Yuan Ning

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EDUCATION

2022 – 2026	**Henan University of Technology**	Zhengzhou, Henan, China
	Bachelor of Science in Computer Science	GPA: 3.2/4.0

RESEARCH INTERESTS

Multimodal Learning, Large Language Model, Computer Vision, Natural Language Processing

PUBLICATIONS

[1] Y. Ning, P. Lv, Q. Zhang, *et al.*, "From vision-only to vision + language: A multimodal framework for few-shot unsound wheat grain classification," *AI*, 2025. DOI: 10.3390/ai6090207.

[2] Q. Zheng, X. Qiao, Y. Ning, *et al.*, "Applying bayesian network models to identify and optimize ecological security zoning—from the perspective of ecosystem service tradeoffs," *Human and Ecological Risk Assessment: An International Journal*, 2025. DOI: 10.1080/10807039.2025.2560940.

[3] Y. Ning, P. Lv, Q. Zhang, *et al.*, "Eca-modnet: Lightweight modulation network for wheat grain quality inspection," *Food Quality and Safety*, 2025 (submitted).

[4] Y. Zhang, Y. Ning, W. Zhao, *et al.*, "How well does street view measure actual vision? experimental comparison of visual measurements in street view imagery and visual perception," *Computers, Environment and Urban Systems*, 2025 (submitted).

RESEARCH EXPERIENCE

Vision-Language Few-Shot Learning Framework for Agricultural Recognition Mar 2025 – Sep 2025

Project Leader[*] | Henan University of Technology | Advisor: Prof. Pengtao Lv

– Proposed a new few-shot learning method for pre-trained Vision-Language Model (CLIP) adaptation

– Designed a Vision-Language framework supporting training-free and training-required regimes for few-shot unsound wheat grain recognition

– Paper published at *AI* (2025) as First Author

LLM Coding Assistant based on RAG Jun 2025 – Aug 2025

Project Leader[*] | Southern Methodist University | Advisor: Prof. Xihao Xie

– Architected a modular semantic code search pipeline based on RAG

– Developed a coding assistant based on LLM and code search pipeline

– Released the project as open-source on GitHub

Lightweight Modulation-CNN for Unsound Grain Detection May 2024 – Feb 2025

Project Leader[*] | Henan University of Technology | Advisor: Prof. Pengtao Lv

– Proposed a dual-branch CNN to strengthen cross-channel interactions

– Reduced model parameters by 3.7 million and boosted average accuracy by 3.17% compared with the baseline model

– Manuscript submitted to *Food Quality and Safety* as Second Author

Comparison of Measurements in Street View and Visual Perception Oct 2023 – Mar 2024

Research Assistant | Zhengzhou University | Advisor: Dr. Yi Zhang

– Benchmarked U-Net segmentation performance across defferent projections to assess distortions

– Developed toolkits for ratio errors computation and ptojection trends visualization

– Manuscript submitted to *Computers, Environment and Urban Systems* as Third Author

Bayesian Network for Identifying and Optimizing Ecological Security June 2023 – Sep 2023
Zoning

Research Assistant | Henan Polytechnic University | Advisor: Prof. Xuning Qiao

– Built an uncertainty-aware Bayesian Network to model ecosystem-service trade-offs

– Engineered a reproducible geospatial ML pipeline for automatic multi-scenario inference and risk zoning

– Paper published at *Human and Ecological Risk Assessment* (2025) as Third Author

SKILLS & INTERESTS

Coding	Python, PyTorch, TensorFlow, MATLAB, LaTeX...
Languages	English, Mandarin Chinese
Interests	Basketball, Swimming, Tennis