

AI Agent Development/Test/Evaluation, ML/DL Modeling, Full-Stack Engineering

2+ years work experience (US/International); 4+ years research and programming experience.

EDUCATION

Ph.D. Student in AI for Geosciences **University of Texas at Austin** 2024 – Expected: May 2029
GPA 3.9/4.0 | TA for 1,000+ students (4.5/5.0 instructor rating)

B.S. in Geosciences (Honors Class) **University of Science and Technology of China** 2020 – 2024
Nominee of the **Highest Honor** for USTC undergraduates (one of the two ESS School nominees)
Founded one of the largest student clubs, grew from 0 to 1,300+ members. [\[News\]](#)

WORK EXPERIENCE

AI Intern, AI Agent Knowledge Base Evaluation **PineAI** (Singapore) | Remote | Jul. 2025 – Aug. 2025

- Implemented multi-dimensional evaluation system from scratch for PineAgent's RAG knowledge base.
- Developed data sanitization module removing 2,000+ PII entries and noise from 1,000+ call sessions.
- Extracted 3,000+ Q&A pairs (knowledge/method/strategy) from call sessions to form the evaluation dataset.
- Deployed concurrent LLM-as-judge + rule-based engine, measuring P/R/F1 to enable RL optimization.

Full-Stack Intern, LLM Text Processing System **ZaiwenAI** | Beijing, China | Jun. 2025 – Jul. 2025

- Fulfilled multiple roles in the startup, from design to deployment. [\[Code\]](#) (non-company business) [\[Demo\]](#)
- Developed 3-module MVP: LLM-footprint detection, removal, and plagiarism checking for researchers.
- Built a RESTful backend with FastAPI and an asynchronous task queue with Celery + Redis.
- Created a Vue.js frontend with 9-format document upload, SSE-based real-time LLM response streaming.

Research Assistant, ML Model Development **UT-Austin** | Austin, TX | Aug. 2025 – Present

Project Admin, High Performance Computing Allocation **NSF NCAR** | Remote | Aug. 2025 – Present

- Integrated machine learning parameter calibration for a SOTA physics-based land surface model (Noah-MP).
- Enhanced efficiency of traditional Monte Carlo parameter calibration with a scikit-learn framework.
- Applied for and funded by NSF NCAR's 1k GPU + 22k CPU hours high performance computing allocation.

Visiting Scholar, High Altitude Observatory **NSF NCAR** | Boulder, CO | Jul. 2023 – Dec. 2023

- Simulated global atmospheric wave propagation, detecting 2 distinct wave modes from Hunga-Tonga eruption.
- Integrated simulation/observation via wavelet analysis, advancing understanding of extreme volcanic events.
- First-authored presentation at a NASA Science Workshop and AGU Meeting. [\[Code\]](#) [\[Abstract\]](#)

Full-Stack Developer, UT01 Navigation Page **Independent** | Hybrid | Jun. 2025 – Present

- Consolidated 80+ campus resources across 11 categories based on student navigation patterns. [\[Code\]](#) [\[Website\]](#)
- Drove 10,800+ visits through SEO optimization; optimized HTML/SCSS frontend for cross-device compatibility.

PUBLICATIONS

- Wu, K., He, C., & Yang, Z.-L.* (in preparation). Noah-Agent: A Multi-Expert AI Agent Framework for Automated Parameterization and Validation over 100K-Line Scientific Codebases.
- Wu, K., Yi, W.*, Xue, X.*, Reid, I., & Lu, M. (2024). Diurnal and Seasonal Variations of Meteor Speed and Arrival Angle Observed by Mengcheng Meteor Radar. *JGR: Space Physics*. [\[Paper\]](#) [\[Code\]](#) [\[Data\]](#)
- Wu, K.*, Xu, X., Jiang, J., & Shen, A. (2024). A Summary Report on the Space Physics Practical Education in 2022. *Rev Geophys and Planetary Phys*. [\[Paper\]](#) [\[Code\]](#) [\[News\]](#)

SKILLS

- Programming:** Python, FastAPI, SQL, Redis, Docker, HPC, AWS/GCP, JavaScript, React, MATLAB

