

CHEN WEI

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Ph.D. student at University of Wisconsin-Madison researching **AI for Science and Spatial Intelligence**, studying spatial reasoning ability of Large Language Models and developing GeoAI Foundation Model applications.

EDUCATION

University of Wisconsin-Madison

MS/PhD Student, Geographic Information Science

Madison, Wisconsin

08/2024 - Exp. 05/2029

Zhejiang University

Bachelor of Science, Geographic Information Science

Hangzhou, China

09/2020 - 06/2024

PUBLICATIONS

- [1] **Chen Wei**, Yiwei Zhang, Xi Guan, Qianheng Zhang, Yanbing Chen, Yuhan Ji, Yibo Zhao, Maoping Wang, Ying Nie, Hanchen Zhuang, and Song Gao, 2025. "GeoAI for Driving Risk Assessment via Vision-Language Models: A Knowledge Guided RAG System and Dual Evaluation". *Proceedings of the 8th ACM SIGSPATIAL International Workshop on AI for Geographic Knowledge Discovery*. **SIGSPATIAL GeoAI**
- [2] Qianheng Zhang, Song Gao, **Chen Wei**, Yibo Zhao, Ying Nie, Ziru Chen, Shijie Chen, Yu Su, and Huan Sun, 2025. "GeoAnalystBench: A GeoAI benchmark for assessing large language models for spatial analysis workflow and code generation". *Transactions in GIS*. **Top GIS Journal**
- [3] Yifei Li, Hanane Nour Moussa, Ziru Chen, Shijie Chen, Botao Yu, Mingyi Xue, Benjamin Burns, Tzu-Yao Chiu, Vishal Dey, Zitong Lu, **Chen Wei**, Qianheng Zhang, et al., 2025. "AutoSDT: Scaling Data-Driven Discovery Tasks Toward Open Co-Scientists". *Proceedings of the 2025 Conference on Empirical Methods in Natural Language Processing*. **EMNLP**
- [4] Ziru Chen, Shijie Chen, Yuting Ning, Qianheng Zhang, Boshi Wang, Botao Yu, Yifei Li, Zeyi Liao, **Chen Wei**, Zitong Lu, et al., 2025. "ScienceAgentBench: Toward Rigorous Assessment of Language Agents for Data-Driven Scientific Discovery". *The Thirteenth International Conference on Learning Representations*. **ICLR**
- [5] **Chen Wei**, Song Gao, and Feng Zhang, 2023. "Geo-knowledge-informed Deep Learning for Auto-identification of Supraglacial Lakes on the Greenland Ice Sheet from Satellite Imagery". *Proceedings of the 31st ACM International Conference on Advances in Geographic Information Systems*. **SIGSPATIAL**

RESEARCH EXPERIENCE

Research Assistant | ScienceAgentBench & GeoAnalystBench

- Designed and annotated complex spatial reasoning tasks to **benchmark the ability of large language models in scientific and spatial intelligence**.
- Contributed to the **GeoAnalystBench design and evaluation pipeline**, integrating workflows similarity and alignment metrics to quantify how LLMs outputs follow scientific logic.

Lead Researcher | GeoAI for driving risk assessment

- Developed a **Vision-Language Model** framework that integrates multi-source and multimodal data to assess driving risks in complex traffic scenarios.
- Designed a knowledge-guided **Retrieval-Augmented Generation** pipeline with a **dual evaluation metric** system, enhancing the interpretability of results and increasing few-shot learning accuracy.

HONORS AND AWARDS

- **IGIF Student Paper Award** AAG 2026
- **Student Research Grants Competition Award** University of Wisconsin-Madison 2025
- **Trewartha Conference Travel Awards** University of Wisconsin-Madison 2025
- **GIS Cup Honorable Prize** ACM SIGSPATIAL 2023
- **Travel Grant Award** ACM SIGSPATIAL 2023