Liu Dai

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EDUCATION

Tongji University — Shanghai, China
B.Eng. in Computer Science, College of Electronic & Information Engineering. — Sept. 2019 - July. 2024
  - **Gap Year for Research**: Sept. 2021 - Sept. 2022

PUBLICATION

*: equivalent contribution, †: corresponding author.

- **3D-Aware Object Goal Navigation via Simultaneous Exploration and Identification**
  Jiazhao Zhang*, **Liu Dai***, Fanpeng Meng, Qingnan Fan, Xuelin Chen, Kai Xu, He Wang†
  Accepted to *IEEE/CVF Computer Vision and Pattern Recognition Conference(**CVPR**) 2023*

- **Discovering Novel Categories in SAR Images in Open Set Conditions**
  Liu Dai, Weiwei Guo†, Zenghui Zhang, Wenxian Yu
  Published at *IEEE/GRSS International Geoscience and Remote Sensing Symposium(**IGARSS**) 2022,* **Oral**

EXPERIENCE

RESEARCH EXPERIENCE

University of California, San Diego — San Diego, California, U.S.
Undergraduate Research Intern, SU Lab — Apr. 2023 - Present
Advisor: **Prof. Hao Su**

Peking University — Beijing, China
Undergraduate Research Intern, Center on Frontiers of Computing Studies — Mar. 2022 - Present
Advisor: **Prof. He Wang**

Proj. : Active 3D Scene Understanding & Navigation

  - We propose a framework for the challenging 3D-aware Object Goal navigation task, empowered by two simultaneous sub-policies. I conducted part of method design, coding, writing & plotting.
  - It was my first time to step into 3D Vision & Embodied AI, and I found it really exciting and promising to build active agents for the real- and open-world.

Proj. : Mobile Manipulation

Tongji-MIT City Science Lab — Shanghai, China
Undergraduate Research Intern — Sept. 2021 - Mar. 2022
Advisor: **Prof. Weiwei Guo**

Proj. : Remote Sensing Image Interpretation with Deep Learning in the Open & Challenging World

  - We introduce Novel Category Discovery(NCD) into the remote sensing community. We started from an application-driven problem: *When encountered with new and unlabelled SAR data, what can we do to make the best of that much data we have labelled?* The project piqued my interest in the setting of open-world. I undertook the most of coding, writing & plotting independently.

Teaching Experience

Teaching Assistant for *Opensource Hardware and Programming* (55010501)   Tongji University
Working with Prof. Xiaohua Sun   2021 Fall
  − Delivering courses on Python & Arduino

Honors

- **SenseTime Scholarship**   2022
  − Nationwide Selected 30 Undergraduates in the Field of AI.
- **Tongji Academic Star**   2022
  − Highest Honor for Undergrads at Tongji University (15/18536).
  − Rank 1st among All Recipients.
- **Outstanding Student Scholarship** of Tongji University   2020, 2021

Awards

- **National First Prize** in *Challenge Cup* Competition: Research Track   2021
  − Most Influential Research Competition among University Students in China.
  − Best Record in College History.
- **National Silver Award** in *Challenge Cup* Competition: Entrepreneurship Track   2023
  − Best Record in College History.
- **Gold Award of Shanghai** in *Internet+* Competition   2022
- **Silver Award of Shanghai** in National College Student *Innovation, Creativity & Entrepreneurship* Challenge 2022
- **Second Prize of Shanghai** & **Univ. Champion** in *FLTRP Cup* National English Public Speaking Contest 2020

Skills

- **Programming:** C/C++, Python, Arduino;
- **Tools:** Pytorch, OpenCV, Open3D, Habitat Simulator;
- **Other Skills:** Public Speaking, Presentation;

Language

- **English:** Fluent
- **Mandarin:** Native
- **French:** Basic