

Thomas Choi

thomaschoimelb@gmail.com | Melbourne, VIC
thomaschoi.io | github.com/thomaschoi143 | linkedin.com/in/thomas-choi-melb

Master of Computer Science international student at the University of Melbourne. Bachelor of Science (Computing and Software Systems) graduate with **academic excellence**. **Self-motivated** software engineer specialising in **full-stack web development** with **AWS Cloud certification** and **Machine Learning**.

EDUCATION

The University of Melbourne

Master of Computer Science

Mar 2024 – Present
(Exp. Grad: Dec 2025)

- Notable subjects taken:
 - AI Planning for Autonomy (**Python**; Grade: 97% H1)
 - **Natural Language Processing (PyTorch)**, model ranked second among 132 teams in final NLP competition; Grade 85% H1)
 - **Computer Vision (OpenCV, TensorFlow, Keras)**; Grade: 85% H1)

Bachelor of Science in Computing and Software Systems

Mar 2021 – Dec 2023

- Notable subjects taken:
 - Algorithms and Data Structures (**C**; Grade: 91% H1)
 - IT Project (capstone community website for a suburb in VIC; Grade: 96% H1)
 - **Machine Learning** (model achieved first place among individual teams in final competition; Grade: 88% H1)

TECHNICAL SKILLS

- Programming Languages: **JavaScript** | **TypeScript** | **SQL** | GraphQL | C | Haskell | Prolog | **Java** | **Python** | **HTML** | **CSS** | **Sass** | PHP | NetLogo
- Frameworks and Tools: **React** | **React Native** | **Vue** | **Redux** | **Express** | **Nest.js** | Next.js | Bootstrap | Tailwind CSS | Material UI | **MongoDB** | **Git** | Highcharts.js | Recharts.js | TypeORM | **Jest** | **Kubernetes** | **PyTorch**

WORK EXPERIENCE

The University of Melbourne

Academic Tutor

Melbourne, VIC
Jul 2024 – Dec 2024

- **Tutored** and **assessed** third-year major subject **Models of Computation** for 2 classes totalling 40+ students, collaborating with subject coordinator to enhance student learning experience
- **Designed** customised teaching materials aligned with students' needs and academic goals, **fostering** an **engaging and interactive** learning environment while **effectively teaching** discrete mathematics, logic, and computational models
- Consistently **achieved highest attendance rate (95%+)** for my class within subject

Melbourne Space Program

ACRUX-2 On-Board Computer Team Lead

ACRUX-2 On-Board Computer Software Engineer

Melbourne, VIC
Jul 2023 – Present
Apr 2023 – Jul 2023

- **Direct** development of on-board computer subsystem team for student research and **host** weekly team meeting to **mentor** team members and **transfer** technical knowledge
- **Coordinate** with leads across subsystems teams to design specifications of cube satellite

- **Design** and **implement** a low-level subsystem endpoint, complete with an extensive interface and hardware requirements **documentation**
- **Adopt Agile** methodology and **build** inter-module communication system with team on EnduroSat on-board computer using SDK to meet mission's goal efficiently

Beyond Zero Technology

Software Engineer Intern

Melbourne, VIC

Aug 2023 – Nov 2023

- **Created and optimised** GraphQL and REST APIs in **4 servers** with Nest.js, TypeORM, MongoDB and PostgreSQL in **Agile** team setting
- **Implemented** secure JWT authentication and RBAC authorisation with Auth0, fortifying system security and ensuring secure access control
- **Partnered with** UI designers and **constructed** internal chart generator with high customisation using React and Recharts.js to boost team's productivity
- **Planned and conducted** comprehensive backend unit testing with **Jest** for 3 servers and frontend E2E integration testing with thorough documentation to ensure system reliability and robustness
- Techs: **React w/ Vite, Nest.js, Next.js, unit testing w/ JEST**, GraphQL, TypeORM, PostgreSQL

Sensand

Software Engineer Intern

Melbourne, VIC

Jul 2022 – Oct 2022

- Interned in a **fast-paced startup** to develop **frontend** of unified AgTech platform in **Agile** environment
- **Built** a user preference settings feature in collaboration with a backend engineer

FEATURED PROJECTS

Project Vault: <https://thomaschoi.io/#/projects>

- Projects showcase on portfolio website
- Techs: **Vue, Sass**

EXTRA-CURRICULAR ACTIVITIES

UniMelb Data Science Student Society (DSCubed)

Education Officer

Mar 2024 – Dec 2024

- **Prepared** teaching materials and **tutored** third-year undergraduate students in Machine Learning exam revision workshop, offering voluntary academic support to students
- **Initiated** collaboration with CISSA and **hosted** inaugural Models of Computation exam revision workshop for 70+ final-year students
- **Planned and delivered** Machine Learning Deployment in AWS workshop for 50+ university students across Melbourne as part of VicHack

UniMelb Computing and Information Systems Students Association (CISSA)

Education Officer

Apr 2022 – Nov 2022

- **Collaborated** as part of Education team organising **10 exam revision workshops** for **300+ students** in total
- **Demonstrated** in 2 exam revision workshops to 40+ first-year students
- **Created and delivered** an Introduction to Git Workshop to 10+ first-year students at Catalyst hackathon

HONOURS & CERTIFICATIONS

- **Engineering and IT Foundation Graduate Scholarship** (2024)
- **Best Presenter in IT Project** (2023)
- **AWS Certified Cloud Practitioner** (2023)
- **Dean's Honours List for Top 3%** (throughout Bachelor's studies; level 1, 2 and 3)
- **Melbourne International Undergraduate Scholarship** (2022)