

GUOHUAN XIE

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Gender: Male · Age: 20 · Hometown: Anhui



EDUCATION BACKGROUND

Nankai University, School of Software, Software Engineering

Sep. 2022 – Jun. 2026

- **GPA:** 93.65 **Rank:** 1/130
- **Major Courses:** Advanced Mathematics (A) I (97), Advanced Mathematics (A) II (97), Probability and Statistics (97), Data Structures (97)

RESEARCH EXPERIENCE

Media Computing Laboratory

Nankai University Aug. 2024 – Present

Advisors: Prof. Mingming Cheng, Prof. Yun Liu Conducting research in computer vision, focusing on video scene understanding and generalizable few-shot semantic segmentation.

Intelligent Media and Cognition Laboratory

Tsinghua University Oct. 2025 – Present

Advisor: Prof. Yue Gao Research in computer vision, focusing on visual perception and generation, hypergraph computation.

ACADEMIC EXPERIENCE

Make It Up: Fake Images, Real Gains in Generalized Few-shot Semantic Segmentation

Apr. 2025 – Nov. 2025

Submitted to CVPR 2026

- Synthesized novel-class images using generative models and generated initial semantic masks with the GFSS model. Further optimized mask quality to construct high-quality pseudo-samples, improving generalization performance in generalized few-shot semantic segmentation tasks.

A Comprehensive Survey on Video Scene Parsing: Advances, Challenges, and Prospects

Sep. 2024 – Apr. 2025

Submitted to CSUR 2025

- Under the guidance of Yun Liu, systematically summarized research progress in video scene parsing (VSP), covering VSS, VIS, VPS, VTS, OVVS, etc. Compared existing methods, model architectures, evaluation metrics, and datasets, and proposed a unified technological evolution roadmap and future research directions.

Course Project: Nankai University Intelligent Assistant

Jul. 2024 – Aug. 2024

- Collected and cleaned over ten thousand posts from major university WeChat public accounts. Built an information retrieval and generation system based on RAG and knowledge graph technologies, successfully deployed online and enabling efficient retrieval and intelligent content generation.

INNOVATION AND PRACTICE

National Innovation and Entrepreneurship Project: Vibration Measurement and Analysis Device for Rail Inspection Car

Mar. 2024 – Present

- Proposed a fault detection method for rapid railway track inspection based on tri-axial acceleration data from a track inspection cart. Accurately identified the location and type of track faults through data analysis.

AWARDS AND HONORS

- **National Level:** National Scholarship ×2 (Oct. 2024, Oct. 2025); Second Prize in the Higher Education Press Cup National College Mathematical Modeling Competition (Nov. 2024); ICM M Award in the American Mathematical Contest in Modeling (May 2025)
- **Provincial Level:** Second Prize in Tianjin Mathematics Competition (Jul. 2023)
- **University Level:** Nankai University Gongneng Scholarship (Oct. 2023); Nankai University Outstanding Student ×2 (Oct. 2023, Oct. 2024)