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EDUCATION

Nanyang Technological University, Singapore   Aug 2022 - May 2026
Bachelor of Science (Data Science and AI)
- ASEAN Scholars with Expected Honours (Distinction), Current cGPA: 4.73/5.0.

SKILLS

- Programming Language: Python, Javascript (React.js, Next.js, Vue.js, Node.js), SQL, C/C++, Java, C#, Go
- Frameworks & Tools: PyTorch, TensorFlow, Langchain, Docker, ROS (Robot Operating System)
- Google Professional Machine Learning Engineer Certification (Certificate Link)

PUBLICATIONS & ACHIEVEMENTS

NTU S-Lab, Singapore   Aug 2023 – Aug 2024
URECA – Diving into Multimodal Large-Scale Models
- URECA program under Prof. Ziwei Liu.
- Developed & co-authored **publication**: Otter, a vision-language model inspired by Flamingo, including finetuning and evaluation pipeline, accepted in **IEEE TPAMI**.
- Developed & co-authored **publication:** LMMS-Eval, a distributed LLM benchmarking framework for streamlined evaluation; accepted at **NAACL 2025**.

BARN Challenge @ ICRA 2024, Japan   Jan 2024 – May 2024
MLDA Robotics Team 2nd Place Winner
- Led a team of 4 and developed an advanced MPC algorithm with mode switching for local path planning, specifically designed to navigate tight space constraints. Detailed report on the challenge outcomes **publication**: BARN ICRA 2024 Report, published in **IEEE Robotics & Automation Magazine**.

RECAP Research Engineer Accelerator
- One-month bootcamp on building focused on developing safe and aligned LLMs and AI agents. (Building **GPT-2**, **RLHF techniques**, **Mechanistic Interpretability** & **Evaluation pipelines** from scratch)
- One-week mini research on evaluations of LLM response to high stakes and its confidence & sycophancy: Can You Trust an LLM with Your Life-Changing Decision?

18th International Zhautykov Olympiad (Izho) in Informatics   Feb 2022 – Feb 2022
Silver Medalist
- Ranked in the **top 40** among over 300 participants from more than 20 countries worldwide

2020 National Science Competition in Informatics (OSN)   March 2020 – Sep 2020
Silver Medalist
- Placed **10th** among 200k+ Indonesian competitors nationwide, **Top 15** in the IOI selection camp.

2018 Junior National Science Competition in Mathematics (OSN)   March 2020 – Sep 2020
Silver Medalist
- Placed **8th** among 400k+ Indonesian competitors nationwide.

2023 ICPC Regional Jakarta   Dec 2023 – Dec 2023
Participant
- Placed **top 30** in regional among 100 selected teams & 20+ universities.

WORK EXPERIENCE

Huawei Research Centre   Jul 2025 – Present
AI Research Engineer, Internship
- Researching on **Personalized Video Stream Understanding**, submitted paper for review in **KDD 2026** as second main author.
- **LoRA fine-tune** and evaluate benchmarks multiple state-of-the-art VLM models.
- Developed a novel knowledge graph memory system for VLM, performing better than state-of-the-art by **7-10%** on personalized video understanding benchmarks.

Temasek Lab, Singapore   Jan 2025 – May 2025
Machine Learning Research, Internship
- Conducted research on model interpretability and developed the first **interpretability integration framework** for this domain, unifying attention rollout, saliency maps, and visual attribution techniques for anomaly detection models.
- Demonstrated early evidence that the interpretability module captures systematic lighting pattern anomalies, indicating potential improvements in model accuracy, robustness, and diagnostic reliability.
- Designed and evaluated multiple anomaly detection architectures, including **multi-level patch-based Transformers** inspired by Swin-Transformer hierarchies, to improve detection performance.

NTU-Continental Lab, Singapore   May 2024 – Dec 2024
Machine Learning & Robotics Research, Internship
- Developed state-of-the-art diffusion planners for robotics motion planning in MuJoCo environments using ROS & PyTorch.
- Experiment on state-of-the-art techniques (Classifier Free Guidance, FiLM, Decision Transformer, Action Chunking) on diffusion planners to improve training stability and accuracy, improved accuracy by **20%**.
- Implemented and compared 3 different algorithms (offline RL with CNN, with Transformers and **Diffusion Planners**) & deployed algorithm to Jackal robot.

A*STAR Institute for Infocomm Research (I2R), Singapore   Jul 2023 – Mar 2024
AI Research Assistant, Internship
- Collaborated with research scientists to develop an AI-driven solution for optimizing diabetes treatment using Reinforcement Learning (**DQN, DRQN, EWC, Mixture of Experts**).
- Published a **software IP (SWIP-OAGW-2023-39)** for a customized **Offline RL Environment Framework**, based on OpenAI Gymnasium framework tailored specifically for medical datasets.

NTU Student's Computing and Data Science Club, Singapore   Sep 2024 – Present
IT Executive Chairperson
- Led a **20-person** team across Software, ML, and UI/UX for [PYPHub](#), a CS exam forum platform.
- Built AI-based scraping, OCR processing, and AI-generated solutions using RAG.
- Launched and used by **2000+ students**, over half the NTU CS cohort, in under a month.
- Tech Stack: Langchain, Next.js, Express.js, Docker

NTU Student Union, Singapore   Aug 2022 – Aug 2024
Backend Team Lead, Vice Chair
- Managed a team of 3 backend developers in the successful development and launch of three major NTUSU projects: NTUSU Ufacility, Event, and NTUMods, used by **3000+ students.**
- Key projects: [NTUMods](#) 📅 - A hassle-free module management tool, and [NTUSU-ITC Portal](#).
- Tech Stack: Python, Django, SQL, React

OTHER INTERESTS

[Kaggle](#), [Codeforces](#), [Pentesting](#), [Quantum Computing](#), [Chess](#), [Go](#)