KHANH NGUYEN

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Education

The University of Adelaide   **Jan 2023 – Dec 2025**
Bachelor of Computer Science (Advanced)   *7.0/7.0 GPA*

University High School   **Jan 2021 – Dec 2022**
Victorian Certificate of Education   *99.05 ATAR*

Experience

Maptek Pty Limited   **Mar 2024 - Present**
Software Engineer Intern | Flax, Jax, Tensorflow, Python   *Glenside, SA*
- Collaborating with the **Maptek DomainMCF development team** to analyze, test, and refine the codebase using Google's Flax/Jax, enhancing overall efficiency in geology modeling.

Massachusetts Institute of Technology Media Lab   **Mar 2024 - Present**
Research Intern - Supervised by Tobin South   *Adelaide, SA*
- Spearheaded the evaluation of **AI model alignment**, including RLHF and traditional instruction-fine tuning, to address critical technology safety concerns.

University of Adelaide   **Nov 2023 – Feb 2024**
Research Intern - Supervised by Prof. Hung Nguyen   *Adelaide, SA*
- Pioneered the conceptualisation and development of an innovative framework, harnessing the power of **Large Language Models** and to simulate advanced cyber attacks, outperforming existing systems by 30%.
- **Led** a **4 person team**, organised tasks with **Jira**, and conducted regular standups.

Budi   **Oct 2023 – Jan 2024**
Front-End Lead | NextJS, Typescript, Tailwind CSS   *Adelaide, SA*
- **Supervised** a **team of 4** to redesign key platform components, resulting in a **30%** increase in customer base.
- Created and delivered a **demo** in just **4 days**, securing partnerships with **2 new retail partners**.

Projects

Unlimited Survival Platformer | *C++, Cmake, SFML, Conan, Catch2, Git*   **Sep. 2023**
- Developed a terrain **generation algorithm** to achieve seamless and distinctive world creation.
- Led a **team of three** using agile methodologies to create a robust game engine using OOP principles in C++.

Sentiment analysis of music consumption during COVID-19 | *Python, SciPy, NumPy, Spotify API*   **Jul. 2023**
- Developed an analysis on the valence of Australians' daily top **200** songs throughout COVID-19.
- Proposed a regression model for predicting the proportion of negative words in lyricism against deaths per million.

Leadership / Extracurricular

Vice President   **Apr 2023 – Present**
The Society of Quantitative Analysis and Data   *The University of Adelaide*
- Trailblazed the swift expansion of the club, propelling its membership to **over 400 members** within just 7 months of founding date, becoming the **second-largest CS club** on campus, surpassing many well-established counterparts.
- Effectively led and managed a **17-member committee**, overseeing the dynamic operations of the thriving and influential club, the **sole data society in South Australia**.

Founder and President   **May 2021 – December 2022**
Programming Club   *The University High School*
- Founded and established the Coding Club in high school, drawing in a significant **130 students** to actively participate.
- Initiated a **positive domino effect** within the school, leading to the establishment of various STEM-focused sub-branches, including **robotics**, **game development** and other **computer science fields**, under my guidance.

Executive Committee   **Oct 2023 – Present**
Competitive Programming Club   *The University of Adelaide*
- Conceptualized and executed a high-impact hackathon event, drawing **over 100 competitors**.
- Distinguished achievement in organising an **inter-university competition**, attracting **nearly 1000 participants** from universities all over Australia, solidifying the club's reputation as a leader on a **national scale**.

Technical Skills

Languages: C, C++, HTML/CSS, JavaScript, R, Python, Matlab
Technologies/Frameworks: React, MongoDB, NextJS, Tailwind CSS, ThreeJS, NodeJS, GitHub, Firebase, Flutter