Xiangyu Sun

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Hi! I am a third-year undergraduate student in Robotics Engineering at UESTC, with a strong academic record. I am seeking a Summer Research Internship to deepen my expertise in Medical Image Analysis.

Education

University of Electronic Science and Technology of China (UESTC) — Chengdu, China — *2022-2026*

Bachelor of Robotics Engineering

GPA: 3.92/4.00 — Rank: 2/43 (top 5%)

Internships and Research Projects

Undergraduate Researcher: Fairness in Medical Vision-Language Models — **HiLab, UESTC**

Mentor: Prof. Guotai Wang — *05/2024 - Present*

○ First-authored paper accepted at ISBI 2025, where we constructed a fully fair dataset that spans multiple sensitive attributes (e.g., gender, age) to conduct a comprehensive fairness analysis of 4 Vision-Language Models (VLMs) under 5 Parameter-Efficient Fine-Tuning (PEFT) methods utilizing a range of fairness evaluation metrics.

○ First-authored paper currently under review for submission to MICCAI 2025, proposing a novel, parameter-efficient fine-tuning method aimed at mitigating biases in VLMs.

Research Intern: Medical Image Computation — **NTU, Singapore**

Mentor: Dr. Teoh Teik Toe — *01/2024*

○ Contributed as a third author to a paper on medical imaging, accepted by ICPICS 2024, where we investigated the impact of Squeeze-and-Excitation (SE) attention modules on ResNet variants for chest X-ray classification.

Publications

[1] Fairness Analysis of CLIP-Based Foundation Models for X-ray Image Classification

Xiangyu Sun, Xiaoguang Zou, Yuanquan Wu, Guotai Wang, Shaoting Zhang — *Accepted at ISBI, 2025*

[2] ResNet Models with SE Attention for Lung Disease Detection

*Hanyu Fang, Hao Xu, **Xiangyu Sun**, Xinyu Zhang, Zhuoyang Yan, Teoh T. Toe* — *Accepted at ICPICS, 2024*

Honors & Scholarships

○ 2024 - 2025 | **National Scholarship**, Ministry of Education, PRC

○ 2023 - 2025 | **First-Class Scholarship**, UESTC

○ 2023 - 2024 | **Outstanding Staff Member**, UESTC Student Union

○ 2023 - 2024 | **Second Prize**, Sichuan University Engineering Competition

Research Interest

Computer Vision, Medical Image Analysis, Vision-Language Models, Algorithmic Fairness

Technical Strengths

○ **Programing Languages:** Python (PyTorch, NumPy, Scikit-learn, Pybullets, etc.), C^{++}, LaTeX, ROS.

○ **Expertise:** VLM, Transfer Learning, Generalization, Medical Image Analysis, Robotics, etc.

○ **Languages:** Mandarin (native), English (fluent, CET-6: 576/710).

○ **Operating Systems:** Linux, Windows.

Courses Undertaken

Artificial Intelligence, Machine Vision, Robotics, Automatic Control Theory, Mechanical Design, Micro Embedded Systems, ROS, Data Structures and Algorithms.