

Marcus O. Chan

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EDUCATION

University of Auckland

Bachelor of Engineering (Hons)

Auckland, New Zealand

Expected Graduation, Nov 2028

- Intended specialisation: Artificial intelligence and machine learning
- Built a solid foundation in algorithms, AI models and software development through self-directed projects.

Auckland Grammar School

Class of 24'

Auckland, New Zealand

Jan 2020 – Dec 2024

- Ranked in the B stream, second to top class among 18 academic streams for 3 out of 5 years at Auckland Grammar
- Subjects Studied at AS and A levels include: Mathematics, Economics, Physics, Chemistry, Biology and English Literature. Notable awards include: **Distinction** in the Australian Maths Competition (AMT), **High Distinction** in the NZ Economics Competition (UoA) and Duke of Edinburgh's **Bronze and Silver** awards.

RECENT PROJECTS

MIT BattleCode 2025

Team Lead

Auckland, New Zealand

Jan 2025 – Feb 2025

- Lead a team to place consistently within the **top 20%** internationally out of 402 teams during weekly scrimmages.
- Developed a **Java-based** AI agent to run in a virtual environment for the international competition. This includes improving agent attack logic which reduced resource consumption by **70%** per tower destruction (objective completion)

Transformer Based - Stock Predictor

Independent Project

Auckland, New Zealand

Feb 2025 – Feb 2025

- Leveraged mathematical models to predict stock price trends using **Multi-Headed attention** transformers, Deep Neural Networks, Natural Language Processing models and Linear Regression Time Series algorithms.
- Processed and analysed **40 million+** financial data points, learning to filter useful indicators from noisy data called from various sources such as rest **API pipelines** and financial statements, training involved **Pytorch, Pandas and Matplotlib**

AI plays Subway Surfers - Computer vision

Independent Project

Auckland, New Zealand

April 2025 – May 2025

- Utilised model fine-tuning on CNNs and Transformers for obstacle detection in a computer vision system to allow for the agent 'jake' to traverse optimally in the presented frame, the model can analyse 5 frames per second **200ms** per inference
- Whilst adhering to the time constraints, it has a combined predictive **mAP@50 score of 98.7%** and a **mAP@95 score of 70.0%** (95% overlap with labels) showcasing high predictive power whilst obtaining a **99.0%** precision within the test set.

EXPERIENCE

Nike, Inc

Sales Specialist

Newmarket, Auckland

Oct 2024 – Present

- Ranked as a **top 5** individual seller for impulse purchases across Australia and New Zealand, maintaining the highest ATV (Average Transaction Value) in the store. **Team MVP** (December & January 2024 Christmas Season), demonstrating strong communication and interpersonal skills, excelling in collaborative, fast-paced environments.

ACTIVITIES AND LEADERSHIP

Taekwondo National Champion

New Zealand

- 5x **National Gold medalist** over a variety of events, including Sparring, Coordinated team patterns and Special technique (advanced kicking)
- Dedicated over **70 hours of volunteer work** at my local toy library, engaging with a diverse range of age groups as well as connecting with my wider community.

Skills & Interests

Skills: Python, Java, Matplotlib, Pytorch, Scikit-learn, Numpy, VScode and Jupyter Notebooks

Interests: Chess, Video Games, Hackathons, Gym, Marathons, Volunteering and Web design