Yuhan JIANG

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EDUCATION

M.S., Wuhan University, Wuhan, China **Sept. 2021 - Jun. 2024(Expected)**

- Department: State Key Laboratory of Engineering in Surveying, Mapping and Remote Sensing
- Major: Cartography and Geographic Information Systems
- Main Courses: Geographic Information Theory and Technology (A+), Natural Language Processing Technology (A), Smart City (A), Numerical Analysis (A-)

B.S., Wuhan University, Wuhan, China **Sept. 2017 - Jun. 2021**

- Department: School of Remote Sensing and Information Engineering
- Major: Remote Sensing Science and Technology
- GPA: 3.84/4.0 (Top 7%)

Summer School, Hong Kong Polytechnic University, Hong Kong, China **Jun. 2019 - Jul. 2019**

- Department: Department of Land Surveying and Geo-Informatics
- Main Courses: Mobile GIS and Location-based Services (A), Spatial Big Data Analytics (B+)

RESEARCH INTERESTS

- Spatiotemporal Data Analytics and Geospatial Artificial Intelligence (GeoAI).
- Quality of Geospatial Information Services (QoGIS): Monitoring, Evaluation and Optimization.

RESEARCH EXPERIENCE

Map Retrieval Intention Recognition *Supervisor: Prof. Zhipeng Gui, Prof. Jianya Gong*

2021 - pres. Drawing on relevant user feedback data and geographic semantics guidance, this research project aims to enhance the retrieval accuracy and assist the discovery and utilization of online geographic resources in an intention-driven way. Currently, the hypergraph segmentation method I proposed has been employed to further optimize this research.

2021 - 2023 OGC WMS Discovery Portal: We built a Web-based retrieval system for online geographic resources, in particular to support the multimodal search and query of the Web Map Service.

2020 - 2021 My undergraduate thesis, titled "WMS Layers Retrieval Intention Recognition Considering Map Features and Semantic Attributes", addressed this issue via DBSCAN algorithm and SWEET ontology library. (Outstanding Thesis)

Simulation of Grassland Desertification *Supervisor: Prof. Zhipeng Gui*

2020 - 2021 We primarily concentrated on the ecology and environment of grasslands, and have established four models based on NetLogo simulation platform to simulate the process of grassland desertification, including a weather prediction model based on Markov chains, a grass growth model, a life-cycle model for sheep and wolves, and an expansion model for deserts.

Spatial Analysis of COVID-19 *Supervisor: Prof. Gang Xu*

2019 - 2021 This study focused on quantifying the spatial distribution patterns of COVID-19 cases in Wuhan by utilizing social media data (Weibo). Furthermore, a correlation analysis was conducted to investigate the potential associations between the distribution of COVID-19 cases and environmental factors.

ACADEMIC ACHIEVEMENTS

4 journal articles, 3 book chapters, 1 conference presentation, 2 patents, 5 software copyrights, including:

Journal Articles

2023 Gui, Z., Liu, X., Zhao, A., **Jiang, Y.**, Ling, Z., Hu, X., Li, F., Yang, Z., Wu, H. Map retrieval intention recognition based on relevance feedback and geographic semantic guidance: For better understanding user retrieval demands. *Information Processing and Management*. *(Under Review)*

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2023 **Jiang, Y.**, Gui, Z. Markov Chain-based Simulation Model of Grassland Desertification. *Bulletin of Surveying and Mapping*. *(Under Review)*

2023 Gui, Z., Hu, X., Liu, X. Ling, Z., **Jiang, Y.**, Wu, H. Map Retrieval Intention Formalization and Recognition by Considering Geographic Semantics. *Journal of Geo-information Science*, 25 (6), 1186-1201. DOI: 10.12082/dqxxkx.2023.230019. (IF: 4.0)

2021 Xu, G., **Jiang, Y.**, Wang, S., Qin, K., Ding, J., Liu, Y., Lu, B. Spatial disparities of self-reported COVID-19 cases and influencing factors in Wuhan, China. *Sustainable Cities and Society*, 76(17), 103485. DOI: 10.1016/j.scs.2021.103485. (IF: 11.7)

Book Chapters

2022 3 Chapters in *OpenGIS*: Desktop-based Mapping and Visualization Tools; Web-based Mapping and Visualization Packages; Programming Libraries, APIs, and Tools. *(Under Review)*

Conference Presentations

2023 "Map Retrieval Intention Recognition Based on Hypergraph Segmentation", *The 18th Annual Conference on Theories and Methods of Geographic Information Science in China*, Guilin, China, 19-21 May, 2023.

Patents

2023 Gui, Z., **Jiang, Y.**, Gong, J., Wu, H., Ling, Z., Liu, X., Zhao, A., A Method for Detecting Geographic Information Resource Retrieval Intentions and its Computer-Readable Medium. Invention patent, No.: 202310900690.5.

2022 Gui, Z., Hu, X., Lin, Z., **Jiang, Y.**, Wu, H., A Method for Semantic-Aware Geographic Information Resource Retrieval Intention Recognition. Invention patent, No.: ZL202210280298.0.

Software Copyrights

2019 - 2020 5 web applications: Service and Analysis Platform for Automatic Extraction of Epidemic-related Locations, Chinese Food and Geography Platform, Supply and Demand Exchange Platform, Digital Town Geographic Information System and Big Event Information Analysis Platform. GitHub

SKILLS & SELF-EVALUATION

Good English ability

- Got an overall score of 7 in IELTS. (Speaking 6.5)
- Able to write English papers independently.

Strong programming

- Proficiency with Python, C/C++, R, and Matlab.
- Obtained Fourth-level Certificate for Nation Computer. (Highest Level)

Good at mathematic

- Won the Honourable Mention of COMAP's Mathematical Contest in Modeling and Interdisciplinary Contest in Modeling respectively.
- Won the Second Prize in the 8th "TipDM Cup" Data Mining Competition.

Strong ability in communication and teamwork

- Active participation in hiking and badminton and have organised many culture and sporting events.
- Won the Outstanding Student Cadre.

HONORS & AWARDS

2021 - 2023	The First Prize Academic Scholarship	Advanced Individual of Social Work
	Outstanding Postgraduate Student	Postgraduate freshman scholarship
2017 - 2021	Outstanding Bachelor's Degree Graduates	Merit Student
	National Encouragement Scholarship	The First Prize Scholarship