YANAN WU

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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 (GIS) and statistics. Excellent written and verbal communication skills evident by extensive conferences and awards. Proven problem-solving, relationship-building, and negotiation through academic and research experience as a Teaching Assistant and a Research Assistant.

EDUCATION

Doctor of Philosophy in Geospatial Information Sciences   **May 2024**

The University of Texas at Dallas

Master of Science 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**

- Led the development, training, and testing of machine learning algorithms to predict emergency dispatch
- Established interactive web maps to efficiently display GPS trajectories using ArcGIS for JavaScript and Python
- Delivered 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**

- Leveraged Fourier Transformation, A-Priori Algorithm to analyze traffic accidents in Dallas
- Provided quarterly reports to supervisor, published papers and conference proceedings
- Initiated Medium blog posts on machine learning, Web-GIS development, and data processing using R, promoting writing skills and engaging in the online community
- Created and maintained repositories to store, track, and share codes on GitHub

Instructor/Lecturer – Principles of Geospatial Information Sciences   **May 2022- May 2023**

- Gave lectures and guided students to learn in GIS through class discussions in a traditional or online classroom
- Contributed to the course material on principles of mapping, charting, and data visualization in ArcGIS Pro.
- Facilitated the development of proficiency in the use of Esri products, enhancing students' geospatial data analysis skills.
- Received 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**

- 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**

- 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