

Dion Yi Chia

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Education

- 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

- 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

- 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

- 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 in elderly or bedridden patients through automated pressure monitoring and load rebalancing.

Skills

- 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