

Dion Yi CHIA

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Education

University of California, Berkeley, Berkeley, CA

Aug 2025 – Present

GLOBE Exchange Student

- Relevant modules: Efficient Algorithms and Intractable Problems, Feedback Control Systems, Artificial Intelligence, Computer Networks, Databases

Nanyang Technological University, Singapore

Aug 2023 – Dec 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): 3.8/4.0

Work Experience

DSO National Laboratories, Singapore

May 2025 – Aug 2025

Algorithm 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 a HIP-based GPU system, 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

Aug 2025 – Present

Developer

- Developing an offline-first system to digitalize teaching materials and improve learning accessibility in rural Ugandan communities. (*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.

Projects

Visual-Field Testing Booth – A system utilising computer vision and a pan-tilt servo mechanism used to enhance traditional VF analysis. *Awarded a \$15,000 (SGD) 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.js, Next.js, FastAPI, Tailwind, PyQt6

Developer Tools: Git, GitHub, Microsoft Azure, Vercel