Guohuan Xie

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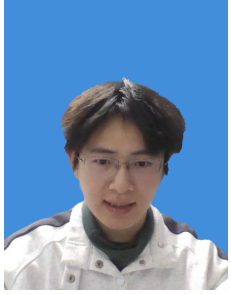
Gender: Male · Age: 19 · Place of origin: Anhui



Education

Nankai University, School of Software, Software Engineering Sep 2022 - Jun 2026

- **GPA**: 93.46 **Ranking**: 1/127
- **Core Courses**: Advanced Mathematics (A1) (97) Advanced Mathematics (A2) (97) Probability Theory and Mathematical Statistics (97) Data Structures (97) Database System Principles (97) Operating Systems (98) Computer Organization Principles (98) Compiler Principles (99)

Research Interests

Multimodal Fusion: Exploring how intelligent agents integrate visual and linguistic information to understand the world. I am particularly interested in building perceptual feedback loops that connect vision and language to support real-world understanding and decision-making.

Efficient Model Learning: Exploring model acceleration, lightweight architectures, and efficient training strategies to achieve high-performance visual understanding. The goal is to make computer vision models more scalable, deployable, and efficient in real-world applications.

Academic Experience

Research Project, A Survey on Video Semantic Segmentation Sep 2024 - Apr 2025

- Under the supervision of Professor Liu Yun, I conducted in-depth research in the field of video scene understanding. I systematically collected and organized high-quality literature in this area, classified and compared the studies, and summarized existing research findings for a review article.

Mathematical Modeling National Contest, Dynamic Research of the ”Bench Dragon” Motion Model Based on Simulation and Optimization Algorithms Sep 2024

- Applied numerical simulations, velocity decomposition, particle swarm optimization, and differential equations to solve problems such as the motion trajectory of the Bench Dragon, collision judgment, and path optimization.

Course Project, Nankai University Intelligent Assistant Jul 2024 - Aug 2024

- Collected over 10,000 pieces of data from various campus WeChat official accounts, performed data cleaning and processing, and built an information retrieval and generation model based on RAG using knowledge graph technology. The model was successfully deployed online, achieving efficient information retrieval and intelligent generation.

Course Project, Gomoku (Five-in-a-Row Game) May 2023 - Jun 2023

- Designed and implemented a human-computer battle version of Gomoku based on C++ and the easyX graphics library. I optimized the AI decision-making process to improve the game’s intelligence and playability.

Innovation Practice

National Innovation and Entrepreneurship Project, Vibration Measurement and Analysis Device for Track Inspection Car Mar 2024 - Present

- Proposed a fault detection solution based on the three-axis acceleration data analysis of track inspection cars for rapid fault detection in railway tracks. The solution accurately identifies the location and type of track faults by analyzing the collected data.

Social Practice, Exploring the Hometown of Premier Zhou, Seeking Revolutionary Footprints, Continuing the Red Bloodline Jul 2023 - Present

- This project surveyed the current state of red culture media promotion in Huai’an, Jiangsu. Through questionnaires, on-site interviews (e.g., Party History Memorial Hall, Su-Huai Border Region Site), and professional analysis, the project enhanced students’ understanding and recognition of red culture.

Awards Honors

- **National Level:** National Scholarship (Oct 2024) First Prize in the National Mathematical Modeling Contest (Nov 2024) M3 International Mathematical Modeling Challenge (Jan 2025)
- **Provincial Level:** Second Prize in Tianjin Mathematics Competition (Jul 2023)
- **University Level:** Nankai University Gongneng Scholarship (Oct 2023) Nankai University Outstanding Student Award x2 (Oct 2023 Oct 2024)

English and Other Information

- **English Proficiency:** CET6: 549 CET4: 603, with strong literature reading and comprehension skills.
- **Other Skills:** Solid programming skills, familiar with CUDA architecture and parallel computing, proficient in PyTorch, familiar with the Linux kernel, proficient in LaTeX writing, with excellent literature collection, organization, and summarization abilities.