Chengyuan Li

(+86) 18555685333 | chengyuanli@seu.edu.cn | Homepage

Education

Southeast University — Nanjing, Jiangsu
M.S., Software Engineering — *Sep. 2022 – Jun. 2025 (expected)*

- **GPA**: 90/100 (Top 1/129)
- **Supervisor**: Professor Hui Xue and Associate Professor Lei Qi
- **Awarded National Scholarship (Graduate)**

Wuhan University of Technology — Wuhan, Hubei
B.S., Computer Science — *Sep. 2018 – Jun. 2022*

- **GPA**: 91/100 (Top 1/257)
- **Supervisor**: Professor Shengwu Xiong and Professor Congjun Rao
- **Awarded National Scholarship (Undergraduate)**

RESEARCH INTERESTS

My research focuses on Computer Vision (e.g., vision-language models, anomaly detection), Machine Learning (e.g., diffusion models, unsupervised learning), and Data Mining (e.g., Partial Label Learning).

Publications

- **Chengyuan Li**, Suyang Zhou, Jieping Kong, *et al.* *KAnoCLIP: Zero-Shot Anomaly Detection through Knowledge-Driven Prompt Learning and Enhanced Cross-Modal Integration*. In **ICASSP 2025**, CCF B.
- **Chengyuan Li**, Haoran Zhu, Hanjun Luo, *et al.* *Spread Prediction and Classification of Asian Giant Hornets Based on GM-Logistic and CSRF Models*. **Mathematics** (JCR Q1, cover paper).

Research Projects

KAnoCLIP: Zero-Shot Anomaly Detection through Knowledge-Driven Prompt Learning
(Accepted by ICASSP 2025)
Developed KAnoCLIP, a zero-shot anomaly detection (ZSAD) framework addressing limited data and privacy challenges. Key innovations include:

- **KnPL:** Integrates GPT-3.5 and Llama3 for enhanced anomaly detection with learnable prompts.
- **CLIP-VV:** Preserves local visual semantics for improved anomaly detection.
- **Bi-CMCI:** Enables effective cross-modal fusion of visual and textual information.
- **Conv-Adapter:** Aligns global visual and textual features for enhanced consistency and accuracy.

Achieved SOTA performance on 12 industrial and medical datasets, outperforming existing ZSAD methods.

Asian Giant Hornets Spread Prediction Using GM-Logistic and CSRF Models
(Published in Mathematics, JCR Q1)
Proposed predictive models to address hornet spread and pest control challenges. Key contributions include:

- **GM-Logistic Model:** Combines grey prediction and logistic models for high accuracy with limited, non-equally spaced data.
- **CSRF Model:** Improves classification and survey prioritization on unbalanced datasets, outperforming standard classifiers (e.g., Random Forest, SVM).
- **Optimization:** Incorporates human control factors and cycle parameters for pest management.
- **Evaluation:** Demonstrated effectiveness through goodness-of-fit tests.

Awards

- **Scholarships:**
  - **2023**, **National Scholarship (Graduate) (Top 1)**
  - **2019**, **National Scholarship (Undergraduate) (Top 1)**
  - **2024**, **Zhi-Shan Scholarship (Top prize, SEU)**
  - **2023**, SEU First-Class Scholarship (Top 5%)
- **Honors:**
  - **2024**, Outstanding Graduate Communist Party Member, SEU
  - **2023**, Model Graduate Student of Excellence, SEU **(Top 1%)**
  - **2022**, Outstanding Graduate, WHUT
  - **2022**, Excellent Student of the Year, WHUT

Mathematics and Programming Achievements

- **Mathematics Competitions:**
  - **Second Prize** in the National College Student Mathematical Contest
  - **Finalist** in the U.S. Mathematical Contest in Modeling **(Team Leader, Global Top 1%)**
  - **First Prize** in the APMCM (Asia-Pacific Mathematical Contest in Modeling) (Team Leader, Top 5%)
- **Programming Competitions:**
  - **Gold Medal** in the China National Collegiate Computer Competition (Team Programming)
  - **Silver Medal** in the Huawei Green Computing Innovation Competition
  - **Silver Medal** in the Lanqiao Cup C/C++ Programming (University A Group)

Internship Experience

- **ByteDance** *TikTok Department, Beijing*
  Jun. 2023 – Mar. 2024
  - Contributed to Douyin CRM big data platform development.
  - Developed an AI Q&A assistant for sales data analysis.
  - Optimized **natural language to SQL (NL2SQL)** conversion through model training and prompt tuning.
- **CHINA HI-TECH** *Software Department, Suzhou*
  Feb. 2023 – May 2023
  - Led a team to develop *Huihu Garbage Sort*, a **WeChat mini-program** with a VUE-based backend.
  - Built a photo recognition module using Res2Net for enhanced accuracy.
  - **GitHub:** Huihu Garbage Sort
- **Hikvision** *AI Lab, Hangzhou*
  Jun. 2022 – Sep. 2022
  - Developed deep learning models using Pytorch and C++.
  - Contributed to a research paper on **person re-identification**.

Technical Skills

Languages: C/C++, Go, Python, SQL, LaTex
Technical Skills: PyTorch, Git, Linux, TensorFlow, MATLAB
Specialized Skills: Deep Learning, Computer Vision, Mathematical Modeling, Algorithm Programming
Libraries: C++ STL, Python Libraries, CUDA Libraries
Soft Skills: Self-driven, Energetic, Problem Solving, Presentation, Adaptability