolerance.
- Integrated and integrated GNSS and LIDAR data in a multithreaded context in a memory safe manner.
- Alleviated burden from teaching staff by ethically providing guidance to peers for 2 weeks.

Twitter Sentiment Analysis | *PyTorch, Python, Jupyter Notebook* — May 2023 – August 2023

- Collaborated with a team of 5 postgraduate students to develop a sentiment classifier.
- Performed optimisations through parallelisation on the tokenizer reducing the preprocessing time by 40%.
- Researched and developed a CNN Bi-LSTM sentiment classifiers with a resulting 95% model accuracy.

Kahoot! Clone | *React, JavaScript, Tailwind, React Query* — February 2023 – April 2023

- Developed a frontend for a Kahoot! clone in React/JavaScript as a team of 2.
- Designed and implemented the user interface with consideration to user experience.

- Implemented client side caching, optimistic updates and cross browser synchronisation to eliminate latency.

Event Management System | *React, Typescript, Django, PostgreSQL, RDS*   September 2022 – November 2022
- Led a team of 5 as the Scrum master to develop a full-stack application for an event management system.
- Developed and led in both the frontend (React/Typescript) and backend(Django, PostgreSQL) teams.
- Coordinated and delegated tasks to team members based on individual strengths.
- Assisted proactively throughout the project and resolved conflicts in a timely manner.
- Set up AWS RDS and Netlify.

TECHNICAL SKILLS

Languages: Typescript, JavaScript, Java, Python, PostgreSQL, GLSL, C++, C#, C.
Frameworks: Nextjs, Nuxt3, Svelte Kit, React, Vue, OpenGL, Flask, Django, .Net, Unreal, Unity.
Others: Figma, Fusion360, SolidWorks, Autodesk, Jira, Raspberry Pi, Arduino, 3D Printing, PyTorch.

INTERPERSONAL SKILLS

Adaptability, Communication, Collaboration, Leadership, Time Management, Quick Learning

COURSE MARKS

COMP1521 – Computer Systems Fundamentals:	85 HD	
COMP1531 – Software Engineering Fundamentals:	78 DN	
COMP2511 – O-O Design & Programming:	85 HD	
COMP2521 – Data Structures and Algorithms :	88 HD	
COMP3121 – Algorithms & Programming Techniques:	80 DN	
COMP3311 – Database Systems:	87 HD	
COMP3421 – Computer Graphics:	92 HD	
COMP3511 – Human Computer Interaction:	77 DN	
COMP3900 – Computer Science Project:	78 DN	
COMP4511 – User Interface Design & Construction:	80 DN	
COMP6080 – Web Front-End Programming:	96 HD	
COMP9444 – Neural Networks & Deep Learning:	78 DN	

AWARDS AND RECOGNITIONS

COMP3421 – Computer Graphics: Top 10 Games Award.