Chenyue Li

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Research Interest: Computer Vision, Multimodal Learning

EDUCATION

Wuhan University 2021.09-2025.06

Bachelor of Engineering in Computer Science and Technology

- **Academic Standing:** GPA: 3.89/4.00 ; Average Score: 91.28/100 (Rank: 5/255, Top 2%)
- **Key Coursework:** Advanced Mathematics (4.0/4.0), Linear Algebra (4.0/4.0), Probability and Statistics (4.0/4.0), Discrete Mathematics (4.0/4.0), Software Engineering (4.0/4.0)

PUBLICATIONS

Adaptive High-Frequency Transformer for Diverse Wildlife Re-Identification 2023.12-2024.03

With Prof. Mang Ye at Wuhan University

ECCV 2024 (European Conference on Computer Vision) *First Author*

- Proposed a **unified multi-species** high-frequency Transformer architecture, breaking through existing species-specific limitations, where current models struggle to handle diverse species due to their unique appearance and behavioral patterns.
- Evaluated the model on **multiple wildlife species datasets**, achieving **significant performance improvements**, including a notable **4.3% boost** over state-of-the-art ReID methods. These results demonstrate its effectiveness in real-world multi-species scenarios and its potential for broader applications.
- **Paper available at:** https://link.springer.com/chapter/10.1007/978-3-031-72784-9_17

Transformer for Object Re-Identification: A Survey 2023.09-2024.01

With Prof. Mang Ye at Wuhan University

IJCV (International Journal of Computer Vision) *Third Author*

- Analyzed evolution from CNN-based approaches to Vision Transformers in Re-ID field, covering **multiple generations** of architectural developments
- Assisted in developing a new Transformer baseline for unsupervised Re-lD tasks, achieving **state-of-the-art performance** in both single-modal and cross-modal evaluations, increased by **2.9%** and **4.5%** respectively
- **Paper available at:** https://arxiv.org/abs/2401.06960

ONGOING RESEARCH & PROJECTS

Microscopy Foundation Model *Research Assistant with Prof. Yuyin Zhou at UCSC* 2024.08-present

- Designing a unified Microscopy Foundation Model targeting **5+ downstream tasks** including 2D/3D segmentation, deblurring, and denoising
- Developing efficient framework for comprehensive microscopy image analysis across **multiple imaging modalities**

Multimodal Trusted Computing Platform National Innovation & Entrepreneurship Training Program

Team Leader 2023.06-2024.06

- Led **5-member team** to develop multimodal retrieval platform integrating **3+ data types** (text, sketches, infrared)
- Implemented **federated learning** for data privacy protection and created interactive platform
- Applied advanced technologies including **CLIP** and **prototype learning** for multimodal retrieval
- Secured **national-level funding** from National University Students' Innovation and Entrepreneurship Fund **(Gold Medal)**

AWARDS

- **National Scholarship** (Award Rate: **0.2%** national-wide) 2024
- **Chinese Collegiate Computing Competition** - **National First Prize** (Team Leader) 2024
- **First Class Scholarship of Wuhan University** (Award Rate: **5%** school-wide) 2023, 2024
- **Longfor Scholarship** (Award Rate: **0.1%** school-wide) 2023
- **China's Innovation Challenge on AI Application Scene** - **National Second Prize** (Team Leader) 2023

SKILLS

Programming: Python, PyTorch, C/C++, LaTeX, Vue, C#, Verilog

Languages: English (TOEFL 107), Mandarin (Native)