

# Yikai Wang

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# Education

#### Wuhan University

Sept 2022 - June 2026

Spatial Informatics & Digitalized Technology

- o **GPA:** 3.98/4.0 **Ranking:** 1/41(major) or 2/351(grade)
- Coursework: Object-Oriented Programming(98), Data Structure and Algorithms(95), Digital Image Processing(95), Computer Vision and Pattern Recognition(96), etc.

## **Awards and Honors**

# **Scholarships**

- o China National Scholarship, 2023-2024
- Wuhan University Outstanding Student First Class Scholarship, 2022-2023 and 2023-2024
- o Wuhan University Freshman Second Class Scholarship, 2022-2023
- o Wuhan University Hongtu Chuangzhan Special Scholarship, 2022-2023

## Academic Awards

- First Prize in Hubei Province of The Chinese Mathematics Competitions (CMC)
- Second Prize in the Central South Region of Chinese Collegiate Computing Competition (4C)

# **Projects and Experience**

# Map Feature Quality Inspection System

July 2023 - Dec 2023

- Developed plugins based on Adobe Illustrator software using the C++ language.
- Designed algorithms to check drawing errors, error types, and topological relationships among various elements and developed functions for error statistics.

# Multi-View Satellite Image 3D Reconstruction Platform

Oct 2023 - Apr 2024

- Improved the classic semantic segmentation network U-net by adding an attention mechanism to achieve high precision extraction of building outlines in remote sensing images.
- Based on the open-source model framework Sat-MVS, generated the DSM by inference using checkpoints and multiview satellite images. Obtained the DEM using CSF filtering algorithm on top of the DSM;
- Extracted building elevation data based on the obtained DEM and DSM results, performed 3D reconstruction according to building outlines, and built the relevant functional platform using Mars3D.

## Distributed Multi-Machine SLAM System

Oct 2024 -

- Joined the project team led by Professor Gao Zhi for scientific research and learning, studied the distributed sensor-fusion SLAM system.
- Focused on learning the back-end map-fusion algorithm part, using the SegMap algorithm for point-cloud segmentation, feature matching, and loop closure detection.
- Conducted simulation experiments of the SegMap algorithm in single-machine and multi-machine modes using data collected by LVI sensors and the original Kitti dataset.

## Skills

- English: IELTS: 7.0; CET-4: 551; CET-6: 506;
- Technologies: C++, Python and MATLAB; HTML, CSS, JavaScript, node.js and Vue; ROS and Linux;

## Future Plan

- $\circ\,$  Have a strong interest in fields such as CV, SLAM, and ML, and hope to conduct relevant research.
- Hope to improve my research and professional competence through my master's degree, and then consider whether to get a job or to continue my studies in the light of the actual situation.