

# Dion Yi Chia

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## Education

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**University of California, Berkeley**, Berkeley, CA

Aug 2025 – Present

*GLOBE Student*

- Relevant modules: Efficient Algorithms and Intractable Problems, Feedback Control Systems, Optimization Models in Engineering, Computer Networks, Databases, Product Management, Technology Entrepreneurship

**Nanyang Technological University**, Singapore

Aug 2023 – July 2027

*BSc. in Computer Engineering, MSc. in Technology Management, Minor in Modern Languages, Expected Honors (Distinction)*

- Renaissance Engineering Program (Premier Engineering Scholars' Programme in NTU), specialization in Computer Engineering
- Renaissance Engineering Program Scholarship (REPS) recipient
- Grade Point Average (GPA): 4.74/5.0

## Work Experience

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**DSO National Laboratories**, Singapore

May 2025 – Aug 2025

*Software Engineer Intern*

- Researched partitional, hierarchical, and density-based clustering algorithms. Benchmarked K-Means, Mean-Shift, DBSCAN, and HDBSCAN for performance and accuracy.
- Parallelized open-source clustering algorithms in an offline Linux environment on an embedded GPU system using HIP in C++, achieving a 10× speedup while preserving accuracy.

**Land Transport Authority**, Singapore

Jun 2024 – Jul 2024

*Artificial Intelligence Intern, Data Science Department*

- Researched on 4 branches of deep learning namely, Computer Vision, Natural Language Processing, Generative AI and Reinforcement Learning.
- Created documentation to distil technical concepts for clarity and understandability for a diverse audience.

**Cosmose**, Singapore

Feb 2023 – Apr 2023

*Business Development Intern, KaiKai*

- Developed tools to automate processes such as prospecting and mailing for CRM processes using JavaScript, resulting in substantial enhancement of team productivity.
- Covered end-to-end sales cycle of B2B products in a fast-growing tech-start-up. Surpassed targets set and acquired more than 50 leads through sales pitches.

## Extracurriculars

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**Blueprint**, University of California, Berkeley / Ecovet Global

Aug 2025 – Present

*Full-Stack Developer*

- Developing a scalable modern web platform to digitalize tabletop exercises for multi-sector emergency preparedness, enabling real-time or async collaboration and scenario management. (*Ongoing*)

**REACH**, Nanyang Technological University

Jan 2024 – Jul 2025

*President*

- Led a team of 30 in engineering innovative solutions targeted at the disadvantaged and differently abled, including projects in various fields such as MedTech and Inclusive Tech.

## Projects

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**Visual-Field Testing Booth** – A system utilizing computer vision and hardware mechanisms used to enhance traditional VF analysis, built on object-oriented programming principles. *Awarded a \$15,000 grant by Tan Tock Seng Hospital for further development.*

**Finder** – Adaptive retrieval-augmented generation tool to aid students' learning built using LangChain, Ollama and Milvus.

**Inflatacare** – Smart inflation device that assists everyday movement (e.g. sitting upright) and helps prevent bedsores amongst elderly or bedridden patients through automated pressure monitoring and load rebalancing.

## Skills

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*Languages:* Python, C, Java, React, HTML5, CSS, JavaScript, Typescript and Verilog

*Frameworks:* LangChain, Node.js, React, Next, FastAPI, Tailwind, PyQT6, Arduino

*Developer Tools:* Git, GitHub, Microsoft Azure, Vercel, Arduino Cloud