# XU PAN M.Sc.

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## **EDUCATION**

#### 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**

- Xu Pan, Zimin Xia, Xianwei Zheng. Scale-aware Co-visible Region Detection for Hierarchical 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 method with key-frame guidance for controllable, infinite-length synthesis, improving text-visual consistency via enhanced 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.

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.