

YANAN WU

+1 (607) 372-0368 | yxw190021@utdallas.edu

gisynw.com | linkedin.com/in/giswu | github.com/gisynw | yw120766.medium.com/

SUMMARY

PhD Student in the Geospatial Information Sciences Department at the University of Texas at Dallas. 2 years of teaching experience as an instructor, guiding students to achieve success in learning Geographic Information Science (GIScience) and statistics. Proven problem-solving, relationship-building, and negotiation through academic and research experience as a Teaching Assistant and a Research Assistant. Excellent verbal and written communication skills evident by extensive conferences and awards.

EDUCATION

Doctor of Philosophy in Geospatial Information Sciences	May 2024
The University of Texas at Dallas	
Master of Arts in Geography	May 2019
Binghamton University	
Bachelor of Science in Resource Environment and Urban-Rural Planning Management	May 2016
Xi'an University of Science and Technology, China	

PROFESSIONAL EXPERIENCE

Modeling of emergency incidents with GPS trajectory data using machine learning	July 2022 – Present
<ul style="list-style-type: none">Led the development, training, and testing of machine learning algorithms to predict emergency dispatchEstablished interactive web maps to efficiently display GPS trajectories using ArcGIS for JavaScript and PythonDelivered 20+ presentations, received 10 travel awards and scholarships, and gained 7 awards in talk competitions	
An Integrated Connected Vehicle and Computing Platform for Public Safety Applications	July 2019 – July 2020
<ul style="list-style-type: none">Leveraged Fourier Transformation, A-Priori Algorithm to analyze traffic accidents in DallasProvided quarterly reports to supervisor, published papers and conference proceedingsInitiated Medium blog posts on machine learning, Web-GIS development, and data processing using R, promoting writing skills and engaging in the online communityCreated and maintained repositories to store, track, and share codes on GitHub	
Instructor/Lecturer – Principles of Geospatial Information Sciences	May 2022- May 2023
<ul style="list-style-type: none">Gave lectures and guided students to learn in GIS through class discussions in a traditional or online classroomContributed to the course material on principles of mapping, charting, and data visualization in ArcGIS ProStrengthened student proficiency in Esri products, elevating geospatial data analysis skillsReceived excellent feedback from students and peer reviews, available on my personal website	
Instructor/Lecturer - Methods of Quantitative Analysis in the Social and Policy Science	May 2021 – May 2022
<ul style="list-style-type: none">Instructed and facilitated discussions with 50 students on fundamental statistical concepts and methods, including statistics, probabilities, sampling, hypothesis tests, and regression	
Integration of Earth Observation and in Situ Data for Analyzing Lake Level Changes	May 2017 – May 2019
<ul style="list-style-type: none">Analyzed and interpreted global remote sensing images and GRACE data using ArcGIS Pro	

PUBLICATIONS

Wu, Y., Yang, Y., & Yuan, M. (2023). Location analytics of routine occurrences (LARO) to identify locations with regularly occurring events with a case study on traffic accidents. *Information* (Under review)

Wu, Y., Yang, Y., & Yuan, M. (2023). Understanding the role of geographical environments in emergency dispatches with GPS trajectories. *Abstracts of the ICA*, 6, 276.

Wu, Y., & Yuan, M. (2021). Where and why there: location analytics of routine occurrences (LARO) with a case study on traffic accidents. *Abstracts of the ICA*, 3, 318.

CONFERENCE PROCEEDINGS

Wu, Y., Yang, Y., Yuan, M. Analyze emergency-vehicle dispatches in Dallas, Texas, USA, In *AutoCarto 2022 Proceedings*.

Yang, Y., **Wu, Y.,** Yuan, M. Quantifying the impacts of social infrastructure on human networks, In *AutoCarto 2022 Proceedings*.

AWARDS

- 2023** Second Place in Graduate Paper Competition, SWAAG conference
- 2023** International Cartographic Association Scholarship
- 2023** Travel award from USNC for ICA with NSF funding to attend the ICC2023
- 2023** Betty & Gifford Johnson Travel Award, UTD
- 2022** Graduate student participants of the Grad WINGS Workshop, UCGIS
- 2022** International Cartographic Association Scholarship
- 2022** Second Place, Student Lightning Talk Award, UCGIS Symposium
- 2022** Third Place in GIS Day 2022 Awarded by Geospatial Information Sciences Program, UTD
- 2022** Travel award from UCGIS to attend the UCGIS Symposium
- 2022** The University of Texas at Dallas 2022 Three Minute Thesis (3MT) Competition, Finalist
- 2022** Honorable mentions, GI Science & Systems Student Honors Paper Competition session, AAG
- 2021** International Cartographic Association Scholarship
- 2021** Travel award from USNC for ICA with NSF funding to attend the ICC2021
- 2021** Pioneers Student Research Fund, Geospatial Information Sciences Program, UTD
- 2021** PhD Research Small Grants Awarded by the Office of Graduate Education, UTD
- 2021** First Place in GIS Day 2021 Awarded by Geospatial Information Sciences Program, UTD
- 2019** First Place in GIS Day 2019 Awarded by Geospatial Information Sciences Program, UTD
- 2019** Pioneers Student Research Fund, Geospatial Information Sciences Program, UTD
- 2019** First Place in GIS Day 2019 Awarded by the Geography Department at Binghamton University
- 2015** Outstanding Prize in GeoDesign at Esri GIS Software Development Contest

PRESENTATIONS

- 2023** Identify geographical environments influencing emergency response performance. *SWAAG*,
- 2023** Modeling of emergency incident with GPS trajectory data using random forest algorithm. *ICC*, August
- 2023** Assessing the role of geographical context in modeling the likelihood of emergency response. *AAG*, April
- 2022** Driving pattern analysis for emergency vehicle (EV). *AutoCarto*, November
- 2022** Understanding emergency vehicle movement from GPS trajectory data. *GIS Day in UTD*, November
- 2022** Understanding 911 Response Time from GPS trajectory data. *UTD Research Day*, October
- 2022** Driving pattern analysis for emergency vehicle (EV) using multi-source data. *UCGIS, Syracuse, NY*, June
- 2022** Why is there a delay in a 911 vehicle arriving? The Three Minute Thesis (3MT) Competition, *UTD*, April
- 2022** Location analytics of routine occurrences (LARO) to identify locations with regularly occurring events. *CO*, April
- 2022** Location Analytics of Routine Occurrences (LARO) with a case study on traffic accidents. *AAG, New York*, February
- 2021** location analytics of routine occurrences (LARO) with a case study on traffic accidents. *ICC, Italy*, December
- 2021** Emergency vehicle data map-matching utilizing the Dijkstra's Algorithm. *GIS Day in UTD*, November
- 2021** Spatial-temporal analysis of traffic accidents for increasing sustainable transportation. *The Center for Spatial Studies at UCSB*
- 2021** The Three Minute Thesis (3MT) Competition. *The University of Texas at Dallas*, April
- 2020** Research Showcase Poster Competition, EPPS. *The University of Texas at Dallas*, October
- 2019** Visualizing (Wild) Fires in Sentinel-2 imagery using custom script in EO Browser. *GIS Day in UTD*, November
- 2019** Developing an hourly risk model for street networks in Dallas. *SWAAG, Fort Worth, Texas*. October
- 2019** Integration of Earth observations and in situ data for analyzing lake level changes. *GIS Day at Binghamton University*, March
- 2019** Integration of Earth observations and in situ data for analyzing lake level changes. *AAG, Washington D.C.* April

ACADEMIC SERVICE

- 2022** Student judge for Faculty Three Minutes Thesis (3MT) Competition in UTD
- 2022** USGIF Student Assistant Program at the 2022 GEOINT Symposium

PROFESSIONAL MEMBERSHIPS

American Association of Geographers
Cartography and Geographic Information Society