TIMOTHY TEW | COMPUTER SCIENCE (ADVANCED)

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Development Environment: Window Subsystem for Linux in VSCode

Professional Summary

High-achieving Computer Science student with a strong academic record and a passion for problem-solving.

Skilled in developing efficient algorithms and leveraging data structures to tackle complex challenges. Proficient in Python and C++, with a strong willingness to learn new technologies.

Hands-on experience in library creation, full-stack development, game development, and academic research.

Technical Skills

C++ (3 years), Python (2 years), JavaScript/HTML/CSS (1 year)

Education

[99.65 / 99.95] – Australian Tertiary Admission Ranking

Achieved maximum selection rank of 99.95 (including bonus points).

Subjects: Specialist Mathematics, Mathematical Methods, Physics, Chemistry, Biology.

[6.933 / 7 GPA] – Bachelor of Computer Science (Advanced), University of Adelaide

Notable Subjects: Object-Oriented Programming, Algorithms & Data Structures, Algorithm & Data Structure Analysis, Topics in Computer Science.

Industry Experience:

2025: Conducting research as part of the "Advanced Topics in Computer Science" course, focusing on a Facebook dataset where teachers discuss AI. Applying natural language processing (NLP) techniques to extract key insights, identify discussion topics, and refine Python programming skills.

2024: Researched Social Network Analysis, using Python to compare clustering algorithms. Created ground-truth clusters based on Star Wars lore and evaluated algorithm performance against these benchmarks.

Projects

Charity Organisation Website (Apr. 2024) | GitHub

Collaborated in a team of university students to design and build a full-stack charity coordination platform from scratch. Implemented features for user registration, organisation/event creation, RSVP functionality, and membership tracking. Gained hands-on experience in team-based software development and enhanced practical web development skills

Python Probability Library (Mar. 2025) | GitHub | PyPi

Created a Python library to simulate probability games involving cards, dice, and coins, enabling empirical analysis of outcomes. Strengthened skills in mathematical modelling, Python development, and packaging. Used by peers to validate results and explore probabilistic events—deepening understanding of models relevant to quantitative finance.

Make A Market (Apr. 2025) | GitHub

Built a Python-based market-making simulation using card draws to mimic trading decisions under pressure. Sharpened fast mental computation, probability intuition, and decision-making speed—reflecting real-world market dynamics. Reinforced Python programming and probabilistic reasoning skills.

Past Achievements / Awards

- Australian Mathematical Olympiad Committee Senior Contest 2019 – Honourable Mention
- Australian Intermediate Mathematics Olympiad 2018 & 2019 – Certificate of Distinction

Interests

- Problem-Solving: Passionate about complex challenges in combinatorics and probability.
- Bouldering: Applies physical problem-solving skills, training 4–8 hours weekly.
- Learning: Continuously explores new knowledge areas and technical skills

Communities - Competitive Programming Club