Alvin Ng Wei Sing

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Passionate Computer Science undergraduate with experience in software development and automation. Proven leader with strong interpersonal skills, driven individual who enjoys learning.

EDUCATION

Singapore University of Technology and Design   Sep 2024 — May 2028 (Expected)
Bachelor of Engineering (Computer Science and Design)   GPA: 5.08/5.00
SUTD Global Distinguished Scholarship
Honours list AY24/25

WORK EXPERIENCE

Software Engineering Intern   Oct 2025 — Dec 2025
Pettichat Tech Limited, Hangzhou, China
- Built a machine learning pipeline to classify 10 pet vocalisations with 80% accuracy using librosa and PyTorch
- Applied knowledge distillation to compress models for edge deployment, reducing inference cost by 50%

Undergraduate Researcher   Jan 2024 — Jun 2024, Feb 2025 — Oct 2025
Singapore University of Technology and Design, Singapore
- Conducted undergraduate research under faculty supervision on efficient and sustainable machine learning systems using PyTorch and Matplotlib
- Investigated clustering-based optimisation and carbon-aware federated learning frameworks
- Led development of a Python package that provides context-based hints, reducing learning curve for students

Engineering/Project Intern   May 2024 — Aug 2024
MLS Logistic Services, Singapore
- Revamped an invoice processing system, reducing task completion time from 3 hours to 10 minutes
- Automated inventory accounting processes to eliminate repetitive manual tasks, improving operational efficiency
- Designed an internal feedback system that automatically routes issues to relevant personnel, reducing response latency

PROJECTS & HACKATHONS

Advent of Code   Dec 2024, Dec 2025
- Completed over 35 distinct challenges across 2 editions of the event
- Ranked 382nd globally on Day 22 (2024) among 25,000+ participants by solving in under 22 minutes
- Implemented Python solutions for challenges involving graph traversal, dynamic programming and simulation

Singapore AI CTF by GovTech   Oct 2024
- Placed 20th in the Open category, successfully completing 7 out of 11 challenges
- Executed attacks, including prompt injection, adversarial image manipulation, and model inversion, to uncover hidden information and vulnerabilities

SUTD Mindsports Game Jam   Oct 2024
- Awarded Most Ambitious Team (Novice category)
- Developed a Unity-based game featuring three minigames and a boss battle, complete with dialogue and storyline, enhancing player engagement and interactive gameplay

PROFESSIONAL CERTIFICATIONS

Data Analytics Specialisation, Google   2024
CS50's Introduction to Artificial Intelligence, Harvard University   2024
CS50's Introduction to Computer Science, Harvard University   2023

SKILLS

Languages: Python, SQL, Java, Javascript, Typescript, C
Technologies/Libraries: PyTorch, Google Big Query, Git, NodeJS