Haoyu Wang

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EDUCATION

The Chinese University of Hong Kong, Shenzhen (CUHK-SZ) **Jan. 2026 – Present**
M.Phil. in Artificial Intelligence Shenzhen, China

Southeast University **Sept. 2024 – Sept. 2025**
Research Assistant in Cyber Science and Engineering Nanjing, China

Anhui Agricultural University **Sept. 2020 – June 2024**
B.Eng. in Computer Science and Technology Hefei, China
- GPA: 88.78/100 | Rank: 2/423 (Top 0.5%) | IELTS: 7.0
- Awards: Outstanding Graduate of Anhui Province; National Scholarship equivalent (Merit Student).

RESEARCH INTERESTS

Multimodal Large Models (VLM), Computer Vision (CV), Machine Learning (ML), AI Safety.

PUBLICATIONS & PATENTS

- **Haoyu Wang**, Youhua Zhang, Liu T, *et al.* (2023). "MFBP-UNet: A Network for Pear Leaf Disease Segmentation in Natural Agricultural Environments". *Plants* (**SCI, JCR Q1**). DOI: 10.3390/plants12183209
- **Haoyu Wang** (1st Inventor). "A Method & Device for Extracting Yeast Transcription Factor-gene Relationship in Biological Text". (CN Patent, *Authorized*).
- **Haoyu Wang** (2nd Inventor). "Deep Learning-Based MRI Image Recognition Method & Device". (CN Patent, *Authorized*).

RESEARCH EXPERIENCE

BlueLM-V: Lightweight Multimodal Large Model Shenzhen, China
Incoming Research Intern (Pre-research for VIVO AI Lab) **Feb. 2026 (Expected)**
- Architecture Reproduction: Implemented a lightweight VLM based on the **BlueLM-V technical report**, integrating a **SigLIP** encoder with a 3B language backbone to simulate efficient edge-side deployment.
- Dynamic Resolution Strategy: Reproduced the **dynamic resolution** mechanism to handle arbitrary image aspect ratios, reducing the number of visual tokens by 20% while maintaining detail recognition.
- Safety Alignment: Curated a safety instruction dataset following **BlueLM's safety taxonomy** (e.g., visual jailbreak defense); applied **LoRA** fine-tuning to enhance the model's harmlessness against adversarial visual inputs.

Beijing QiAnXin Technology Research Institute Beijing, China
Algorithm Research Intern (LLM & API Safety) **July 2025 – Nov. 2025**
- Engineered an automated pipeline to clean 300k+ HTTP logs using semantic clustering, which improved data validity from 40% to 80% for model fine-tuning.
- Explored automated security testing workflows using LLM Agent tools (e.g., BrowserUse) and evaluated their efficacy in high-risk operation scenarios.

Intelligent Identification of Encrypted Traffic (NSFC Project) Nanjing, China
Core Researcher, Southeast University (Key Lab of Network & Info Security) **Dec. 2024 – June 2025**
- Designed a Deep Learning-based temporal feature extraction network to process high-dimensional sequential data for cloud encrypted traffic identification.
- Conducted inverse analysis on unknown protocols and utilized sequence models to capture spatiotemporal correlations, significantly improving identification accuracy in complex environments.

Anhui Zhongke Jingge Co., Ltd. Hefei, China
Algorithm Research Intern (RAG & SFT) **Mar. 2024 – June 2024**
- Fine-tuned Llama 3 via LoRA for Text-to-Shell conversion; optimized Rank/Alpha parameters for high-precision command generation.
- Architected a Retrieval-Augmented Generation (RAG) system with vector databases, effectively mitigating model hallucinations in private domain tasks.

SELECTED HONORS & AWARDS

- **National 1st Prize**, Chinese Collegiate Computing Competition (Visualization Track) 2023
- **National 2nd Prize**, "Huawei Cup" National College Students IoT Design Competition 2022
- **National 2nd Prize**, China Undergraduate Physics Experiment Competition 2021
- **National 3rd Prize**, "Beidou Cup" Innovation Competition 2023
- **Outstanding Graduate of Anhui Province** 2024

TECHNICAL SKILLS

- **Languages & Tools:** Python, C/C++, PyTorch, MATLAB, SQL, Docker, Linux, Git.
- **Core Competencies:** LLM Training (Pre-train/SFT/DPO), Multimodal Learning, RAG, Agentic Workflow.