

Yilong Wu

PhD Candidate | Curtin University

[Curtin Profiles](#) | [Research Gate](#) | [Google Scholar](#) | [Bilibili](#) | [yilongwu.top](#)

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RESEARCH INTERESTS

GeoAI and Spatial Modeling; Multimodal Spatial Representation; Spatial Intelligence for Infrastructure.

EDUCATION

Curtin University

Dec 2025 - Present

- **PhD in Construction Management(Fully funded)**
- **Supervisor:** Dr. Yongze Song
- PhD candidacy confirmed

April 2026

Fujian Normal University

Sep 2020 - Jun 2024

- **Bachelor of Geographic Information Science(GIS)**
- **GPA:** 3.67 / 5 (Ranked **1st** in Cohort)
- **Honors & Awards:**
 - Excellent Intern Award; Excellent Undergraduate Thesis; Excellent Graduate Award

Feng Chia University

Sep 2022 - Jun 2023

- Fujian-Taiwan Cooperation Project.
- **GPA:** 4.53 / 5 (Ranked **1st** in Cohort)

PUBLICATIONS

Published articles

2026

- [1] Wang, X., **Wu, Y.(co-first author)**, Shi, T., Zhang, R., Chen, Y., & Song, Y. (2026). Explainable second-dimension spatial association between park sentiment and built-social environments. **Cities**, 174, 107068. <https://doi.org/10.1016/j.cities.2026.107068>
- [2] Luo, P., **Wu, Y.**, & Song, Y. (2026). Focal-feature regression kriging. **Geographical Analysis**, 58(2), e70035. <https://doi.org/10.1111/gean.70035>
- [3] Liu, H., Song, Y., Zhang, P., Ren, K., & **Wu, Y.** (2026). Generalised spatial error for validation. **GIScience & Remote Sensing**, 63(1), 2690327. <https://doi.org/10.1080/15481603.2026.2690327>

2025

- [4] Qin, X., **Wu, Y.**, Huang, H., Yang, X., & Gao, L. (2025). Impact of impervious surface spatial morphologies on urban waterlogging: Insights from a cascade modeling chain at catchment scale. **Sustainable Cities and Society**, 134, 106912. <https://doi.org/10.1016/j.scs.2025.106912>
- [5] **Wu, Y.**, Yu, S., Chen, Y., Liu, X., & Cui, Z. (2025). Risk assessment of waterlogging by fusing multi-source heterogeneous big data in Tong'an. **Geomatics & Spatial Information Technology**, 48(4), 70–73.

2023

- [6] **Wu, Y.**, Chen, Y., Zhang, R., Cui, Z., Liu, X., Zhang, J., Wang, M., & Wu, Y. (2023). A spatial information extraction method based on multi-modal social media data: A case study on urban inundation. **ISPRS International Journal of Geo-Information**, 12(9), 368. <https://doi.org/10.3390/ijgi12090368>
- [7] Qin, X., **Wu, Y.**, Lin, T., & Gao, L. (2023). Urban flood dynamic risk assessment based on typhoon rainfall process: A case study of Typhoon “Lupit” (2109) in Fuzhou, China. **Remote Sensing**, 15(12), 3116. <https://doi.org/10.3390/rs15123116>

Manuscripts under consideration

- **Spatial information use in large language model prediction**
Wu, Y.
International Journal of Digital Earth (With Editor)
- **Simple second-dimension learning for efficient spatial prediction**
Wu, Y., Chen, Y., Cui, Z., Huang, X., Qin, X., & Song, Y.
International Journal of Geographical Information Science (Ready to Revise)

WORK AND INTERNSHIP EXPERIENCE

Main Roads Western Australia	Sep 2025 - Mar 2026
<i>Research Assistant</i>	
- Developed automated workflows for preprocessing and modelling road performance data across Western Australia. - Collected and processed large-scale Google Street View imagery (2022 & 2024), enabling automated data retrieval and Green View Index (GVI) computation. - Integrated satellite-derived NDVI and street-view GVI with road-section records for multi-scale roadside vegetation analysis across Western Australia. - Examined associations between vegetation measures and pavement-condition indicators, and screened road sections for further review. - Prepared GIS datasets, maps, field dictionaries and workshop materials to communicate analysis findings to project partners.	
Fujian Provincial Coalfield Geology Bureau, China	Nov 2023 - Jan 2024
<i>Data Processing Engineer</i>	
- Conducted 1:10,000 scale geological disaster risk survey, assessment mapping, and corresponding data processing in Fuqing City. - Participated in the "Two Reservoirs Connection" project for Fujian Province, conducting comparison and verification.	
Certain Provincial Emergency Management Science Research Institute, China	Dec 2023
<i>Data Processing Engineer (Remote Internship)</i>	
- Built a comprehensive risk assessment project for urban waterlogging in a specific area using a model builder according to the plan - Trained relevant technical staff.	
GeoScene Information Technology Co., Ltd., China	Mar 2023 - Jun 2023
<i>Outstanding Campus Ambassador of the Marketing Department</i>	
Prepared competition publicity materials, answered student enquiries and supported campus promotion.	

TEACHING EXPERIENCE

Curtin University	Semester 2, 2026
<i>Teaching Assistant / Tutor</i>	
BLDG1001 High-Rise Construction	
Plan and deliver tutorials, prepare materials, support exercises, and mark assessments with rubric-based feedback.	

SELECTED PRESENTATIONS

Main Roads Western Australia	21 Sep 2026
Workshop: project summary presentation and discussion of subsequent validation across regions.	
Central South University	4 Jun 2026
Research presentation and exchange, School of Geosciences and Info-Physics, China.	
Explainable second-dimension spatial association between park sentiment and built-social environments (ESDA)	
Focal-Feature Regression Kriging (FFRK)	
Main Roads Western Australia	6 Mar 2025
Research presentation and project discussion, Perth, Australia.	

ACADEMIC SERVICE

Member, Young PhD Editorial Team, <i>Big Earth Data</i> (IF: 3.6)	
Peer Reviewer: <i>JAG</i> (IF: 8.2); <i>GIScience & Remote Sensing</i> (IF: 6.8); <i>Journal of Spatial Science</i> (IF: 2.2)	
Member, GISphere GISStory	

SELECTED AWARDS AND HONOURS

Geographic Big Data and Spatial Intelligence Summer School — Excellent Report and Excellent Student	2024
National Engineering Research Center for GIS Campus Open Day — Outstanding Camper	2023
Academic Scholarships, Feng Chia University — ranked 1st in cohort	2023
Outstanding Scholarship, Fujian Normal University — top 1%	2022 & 2023
ESRI Cup Chinese University GIS Software Development Competition — First Prize	2022

TECHNICAL SKILLS

Programming and analysis: R, Python; spatial statistics, data processing and reproducible research workflows.	
Geospatial tools and data: ArcGIS Pro, QGIS; remote sensing, street-view imagery, GIS mapping and data delivery.	
AI research workflows: local large language model evaluation, controlled prompting and experiment documentation.	