Xu Pan M.Sc. Student

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in LinkedIn GitHub ResearchGate Scholar

Education

Wuhan University | State Key Lab. LIESMARS   Wuhan, China

M.Sc. in Cartography and Geographic Information Systems   2023.09 - 2026.06
- GPA: 3.55/4.00, Average Score: 89.40/100, IELTS: 7.0(6.0)
- Research area: Computer Vision and 3D Reconstruction | Supervisor: Prof. Xianwei Zheng

Wuhan University | School of Remote Sensing and Information Engineering   Wuhan, China

B.Eng. in Remote Sensing Science and Technology   2019.09 - 2023.06
- GPA: 3.75/4.00, Average Score: 88.90/100

Publications

1. **Xu Pan**, Zhenglin Wan, Xingrui Yu, Xianwei Zheng, Youkai Ke, Ming Sun, Rui Wang, Ziwei Wang, Ivor Tsang. **SA-VLA: Spatially-Aware Reinforcement Learning for Flow-Matching Vision-Language-Action Models**. *(Under Review at ICML)*, 2026. Available at `arXiv`.

2. **Xu Pan**, Zimin Xia, Xianwei Zheng. **Scale-aware Co-visible Region Detection for Image Matching**. *ISPRS Journal of Photogrammetry and Remote Sensing (JCR Q1, IF 12.2)*, 2025. `https://doi.org/10.1016/j.isprsjprs.2025.08.015`

3. Ming Sun, Rui Wang, Xingrui Yu, Lihua Jing, Hangyu Du, Zhenglin Wan, **Xu Pan**, Ivor Tsang. **SleeperVLA: Towards Backdoor-Based Ownership Verification for Vision-Language-Action Models**. *(Under Review at ICML)*, 2026.

4. **Xu Pan**, Qiyuan Ma, Jintao Zhang, He Chen, Xianwei Zheng. **SAMatcher: Co-Visibility Modeling with Segment Anything for Robust Feature Matching**. *IEEE Transactions on Geoscience and Remote Sensing (Under Review)*, 2026.

5. Jiashen Huang, **Xu Pan**. **The Institutional Filter: How Trust Shapes Inequalities Between Domestic and Global AI Models**. *Under Review at IAMCR Conference*, 2026.

Projects

Intelligent Interpretation Platform for Remote Sensing Images Based on Baidu PaddlePaddle   2022.03 - 2022.08
 `TwSphinx54/I2RSI`

Web-based Global Natural Disaster Assessment System   2022.05 - 2022.09
 `TwSphinx54/GNDAS`

Experiences

Research Assistant @ A*STAR | Centre for Frontier AI Research (CFAR) | Singapore   2025.08 - present
- Pioneered spatially-aware reinforcement learning adaptation for flow-based VLA models, preserving implicit spatial inductive bias through fused geometric prior and preventing degradation under distribution shifts.
- Designed geometry-aligned dense rewards and spatially-conditioned exploration, enabling stable RL fine-tuning, superior zero-shot spatial generalization, and robust transferable behaviors in complex manipulation scenes.

Research Intern @ Baidu, Inc. | **International Technology R&D Dept.** | Shenzhen, China   2024.12 - 2025.03
- Developed DiT-based framework for controllable, arbitrarily long video generation via key-frame conditioning.
- Improved the visual fidelity of rendered text in image generation by designing specialized attention mechanisms.
- Contributed to the **SynClub** AI chat app through assessment of frontier multimodal generative models and optimization of text-to-image/video modules, delivering improved performance and higher-quality outputs.

Academic Activities

2025 Annual Conference on Photogrammetry and Remote Sensing, Chinese Society for Geodesy, Photogrammetry and Cartography (CSGPC) | Kunming, China   2025.07.28 - 07.30

Awards and Honors

- **Outstanding Graduate Student,** Wuhan University   2025.11
- **Graduate Academic Excellence Scholarship,** Wuhan University   2025.11
- **Graduate Academic Excellence Scholarship,** Wuhan University   2024.11
- **Outstanding Student Leader,** Wuhan University   2024.10
- **Outstanding Student Club Leader,** Wuhan University   2024.08
- **Active Contributor to Social Activities,** School of Remote Sensing and Information Engineering   2023.05
- **Wuhan University Class C Scholarship,** Wuhan University   2022.10
- **National Second Prize,** China Software Cup College Student Software Design Competition   2022.08
- **Honorable Mention,** Mathematical Contest In Modeling   2022.03
- **Third Prize,** Asia and Pacific Mathematical Contest in Modeling   2021.12
- **First Prize in Hubei Division,** China Undergraduate Mathematical Contest in Modeling   2021.10
- **Outstanding Student,** Wuhan University   2021.09
- **Bronze Medal,** China Collegiate Algorithm Design & Programming Challenge Contest   2021.03
- **Second Prize in Final,** Translation & Interpreting Contest of Hubei Province   2020.05

Skills

Languages: Mandarin, English (IELTS 7.0)

Programming: `Python`, `C++`, `MATLAB`, `HTML`, `CSS`, `JavaScript`, `C#`, `SQL`, `R`

Soft Skills: Leadership, Project Management, Event Organization, Public Speaking, Design & Editing

Certificates

System Integration Project Management Engineer
Qualification Certificate of Computer and Software Technology Proficiency

Certificate of Level 4 in Network Engineer
National Computer Rank Examination

Certificate of Level 3 in Network Technology
National Computer Rank Examination

Certificate of Level 3 in Database Technology
National Computer Rank Examination

Service and Leadership

Reviewer	International Conference on Machine Learning (ICML'26)
Member	ISPRS Student Consortium (ISPRS SC)
Chairman	The 22nd LIESMARS Graduate Student Union
Director	GeoScience Café Operation Center
Volunteer	2023/2024 International Graduate Workshop on Geo-Informatics
	The 21st China Ocean Color Conference