

Xinyuan Zhang

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EDUCATION

- University of Chinese Academy of Sciences (UCAS)** Sep 2023 - June 2027 (Expected)
B.S. in Artificial Intelligence Beijing, China
 - **Current GPA: 3.94/4.00, Rank: 3/88**
 - Relevant Coursework:
 - AI:** Pattern Recognition and Machine Learning (90), Data Structures and Algorithms (91)
 - Mathematics:** Calculus (95), Linear Algebra (92), Information Theory (91), Probability and Statistics (92)
- University of Oxford (Visiting Student)** Oct 2025 - July 2026
Visiting Student in Computer Science Oxford, UK
 - Relevant Coursework: Computer Vision (A), Computational Game Theory (A)

RESEARCH EXPERIENCE

- 3D Building Layout Reconstruction** Jan 2026 - Sep 2026
Research Intern, Dynamic Robot Systems Group, Oxford Robotics Institute (ORI) Supervisor: Prof. Maurice Fallon
 - Developed **SeqLayout3D**, a bottom-up system that reconstructs **detailed** room-wise 3D building layouts, including walls, windows, and piecewise-planar ceilings, from **passive monocular image streams**.
 - Combines **SLAM-based camera tracking** and **vision foundation models** with **geometric and temporal reasoning** to reconstruct detailed building structure from noisy image-derived point clouds.
- Simulation and Vision-Language Navigation** Feb 2024 - Oct 2025
Research Intern, Chinese Academy of Sciences (CAS) Supervisor: Prof. Fei-Yue Wang
 - **Part 1:** Led USV simulation and perception; integrated USV into CARLA for automated data collection and joint vehicle simulation.
 - **Part 2:** Proposed **LogisticsVLN**, the **first** aerial VLN system for terminal delivery; built a **pipeline integrating MLLMs with vision models**. **First-authored** a paper accepted by ITSC 2025.

PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS

- [S.1] Xinyuan Zhang, Yifu Tao, Jan Quenzel, Maurice Fallon (2026). **SeqLayout3D: Room-wise 3D Building Layout Reconstruction from Monocular Image Streams**. *Under review*
- [C.1] Xinyuan Zhang, Yonglin Tian, Fei Lin, Yue Liu, Jing Ma, Kornélia Sára Szatmáry and Fei-Yue Wang (2025). **LogisticsVLN: Vision-Language Navigation For Low-Altitude Terminal Delivery Based on Agentic UAVs**. In 2025 IEEE Intelligent Transportation Systems Conference (ITSC 2025)
- [C.2] Yonglin Tian, Fei Lin, Xinyuan Zhang, Jingwei Ge, Yutong Wang, Xingyuan Dai, Yisheng Lv and Fei-Yue Wang (2024). **LogisticsVISTA: 3D Terminal Delivery Services With UAVs, UGVs and USVs Based on Foundation Models and Scenarios Engineering**. In 2024 IEEE International Conference on Service Operations and Logistics, and Informatics (SOLI 2024)

HONORS AND AWARDS

- National Scholarship** 2024, 2025
Ministry of Education, China
 - The highest-level national scholarship, funded by the Chinese central government. Awarded twice consecutively.
- First-Class Undergraduate Academic Scholarship (Top 5% in UCAS)** 2024, 2025
University of Chinese Academy of Sciences (UCAS)

ADDITIONAL INFORMATION

- **Interests:** Building models and systems that truly understand the physical world and leveraging them for real-world robotic task
- **Profile:** Motivated and independent learner with a strong foundation in programming and mathematics; persistent and curious
- **Programming & Tools:** Python, PyTorch, C/C++, CARLA, AirSim, COLMAP
- **Languages:** TOEFL: 109/120 (Reading 30, Writing 27, Listening 29, Speaking 23)