

YUANKUN WANG

🏠 Wuhan University, Wuhan, Hubei, China

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🌐 <https://kittywyk.github.io/>

EDUCATION

Wuhan University, China

Sept. 2022 - Present

State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing

M.E. in Photogrammetry and Remote Sensing (Postgraduate Recommendation)

GPA: 3.67/4.00 (91.24/100)

China University of Geosciences (Wuhan), China

Sept. 2018 - Jun. 2022

School of Geography and Information Engineering

B.E. in Remote Sensing Science and Technology (Outstanding Graduate at School Level)

GPA: 3.95/5.00 Rank: 3/60

Major Courses: Probability and Statistics (96), Linear Algebra (93), Data Structure (95), Remote Sensing Image Processing (95), Digital Signal Processing (94), 3D GIS (100), Digital Photogrammetry (95)

RESEARCH INTEREST

Understanding Gender Differences in the Perception of Safety

Urban Perception Using Visual Data (Street-View Imagery, Aerial Imagery, Videos)

RESEARCH ACHIEVEMENT

Wang, Y., Shao, Z., Wang, J., Wang, Y., Ding, Y., & Cheng, G. TripleA: An Unsupervised Domain Adaptation Framework for Nighttime VRU Detection. *IEEE Transactions on Intelligent Transportation Systems*. (Under Review, ID: T-ITS-24-04-1407)

Ding, Y., Shao, Z., **Wang, Y.**, Yang, C., et al. SARBA-Net: A Boundary Awareness Network for Impervious Surface Extraction of SAR Images. *Pattern Recognition*. (Under Review)

RESEARCH EXPERIENCE

Nighttime Vulnerable Road User (VRU) Detection

Sept. 2022 - Ongoing

Head of Student, R&D and Application of Key Technologies for Intelligent Analysis of Intelligent Transportation Video Big Data
Wuhan University

- Labeled VRUs in traffic surveillance camera data during the daytime
- Proposed an unsupervised domain adaptation framework for nighttime VRU detection using only daytime annotations, reducing the cost of manually labeling challenging nighttime data
- Authored a paper manuscript under review by *IEEE Transactions on Intelligent Transportation Systems*

Road Damage Detection and Physical Properties Estimation

May 2023 - Ongoing

Head of Student, Hubei Province Key R&D Project
Wuhan University

- Constructed a road damage dataset containing the physical properties of road damage
- Enhanced the YOLOv5 architecture by integrating additional regression heads to predict the physical properties of detected road damage
- Developed an integral transform function (CDT) to address the long-tailed distribution problem in regression variables

Highway Asset Inspection Using Street View Imagery

Jan. 2023 - Ongoing

Researcher, Shanxi Provincial Science and Technology Major Special Project
Wuhan University

- Conducted semi-automatic annotation of highway traffic signage, resulting in a street-view image dataset
- Developed a detection model for highway traffic signage using street-view images

Understanding Chinese Street Network Patterns

Jun. 2021 – Sept. 2021

Leader, 1st Prize in Esri-Cup Chinese College Students GIS Software Development Contest

- Mapped and analyzed street network patterns across 1,321 built-up areas in China using orientation entropy and rose diagrams
- Employed spatial autoregressive models to quantitatively understand the relationship between street network patterns and various landscape factors
- Implemented interactive visualization of analysis results using ArcGIS StoryMaps

Building Damage Assessment Using High-Resolution Satellite Imagery

May 2020 – May 2021

Leader, National Training Program of Innovation and Entrepreneurship for Undergraduates

- Developed a Siamese network to extract pre- and post-disaster building footprints and assess post-disaster building damage levels
- Integrated an attention mechanism to enhance feature representation within the network
- Employed a loss function to address the imbalanced distribution of damage classes

HONORS & FELLOWSHIPS

Scholarship

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| • Excellent Study Scholarship (top 10%), Wuhan University | 2023 |
| • Graduate Study Scholarship, Wuhan University | 2023, 2022 |
| • Self-Reliance Star Scholarship (top 5%), China University of Geosciences | 2020, 2019 |

Academic Competitions

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| • 3 rd Prize in Huawei Cup the 20 th China Post-Graduate Mathematical Contest in Modeling | 2023 |
| • 1 st Prize in Esri-Cup Chinese College Students GIS Software Development Contest | 2021 |
| • 2 nd Prize in National English Competition for College Students | 2020 |
| • 2 nd Prize in Translation and Interpreting Contest of Hubei Province | 2019 |

Honor

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| • Outstanding Individual at University Level, Wuhan University | 2024 |
| • Outstanding Youth League Member at School Level, Wuhan University | 2023 |
| • Outstanding Graduate at School Level, China University of Geosciences | 2022 |
| • Excellent Bachelor Dissertation Award at School Level, China University of Geosciences | 2022 |
| • Outstanding Individual at University Level, China University of Geosciences | 2020, 2019 |

LEADERSHIP & EXTRACURRICULAR

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| • Commissary in charge of publicity, master’s II class, Wuhan University | Sept. 2022 - Present |
| • Volunteered at the second expert group meeting of the DSSP application projects of APSCO | Jun. 2024 |
| • Volunteered at the 2024 China-Latin American and Caribbean States Space Cooperation Forum | May 2024 |
| • Volunteered at the 7 th CISM Military World Games, accumulating 98 hours of volunteering | Nov. 2019 |

SKILL SET

Languages	Mandarin (Native) English (IELTS: 7.0, with L: 7.0 R: 8.0 W: 7.0 S: 6.0)
Programming	Python MATLAB C/C++ R JavaScript HTML CSS L ^A T _E X
Software	ArcGIS ENVI SNAP Autodesk 3ds Max Qt ERDAS Imagine Adobe Photoshop
DL Framework	PyTorch TensorFlow
Certificate	Certificate of Intermediate Level of Computer and Software Technology Proficiency (Software Design Engineer) Certificate of Competence in Network Technology, Level III of the National Computer Rank Examination