Zachary Anderson

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Education

Bachelor of Mathematical and Computer Sciences **February 2023 – November 2025**
The University of Adelaide

- 7.0/7.0 GPA including 99% in Programming (Matlab & C) and 100% in Mathematics IB

Work Experience

Product Engineer | insightfactory.ai **February 2024 – Present**

- Undertaking cadetship involving developing software to improve the main data/AI platform and product
- Improved useability of the React UI by updating and creating tooltips

Academic Tutor | Sole Trader **January 2023 – Present**

- Providing tutoring services primarily for computer science and SACE Stage 2 sciences/mathematics
- Managing business activities including finding customers and tracking finances/paperwork

Projects

Sudoku **December 2023 – January 2024**

- Created sudoku web app with three difficulty modes using Vue
- Implemented sudoku validation, completion, and board generation algorithms in TypeScript
- Improved performance to be consistently under 1 second for all types of board generations

Minesweeper with Save States **September 2023 – October 2023**

- Collaborated in a team of three people to recreate classic Minesweeper with various board configuration options and save states using SFML with C++
- Developed the object-oriented structure and implemented entity, tile, mine, and number classes

University of Adelaide Timetable Generator **January 2023 – February 2023**

- Created web app to generate permitted class configurations for any selected range of subjects
- Implemented responsive user interface with HTML, CSS, and JavaScript
- Leveraged JavaScript for extensive input string parsing and scalable subject clash logic

Custom Spotify Shuffle Feature **October 2021 – December 2021**

- Created web app to allow for custom shuffle parameters and weightings
- Re-engineered initial Python program to a JavaScript web app with an interactive HTML/CSS interface
- Implemented asynchronous web API calls and custom shuffle logic based on user input

Community Involvement

- Active member of Competitive Programming Club and placed in the top 10% in recent competitions (2024)
- 1 of 5 SA students selected for the ANU-AAMT National Mathematics Summer School (2022)
- Assisted EdTechSA Conference presentation about teaching mobile app development in Lua (2019)

Awards

- City of West Torrens Mendelson Scholarship (2023)
- University of Adelaide Principals' Scholarship (2023)
- Way College Prize and Medal for Highest Achievement in SA/NT Stage 2 Chemistry (2022)
- Saint Ignatius' College Class of 2022 Highest ATAR of 99.80 (Selection Rank 99.95) (2022)
- SACE Merits in Chemistry (20/20), Physics (19.9/20), and Specialist Mathematics (19.9/20) (2022)

Languages & Technologies

C++, C, Python, JavaScript, HTML, CSS, React, Vue, TypeScript