

## Ryan Tsai

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### EDUCATION

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#### BE (Hons) Software Engineering, University of Auckland; 2024 – 2027

- *Grade:* Passed with an 8.09 GPA
- *Modules:* Intro to Computer Systems; Object Oriented Programming; Discrete Mathematics; Data Structures and Algorithms (in progress), Software Quality Assurance (in progress)

#### Saint Kentigern College, Auckland; 2019 – 2023

- Proxime Accessit
- Subject Awards in Mathematics, English, Chemistry, Japanese
- NCEA Level 3 Endorsed with Excellence

### EXPERIENCE

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#### Thinking2Morrow, English and Mathematics Tutor

Feb 2024 to Present

- Math and English tutor for years 1 to 13, including NCEA, IGCSE and Cambridge curriculums.
- Worked collaboratively with other tutors to efficiently and effectively tutor classes of up to 12 students.
- Developed independent and collaborative skills in the workplace

### SKILLS AND INTERESTS

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**Programming Languages:** Knowledge in TypeScript, NodeJS, Java, Python, HTML/CSS/JavaScript, C, R, MATLAB

**Languages:** English (native), Mandarin Chinese (basic to conversational)

**Volunteering:** St John Youth, Warrior Taekwon-Do Assistant Instructor, ParkRun Marshall

**Interests:** Guitar, Taekwon-Do, Rubik's Cubes and puzzles

**Associations:** Software Engineering Student Association, Taiwanese Student Association, Eastern Students Association

### PROJECTS

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#### FFXIV Market Predict

A TypeScript/Python project that retrieves crowd-sourced market data in the online game FINAL FANTASY XIV and employs machine learning to attempt to predict future prices of items in game items.

#### Valorant API Wrapper

A TypeScript wrapper for the internal API endpoints for the online game VALORANT that allow users to remotely access game data that would not be able to be accessed without opening the game.

#### ArmaBot

A custom commissioned JavaScript bot for the online messaging platform Discord. Implemented custom commands per client request for moderation and roleplay integration in the game Arma.

#### Astral Bot/Astral Music

A personal Discord bot for moderation and entertainment. Implemented database connection with MongoDB, as well as Valorant and Reddit integration. Astral Music was a custom Discord bot for playing music through voice calls, later merged into Astral Bot. Built with volume controls, song queueing and voice filter integration.

#### Astral Music Website

A responsive website built with HTML, CSS and JavaScript to promote the Discord bot Astral Music.

#### Custom Keyboard Firmware

Created custom keyboard firmware for Arduino microchips using the QMK firmware library for a hand-wired numpad and a custom split keyboard.