

# Tim Zhang

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## EDUCATION

### University of New South Wales (UNSW)

February 2019 – Present

3<sup>rd</sup> year student – Bachelor of Engineering (Software), Bachelor of Commerce.

- Weighted Average Mean: 92.00 (High Distinction). 
- Academic awards:
  - Faculty of Engineering Dean's Award (2020) for being in the top 25 highest performing 1<sup>st</sup> & 2<sup>nd</sup> year students in the School of Engineering.
  - Atlassian 1<sup>st</sup> place prize for Data Structures and Algorithms out of 429 students.
  - Academic Awards Achievement (AAA) university scholarship.
- Computer Science & Engineering Society (CSESoc) Projects Team Lead for an educational data structures and algorithms visualiser project.

## WORK EXPERIENCE





### University of New South Wales – Academic Tutor

June 2020 – Present

Data Structures and Algorithms (COMP2521), teaching 3 semesters per year.

- Deliver 8 hours per week of tutorial classes and lab demonstrations.
- Volunteer extra hours to support students in online help sessions and course forums.
- Achieved a student satisfaction rating of 5.89/6.00.

## PERSONAL PROJECTS

- **Tactile-DS – an interactive data structure and algorithm visualiser** [data-structures.xyz/](https://data-structures.xyz/) 
  - Coded a collection of interactive data structures and algorithms from scratch in C/C++.
  - Wrote Shell and Perl 5 scripts for automatically generating and applying Makefiles in a large C codebase.
  - Leading a team of CSE students in developing a full-stack educational app for computer science students using React with Redux, Express and MongoDB.
  - Developed a selection menu CLI using Ruby.
- **Techsuite – a full-stack social networking app for developers** [techsuite.dev/](https://techsuite.dev/) 
  - Developed a real-time direct messaging and private group messaging system using web sockets.
  - Used Flask to serve endpoints for friendship management, profile personalisation, messaging and channels.
  - Built a responsive frontend interface with React and Bootstrap 4.
  - Designed and implemented relational database schemas for PostgreSQL.
  - Integrated external APIs such as Google, GitHub and HackerNews' APIs for authentication and displaying trending open-source projects and articles.
- **Galactic-Ed – an intelligent educational platform for Autistic children** [galactic-ed.xyz/](https://galactic-ed.xyz/) 
  - Currently working for the 'Autism Awareness' charity organisation in a team of 4 to develop a full-stack educational web application that tailors a curriculum for young children using a recommendation engine.
  - Achieved 1<sup>st</sup> place out of 37 other teams across Australia in Accenture's 'Hack for Good' Hackathon.
  - Utilised React with Next.js to build the frontend interface for the user dashboard, lesson environments, data visualization graphics and course pages.
  - Used Flask with MongoDB to implement an API for authentication, user analytics and recommendations.
- **Cosmica – a cross-platform sci-fi strategy game** [tymotex.github.io/Cosmica/](https://tymotex.github.io/Cosmica/) 
  - Developed an open-source cross-platform strategy game using C# with the Unity Scripting API and published it on Google Play.
  - Gained experience in object-oriented system design, event-driven programming, asynchronous programming, UI design, animations and music, performance optimisation and building an interactive tutorial.

## SKILLS

- Proficient: C, Python, JavaScript, Node.js, React, Gatsby, Shell scripting
- Familiar: Java, C#, MongoDB, PostgreSQL, Git, SCSS, jQuery, Flask, Express, Perl 5, PyTorch