Luzhe Sun

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RESEARCH INTEREST

- Diffusion models in action planning, state estimation and trajectory planning
- Embodied grounding with foundation models in unstructured environments
- Multi-modal reasoning, robotic learning and planning

EDUCATION BACKGROUND

Toyota Technological Institute at Chicago   **Chicago, US**
Ph.D. Student in Computer Science   *Sept 2023 - Present*

University of Chicago   **Chicago, US**
Master Program in Computer Science ｜ GPA: 3.77/4.00   *Sept 2021 - Mar 2023*

Xiamen University   **Xiamen, China**
Bachelor of Software Engineering, ***Graduate with Honor***   *Sept 2017 - Jul 2021*
Overall GPA: 3.74/4.00 Major GPA: 3.92/4.00 Ranking:4/125

PUBLICATIONS

- **"Joint Gravity Stability Prediction for Construction via Diffusion"**   In submission ICRA 2025
  Luzhe Sun*, Takuma Yoneda*, Samuel W. Wheeler, Tianchong Jiang, Matthew R. Walter

- **"Efficient Open World Reasoning with Multimodal Localization"**   In submission ICRA 2025
  Luzhe Sun, Jiading Fang, Jiawei Zhou, Matthew R. Walter

- **"To the Noise and Back: Diffusion for Shared Autonomy"**   RSS 2023
  Takuma Yoneda, Luzhe Sun, Ge Yang, Bradly Stadie, Matthew R. Walter

- **"Decompositional Quantum Graph Neural Network"**
  Xing Ai, Luzhe Sun, Junchi Yan, Zhihong Zhang and Edwin Hancock

AWARDS & ACHIEVEMENTS

- Honored Graduates Student, Xiamen University   2021
- **National Scholarship** (TOP 0.2% nationwide), Chinese Ministry of Education   2020
- **National Scholarship** (TOP 0.2% nationwide), Chinese Ministry of Education   2019
- **National Second Prize** of China Undergraduate Mathematical Contest in Modeling   2019
- **National Third Prize** of China Students Service Outsourcing Competition   2019
- Huang Xilie Scholarship of Xiamen University in 2019 (2/200)   2019
- The First Prize Scholarship, Xiamen University   2018
- Xiamen University Social Work Scholarship   2018

PROFESSIONAL SERVICE

TTIC Summer Workshop on Multimodal Artificial Intelligence   2024.08 — **Organizer**
Midwest Robotics Workshop   2024.04 — **Volunteer**
Girls who code   2023.10 — **Volunteer**
4th China "Internet +" College Studentsand Entrepreneurship Competition   2018.10 — **Volunteer**

SKILLS

- **Programming**: Python, C/C++, SQL, HTML
- **Coding Frameworks**: PyTorch, TensorFlow, Linux, Bash
- **Tools/Plateform**: Git, Docker, Xcode, MATLAB, Navicat, Unity, Postman, Huggingface