

## 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 undergrads (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
- Built an evaluation system from scratch for multi-dimensional assessment of PineAI Agent's knowledge base.
  - Developed a 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.
  - Implemented a 5-dimensional evaluation engine using LLM-as-a-judge method with concurrent processing.
- Full-Stack Intern, LLM Text Processing System**      **ZaiwenAI** | Beijing, China | Jun. 2025 – Jul. 2025
- Acted as 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 the NSF NCAR's 1k GPU hrs, 22k CPU hrs 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

1. **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.
2. **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*. [\[Paper\]](#) [\[Code\]](#) [\[Data\]](#)
3. **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

