

Diao Shengjia

Singapore, 84362381, diaoshengjia@gmail.com

PROFILE

Hardworking and motivated college student seeking an internship opportunity in the field of data intelligence and machine learning. Proven track record of developing efficient workflows and implementing advanced algorithms. Current SM2 Scholarship holder.

EDUCATION

Master of Science, Nanyang Technological University Aug 2024 — Present

- Program: **Signal Processing and Machine Learning**
- **Honors(HIGHEST DISTINCTION)**; CGPA: 4.5
- Relevant Modules: (1) Genetic Algorithms and Machine Learning (2) Probability and Random Processes (3) Machine Vision (4) Natural Language Processing (5) Analytic & Ensemble Learning (6) Video Signal Processing

Bachelor, Nanyang Technological University Aug 2020 — May 2024

- Electrical and Electronic Engineering
- **Honors(DISTINCTION)**; CGPA: 4.33
- Specialization: **Info-Communication Engineering (Data Intelligence)**

Relevant Modules: (1) Artificial Intelligence and Data Mining (2) Data Structures and Algorithms (3) Machine Learning Design & Application (4) Digital Signal Processing (5) Database Systems (6) Introduction to Data Science and Artificial Intelligence

INTERNSHIPS AND WORK EXPERIENCE

Huawei Research Singapore Center, Singapore, Video and Audio Algorithm Enginner Intern July 2025 — Present

- Developed a multiprocessing high-performance histogram analysis system for Huawei RAW images, enabling multi-channel analysis with varying bit depths.
- Implemented Earth Mover's Distance (EMD) calculations to provide robust image comparison capabilities.

Kingdee International Software Chongqing, Implementation Engineer Intern May 2024 — Jul 2024

- Implemented and tested the ERP system for Chongqing Xinhua Bookstore Group and Liang Jiang Industry Operation.

Infineon Technologies Singapore, Chip Verification Engineer Intern Dec 2022 — Jun 2023

- Developed an optimized workflow for the testbench qualification process with Tcl and Python, reducing runtime by 33%.
- Collaborated with the chip design team to conduct multiple experiments on testbench qualifications.

COMPETITIONS

WSDM Cup - Multilingual Chatbot Arena (Ranked 154/950) Dec 2024 — Feb 2025

- Fine-tuned the **Gemma2-9b-it** model to optimize performance on multilingual classification tasks, enhancing accuracy and efficiency across diverse language datasets.
- Implemented **LoRA** and **int4 quantization** techniques to reduce model size and computational overhead while maintaining high performance.
- Conducted extensive experimentation and evaluation to ensure robust model generalization across multiple languages.

LLM 20 Questions (Ranked 188/832) May 2024 — July 2024

- Developed a **multi-agent dialogue system** using quantized **Gemma-7b-it** for the Kaggle 20 Questions challenge, enabling efficient multi-turn reasoning under memory constraints.
- Designed optimized prompt templates and **dynamic dialogue memory management** to enhance answer accuracy and context consistency.
- Improved robustness against LLM hallucinations via sampling strategy tuning, format-constrained generation, and regex-based validation.

AWARD

EEE GLOBAL MERIT AWARD: School of Electrical and Electronic Engineering, NTU Aug 2024

- Awarded a \$5,000 grant for academic excellence in MSc Electrical and Electronic Engineering.

SKILLS

- **Languages:** English, Mandarin
- **Programming Languages:** Python, SQL, TCL, HTML5, CSS, PHP, JAVASCRIPT
- **Tools:** Git, Pytorch, Tensorflow, Certitude, Microsoft Office (Excel, Word, PowerPoint, Access), Tableau, Navicat, Bash