Chenyue Li

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Research interest: Computer Vision; Multimodal learning

EDUCATION

Wuhan University 2021.09-2025.06
Bachelor of Engineering

- **Major:** Computer Science and Technology
- **GPA:** 3.89/4.00
- **English Ability:** Scored 107 in TOEFL. 29, 30, 26, 22 for reading, listening, writing, speaking, respectively. GRE preparation is underway.

PUBLICATIONS

ECCV2024(European Conference on Computer Vision) 2023.12-2024.03
With Prof. Mang Ye *First Author*

- **Paper name:** Adaptive High-Frequency Transformer for Diverse Wildlife Re-Identification
- Conducted a comprehensive analysis of challenges unique to the relatively under-explored wildlife ReID task, which differentiates among individuals within the same species, setting it apart from the more established conventional person and vehicle ReID tasks.
- Proposed a unified, multi-species general high-frequency Transformer architecture to enhance applicability across various species, breaking through the existing species-specific methods, and evaluated the model on diverse wildlife datasets, where it achieved superior performance over state-of-the-art ReID methods.

Submitting to IJCV(International Journal of Computer Vision) 2023.09-2024.01
With Prof. Mang Ye *Third Author*

- **Paper name:** Transformer for Object Re-Identification: A Survey
- Analyzed the evolution of the Re-ID field, highlighting the shift from deep learning technologies based on convolutional neural networks to the advent of Vision Transformers.
- Assisted in proposing a new Transformer baseline, targeting unsupervised Re-ID tasks and achieving state-of-the-art performance in both single and cross-modal tasks.
- Our paper has been published on arXiv and is available at: https://arxiv.org/abs/2401.06960.

Microscopy Foundation Model(Ongoing) 2024.07-now
With Prof. Yuyin Zhou

- We designed Microscopy Foundation Model for microscopy image analysis, targeting multiple downstream tasks including 2D segmentation, 3D segmentation, deblurring, denoising and so on. Microscopy Foundation Model aims to provide a unified framework for efficient and accurate microscopy image processing across a range of tasks.

PROJECTS

Leading College Student Innovation & Entrepreneurship Training Program(National Level)
Team Leader 2023.06-2024.06

- **Project name:** Multimodal Trusted Computing Platform
- Led the team to develop a multimodal retrieval platform integrating text, sketches, and infrared data, incorporating federated learning for data privacy protection and creating an interactive platform.
- Acquired in-depth knowledge of multimodal retrieval technologies involving text, sketches, UAV, and infrared data, involving CLIP, prototype learning, and other technologies. Demonstrated leadership in guiding the team's technical direction.
- The project was successfully rated as national-level and received funding from the National University Students' Innovation and Entrepreneurship Fund.

AWARDS

- **Chinese Collegiate Computing Competition** - **National** Frist Prize(Team Leader) 2024

- **First Class Scholarship of Wuhan University**(Award Rate: **5%** school-wide) 2023
- **Longfor Scholarship** (Award Rate: 60/59774=**0.1%** school-wide) 2023
- **Merit Student** (Award Rate: **10%** school-wide) 2023
- **China's Innovation Challenge On Artificial Intelligence Application Scene** - **National** Second Prize 2023
- **Outstanding Student** (Award Rate: 30% school-wide) 2022
- **Third Class Scholarship of Wuhan University**(Award Rate: 30% school-wide) 2022

PATENTS

- **Mang Ye, Shuoyi Chen, Chenyue Li**, "Unsupervised object re-identification method and system based on perception-assisted learning Transformer model", granted Invention patent. (Supervisor as First Inventor).
- **Mang Ye, Chenyue Li**, "Method and system of object sensing high-frequency enhanced animal re-identification based on Transformer", Invention patent, under review. (Supervisor as First Inventor).

SKILLS AND COURSES

Languages: Python, C/C++, C#, JavaScript, Java
Mathematics: Achieved 4.0/4.0 in all mathematics courses, including Advanced Mathematics, Linear Algebra, Probability and Mathematical Statistics, and Discrete Mathematics.
Coursework: Introduction to Artificial Intelligence, Data Structure, Operating System, Computer Organization and Design, Digital Logic and Digital Circuits, Database Systems, Computer Networks