# XU PAN M.Sc.

## **FDUCATION**

## The State Key Lab. LIESMARS, Wuhan University

Wuhan, China

M.Sc. in Cartography and Geographic Information Systems

2023 - 2026 (expected)

- GPA: 3.55/4.00, Average Score: 89.69.
- Advisor: Prof. Xianwei Zheng
- Research area: Computer Vision and Geographical 3D Reconstruction

# School of Remote Sensing and Information Engineering, Wuhan U Wuhan, China

B.Eng. in Remote Sensing Science and Technology

2019 - 2023

• GPA: 3.75/4.00, Average Score: 88.90.

# **PUBLICATIONS**

- 1. Xu Pan, Zimin Xia, Xianwei Zheng. Scale-aware Co-visible Region Detection for Image Matching. ISPRS Journal of Photogrammetry and Remote Sensing (Under Review), 2025.
  - Addressed the challenge of matching images with large scale gaps by detecting and aligning co-visible regions using a hierarchical framework with Scale Head Attention for robust cross-scale feature correlation.
  - Achieved up to +8.41% precision gain over state-of-the-art methods on diverse large-scale image matching benchmarks.
- 2. **Xu Pan**, Qiyuan Ma, Jintao Zhang, Xianwei Zheng. SAMatcher: Segment Anything Co-Visible for Robust Feature Matching. (*In Preparation*), 2026.
  - Targets robust image matching under significant scale variation by identifying semantically consistent, co-visible object segments.
  - Leverages SAM priors to detect co-visible object segments and constrain hierarchical matching within semantically aligned regions.

#### **PROJECTS**

# Intelligent Interpretation Platform for Remote Sensing Images Based on Baidu PaddlePaddle

Github Repo: github.com/TwSphinx54/I2RSI

2022.03 - 2024.01

**SCoDe** 

Github Repo: github.com/TwSphinx54/SCoDe

2023.10 - 2024.03

# Internships

#### Baidu, Inc. - Intl. Tech R&D Dept. | Shenzhen, China

2024.12 - 2025.03

- Developed a novel DiT-based video generation framework with key-frame conditioning for controllable, infinite-length synthesis
- Improved the visual fidelity of rendered text in image generation by designing specialized attention mechanisms.
- Contributed to the **SynClub** AI chat app by evaluating SOTA image generation models and optimizing text-to-image components for better performance and quality.

A\*STAR - Centre for Frontier AI Research (CFAR) | Singapore

2025.08 -

Academic Activities	2025 Annual Conference of the Chinese Society for Geodesy, Photogrammetry and Cartography (CSGPC), Commission on Photogrammetry and Remote Sensing	
,,	Kunming, China 2025.07.28 - 2	.025.07.30
Awards and Honors	<ul> <li>Graduate Academic Excellence Scholarship, The State Key Lab. LIESMARS, Wuhan University</li> <li>Outstanding Student Leader, Wuhan University</li> <li>Outstanding Student Club Leader, Wuhan University</li> <li>Active Contributor to Social Activities,</li> </ul>	2024.12 2024.10 2024.08
	School of Remote Sensing and Information Engineering, Wuhan University	2022.10
	<ul> <li>National Second Prize,</li> <li>China Software Cup College Student Software Design Competition</li> </ul>	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,  Oliver G. Weiger and D. G. Charles G. Weiger and G.	2021.02
	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.	
	Programming: Python, C++, MATLAB, HTML, CSS, JavaScript, C#, SQL, R.	
	Soft Skills: Leadership, Project Management, Event Management, Writing, Public	Speaking.
Certificates	System Integration Project Management Engineer  Qualification Certificate of Computer and Software Technology Proficiency	
	Certificate of Level 3 in Database Technology National Computer Rank Examination	
	Certificate of Level 3 in Network Technology	

National Computer Rank Examination

Certificate of Level 4 in Network Engineer

National Computer Rank Examination

Volunteer Experience Volunteer of: 2023 International Graduate Workshop on Geo-Informatics,

the 21st China Ocean Color Conference.

Chairman of: the 22nd LIESMARS Graduate Student Union.

Director of: GeoScience Café Operation Center.