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:** *Adaptive High-Frequency Transformer for Diverse Wildlife Re-Identification*

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:** *Transformer for Object Re-Identification: A Survey*

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
- Conducted large-scale dataset collection and preprocessing from an **internet-scale raw dataset**, which encompasses diverse formats and modalities. Pre-trained the model on extensive microscopy datasets

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)