



Zihong Luo

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PROFILE

Research-focused undergraduate in **Computing/AI**, with experience across **multimodal learning, medical imaging, and robot learning**. Publishing at **AAAI, ICANN, ICPR**, open-source contributions, and top-tier quant competition performance. **Seeking Fall 2026 PhD/RA roles in multimodal/medical AI, representation learning, and robotics.**

EDUCATION

University of Liverpool (UoL)

BSc in Computing Science, GPA: 3.796/4.0

Liverpool, UK

Expected Jun 2026

Xi'an Jiaotong-Liverpool University (XJTLU)

BSc in Information & Computing Science, GPA: 3.75/4.0

Suzhou, China

Sep 2022 – Jun 2024

PUBLICATIONS (SELECTED)

PG-SAM: Prior-Guided SAM with Medical for Multi-organ Segmentation

2025

– Yiheng Zhong*, **Zihong Luo***, et al. [arXiv].

Incomplete Modality Disentangled Representation for Ophthalmic Diagnosis (AAAI)

2024

– Chengzhi Liu*, Zile Huang*, **Zihong Luo**, et al. [Project].

ARIF: Adaptive Attention-Based Cross-Modal Representation Integration (ICANN)

2024

– Chengzhi Liu*, **Zihong Luo***, et al. [SpringerLink].

MTSA-SNN: Multimodal Time Series via Spiking Neural Networks (ICPR)

2024

– Chengzhi Liu*, **Zihong Luo***, et al. [arXiv].

MC-DBN: Modality Completion with Deep Belief Networks (ICPR)

2024

– **Zihong Luo***, Chengzhi Liu*, et al. [arXiv].

Interpretable ML for Peripheral Neuropathy & LEAD (BMC Medical Informatics)

2024

– Ya Wu, Danmeng Dong, **Zihong Luo**, et al. [SpringerLink].

RESEARCH EXPERIENCE

MBZUAI

Research Assistant (Prof. Imran Razzak)

Abu Dhabi, UAE

Dec 2024 – Jul 2025

- Designed a **modality prior aligner** leveraging medical LLM to bridge **text–pixel** semantics; built a **fusion decoder** with iterative mask optimization.
- Validated on **Synapse** and related benchmarks; results released on **arXiv** with open-source code.

University of Exeter

Summer Research Assistant (Prof. Yanda Meng)

Exeter, UK

Mar 2024 – Aug 2024

- Implemented IMDR with **modal-common** vs **modal-specific** disentanglement and a **proxy learning** module.
- Evaluated on **4 ophthalmology datasets**; gains over prior methods; accepted at **AAAI 2025**.

Tongji University School of Medicine (TUSM)

Shanghai, China

Research Contributor (Prof. Xiaoyun Xie)

2024

- Built interpretable ML models for **DPN/LEAD** prediction; applied **SHAP** for risk factor analysis aiding DFU prevention.

XJTLU

Suzhou, China

Research Assistant (Prof. Xiaobo Jin)

Sep 2023 – Nov 2023

- Developed encoder–decoder with attention for **modality completion**; dual losses for accuracy and integration; accepted at **ICPR 2024**.

XJTLU

Suzhou, China

Research Assistant (Prof. Shuliang Zhao)

Jun 2023 – Sep 2023

- Integrated **image + temporal** signals via spiking networks for anomaly detection; published at **ICPR 2024**.

INDUSTRY EXPERIENCE

Jifu Medical (AI Algorithm Group)

Shenzhen, China

Algorithm Intern — Multimodal Robotics & Medical Imaging

Jun 2025 – Aug 2025

- Benchmarked SOTA **action models** (e.g., ACT, ALOHA) for robot-assisted workflows; built **Isaac Sim** RL environment.
- Configured **LeRobot SO-101** dual-arm teleoperation; replicated control pipeline; documented **failure modes** for compliance.
- Developed **multimodal fusion** (endoscopy + magnetic positioning) for robust MCCE anomaly detection.

SELECTED OPEN-SOURCE PROJECTS

LeRobot SO101 Robotic Arm Control

2025

- Implemented **dual-arm** control & teleoperation; dual-camera sync; **50** recorded test episodes uploaded to HF Hub.
- **Tech:** Python, LeRobot, PyTorch, OpenCV **Hardware:** SO101 arms, dual cameras.

Wheel-legged Robot Reproduction

2025

- Implemented **5-link** forward/inverse kinematics; cascaded **PID** with IMU feedback; RC teleop for locomotion.
- **Tech:** C++, Arduino **Hardware:** Wheel-leg platform, IMU, servo/BLDC.

HONORS & AWARDS

International Quant Championship (WorldQuant) — UK Finals (Top 6)

2025

- **Top 0.1%** of **79,000+** participants; advanced to National/Regional Finals; invited to **Consultant Program**.

China Undergraduate Mathematical Contest in Modelling

2023

- Participant, team-based competition.

Biology Olympiad

2022

- Provincial **First Prize** & National **Second Prize**.

SKILLS

Programming: Python, C++, Java, L^AT_EX

ML/DS: PyTorch, scikit-learn, OpenCV, Jupyter, Matplotlib

Dev/Platforms: Git, HuggingFace Hub, Isaac Sim

OS: Linux (Ubuntu), Windows

Languages: IELTS 7.0