Lidang Jiang

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- ▶ Algorithm & Frontend-Backend Full Stack Development Engineer, 25k-30k/mo
- ▶ From Xianning, Hubei Province, currently living in Shenzhen, Guangdong Province
- ▶ Homepage: https://lidang-jiang.github.io

Education

Sichuan University, *Master's Degree*　　　　　　　　　　　　　　　2021.09 - 2024.07

College of Chemical Engineering, Materials and Chemical Engineering

- University Second-class Academic Scholarship, Academic Year 2021 - 2022
- University Second-class Academic Scholarship, Academic Year 2022 - 2023
- University Second-class Academic Scholarship, Academic Year 2023 - 2024

Jinzhong University, *Bachelor's Degree*　　　　　　　　　　　　　　2014.09 - 2018.07

College of Chemistry and Chemical Engineering, Applied Chemistry

Tongshan County No.1 High School　　　　　　　　　　　　　　　　2011.09 - 2014.07

Self-Evaluation

Scored 502 in College Entrance Exam. Undergraduate GPA: 2.9/4, ranked 45/50. Graduate Entrance Exam: 263 in 2020 and 400 in 2021 (8th/120), Mathematics II: 141 (1st/120). Graduate GPA: 3.5/4, top 30%.

During my graduate studies, I primarily focused on research at the intersection of AI and lithium-ion batteries (LiBs). As the first author, I published two papers in *Energy* and *Applied Energy* (both are Q1 journals in CAS and JCR rankings). Throughout my master's studies, I developed the ability to independently conduct interdisciplinary research.

After completing my master's degree, I have built hands-on engineering skills in both AI and full-stack web development (using frameworks like Vue and Spring Boot). My current research interests include AI4Science, Agents, Generative AI, Deep Learning, LLMs, and MLsys.

Publications

1: Jiang, Lidang, et al. "A Robust Adapted Flexible Parallel Neural Network Architecture for Early Prediction of Lithium Battery Lifespan." *Energy*, 308:132840, 2024. (IF=9.3)

2: Jiang, Lidang, et al. "Generating Comprehensive Lithium Battery Charging Data with Generative AI." *Applied Energy*, 377:124604, 2025. (IF=10.9)

Professional Skills

- **AI Infrastructure & LLM**:
    - **Frameworks & Tools**: Familiar with **PyTorch** deep learning framework; proficient in **vLLM** inference framework usage and basic principles;
    - **Testing & Optimization**: Skilled in using **vllm-bench** for inference performance benchmarking; using **EvalScope** for model accuracy evaluation; familiar with RAG and other AI application development.
- **Programming Languages (by proficiency)**:
    - **Proficient**: **Python** (core language), **Vue2 / JavaScript** (capable of complex front-end component development).
    - **Basic**: C++, Java, SQL, SpringBoot.
- **Full-Stack Development**:
    - Front-end: Vue2, Element-UI, Vant, ECharts.
    - Back-end & DevOps: Spring Boot (basic API development), MySQL, Nginx, Docker, Linux.
- **General Tools**: Git version control, LaTeX document typesetting, VS Code, etc.

Work Experience

Shanghai MicroPort Software Co., Ltd. Shenzhen Branch, Python Backend Developer　　2025.08 - Present

Hainan Xin Zhujiang Human Resources Development & Management Co., Ltd.　　2024.07 - 2025.06

- Large Language Model Algorithm Engineer (2024.07 - 2024.09)

- Front-end Development Engineer (2024.09 - 2025.06)

Wenjia Education, etc., Graduate Entrance Exam Subject Tutor	2021.05 - 2021.12
Guangzhou Lizhi Education Technology Co., Ltd., Yousi Tutoring, etc., Math Teacher	2021.05 - 2021.12
Others (e.g., Unemployed, Preparing for Exams at Home, etc.)	2019.09 - 2021.05
Real Estate Consultant, Environmental Engineer, Hotel Receptionist, Game Booster	2018.07 - 2019.09

Project Experience

Project 13: vLLM-Kunlun (Baidu Kunlun Chip Large Model Inference Framework)   2025.08.18 — Present

- **Project Role**: Contributor | **Open Source**: https://github.com/baidu/vLLM-Kunlun
- **Project Background**: vLLM-Kunlun aims to adapt core technologies such as PagedAttention to Baidu Kunlun Chip (XPU) hardware, supporting high-performance inference of mainstream models like Qwen.
- **Technology Stack**:
  - Core Languages: Python (PyTorch), C++
  - Hardware Environment: NVIDIA A800 (Golden Baseline) vs Kunlun P800 (Target)
- **Core Contributions**:
  1. **Heterogeneous Hardware Operator Precision Debugging (System Debugging)**:
     - **Problem Solving**: Resolved the issue of garbled inference output for Qwen2.5-7B model in P800 (Float16) environment.
     - **Root Cause Analysis**: Through statistical analysis, discovered that Q/K/V tensors, q_seq_start_loc and other tensors before entering the Attention layer had identical mean and variance on both ends, but output tensors showed differences. Successfully narrowed down the fault scope from the entire model to the **Attention** operator internals, assisting the team in fixing the XPU operator's computational logic defects.
  2. **Open Source Ecosystem and Engineering Construction**:
     - **Documentation Engineering**: Responsible for building the official project documentation website (Sphinx+ReadTheDocs). Authored relevant development documentation to lower the entry barrier for developers.
     - **Quality Assurance**: Responsible for release readiness testing, establishing accuracy and performance Benchmark baselines for Qwen series models.
- **Project Achievements**:
  - Name included in official documentation *Acknowledgments*: https://vllm-kunlun.readthedocs.io/en/latest/community/contributors.html

Project 12: University Researcher Profile System   2025.05.25—2025.06.04

- **Module (Full-Stack)**: Front-end systems for client and admin + backend API development
- **Project Background**: Personal portal system for university researchers, integrating academic achievements display, project management and news updates, supporting multilingual internationalization. GitHub open-source project, deployed and applied in actual research team websites.
- **Technology Stack**:
  - Front-end: Vue 2.7 + Element UI + Vue I18n + Vue Router + Vite + Quill editor
  - Backend: Java (Spring Boot) + MyBatis-Plus + MySQL
- **Core Contributions**:
  1. **Developed complete front-end code for client and admin systems**: Implemented multilingual switching system based on Vue I18n: supporting seamless Chinese-English switching
  2. **Backend API development**: Designed and implemented RESTful APIs for News and Project modules for both client and admin
- **Project Achievements**:
  - Successfully deployed on research team's official website: https://www.hegelab.com/
  - GitHub open-source address: https://github.com/Lidang-Jiang/UniversityResearcherProfiles

Project 11: Government-Enterprise Platform V3.1   2025.05.15—2025.05.31

- **Module (Front-end)**: Government Data Intelligent Management Suite
- **Project Background**: Added data status tracking, batch approval and other features to solve cross-department data coordination challenges.
- **Technology Stack**: Front-end, Vue2 + Element-UI + Vuex + Vite
- **Core Implementation**: Batch approval, Data status tracking list

Project 10: Haikou 12345 Intelligent Report System V1.0   2025.05.13—2025.05.31

- **Module (Front-end)**: Intelligent Report Editor and Template Management Center
- **Project Background**: Government hotline report automation system, enabling intelligent generation of structured reports from work order data, solving pain points of low efficiency in manual report preparation and inconsistent formats
- **Technology Stack**: Front-end, Vue2 + Element-UI + Quill + Vuex + Vite

- **Core Contributions**: **Intelligent Template Management System**. **Interactive Report Template Editor**: Developed extensible table component, deepseek instruction dialog component.

Project 9: 928 Hospital - Model Command System V2.0 — 2025.03.31 - 2025.04.09

- **Module (Front-end)**: To-Do Items Module
- **Project Background**: Added to-do items module to establish closed-loop task supervision mechanism. Solved V1.0 issues of scattered task management, cross-department collaboration difficulties, and progress tracking blind spots.
- **Technology Stack**: Front-end, Vue2 + Element-UI + Vuex + Vite
- **Main Contributions**: Implemented dual-view mode for tasks, Developed department tree selection component

Project 8: Risk Monitoring and Early Warning System Common Service Platform V1.0.1 — 2025.03.10 - 2025.03.21

- **Module (Front-end)**: Warning Model Management System CRUD Module
- **Project Background**: Restructured core modules of government-level risk warning platform, establishing warning linkage mechanism. Solved V1.0.0 issues of scattered model management and poor multi-source data adaptability.
- **Technology Stack**: Front-end, Vue2 + Element-UI + Vuex + Vite
- **Main Contributions**: Implemented three-state filtering mechanism, Built model type-entity type linkage component, automatically populating warning names based on tree-structured data

Project 7: Red Detachment of Women Memorial Park Digital Platform V1.2.0 — 2025.02.25 - 2025.03.06

- **Module (Front-end)**: Multi-terminal collaborative development (Official Chinese Website/Youth Version/Admin Panel)
- **Project Background**: Experience upgrade based on V1.0, focusing on restructuring the visiting service process, achieving data intercommunication across three terminals. Solved V1.0 issues of poor compatibility and lengthy reservation process.
- **Technology Stack**: Vue2 + Element-UI + Vuex + Vite
- **Main Contributions**: Designed and implemented a unified reservation service system across three terminals: Secure document download, implemented server-side rendering of Word templates

Project 6: Government-Enterprise Platform V2 — 2025.02.21 - 2025.02.25

- **Module (Front-end)**: Enterprise Data Validation Module
- **Project Background**: Government enterprise data verification platform, providing enterprise information verification services for government, banks and other institutions. By connecting to the National Market Entity API, it enables batch verification of enterprise names and unified credit codes, solving the pain point of inefficient manual verification.
- **Technology Stack**: Front-end, Vue2 + Element-UI + Axios + Vite + ESLint + Prettier
- **Main Contributions**: Implemented batch import functionality for Excel files, Developed real-time validation progress display component

Project 5: Project Platform Management System V2.6 — 2025.01.13 - 2025.02.06

- **Module (Front-end)**: Mobile "Approval Center" module development
- **Project Background**: This project is the company's internal project management platform, covering multiple approval processes and management functions. V2.6 version added the "Business Opportunity Approval" feature to better manage and review the company's business opportunities.
- **Technology Stack**: Mobile, Vue2 + Vue Router + Pinia + Vant + ESLint + Prettier.
- **Main Contributions**: Responsible for developing the mobile "Approval Center" module, supporting viewing and managing various approval tasks, such as business opportunity approval, overtime task approval, contract approval, etc.

Project 4: Digital Campus System V2.0.5 — 2024.12.13 - 2024.12.24

- **Module (Front-end)**: PC-side work assignment settings and WeChat public account delegation verification and push module development
- **Project Background**: The Digital Campus System aims to provide schools with a comprehensive management and service platform to improve the work efficiency of head teachers and parents, ensuring student safety and management convenience. The project covers both PC and WeChat public account platforms, implementing class duty management and student pickup delegation verification functions respectively.
- **Technology Stack**: Front-end, Vue2 + Vue Router + Vuex + Element-UI + uni-app + ESLint + Prettier
- **Main Contributions**: PC-side "Work Assignment Settings" module. WeChat Public Account "Delegation Verification and Push" module: Implemented QR code verification function, Designed and developed delegation verification form

Project 3: Red Detachment of Women Memorial Park Digital Platform V1.0 — 2024.11.11 - 2024.11.30

- **Module (Front-end)**: Multi-terminal front-end module development
- **Project Background**: Development of Red Detachment of Women Memorial Park digital platform, including admin panel, PC client and youth PC client, providing visit services, study tour activity management, transportation guides and other functions to enhance users' online interaction and service experience.
- **Technology Stack**: Vue2 + Vue Router, Element-UI, Vant, ESLint, Prettier.
- **Main Contributions**: **Admin Panel**, Responsible for "Study Tour Registration Management" module development. **Youth PC Client**, Responsible for "Visit Services" section development.

Project 2: Project Operation Management Platform V2.5 — 2024.10.22 - 2024.11.20

- **Module (Front-end)**: PC and mobile vehicle management functionality development

- **Project Background**: Internal enterprise vehicle management system, covering both PC and mobile platforms. Mainly used for vehicle usage management and statistics, including permission management, data filtering and export functions.
- **Technology Stack**: Front-end, Vite + Vue2 + Vue Router + Pinia + Element-UI + Husky + ESLint + Stylelint + Prettier + Vant.
- **Main Contributions**: **PC Platform**, Responsible for "Vehicle Reports" module development. **Mobile Platform**, Responsible for "Workbench", "Approval Center", and "Vehicle Management" module development.

Project 1: Haikou Police Administrative Knowledge Base   2024.07.25 - 2024.09.25

- **Module (Algorithm)**: RAG System Construction and LLM Evaluation
- **Project Background**: Developed an intelligent administrative knowledge base for Haikou Police System, employing Retrieval-Augmented Generation (RAG) technology to enhance the accuracy of large language models in responding to administrative knowledge queries, addressing issues such as low retrieval efficiency and inconsistent answer quality in traditional knowledge bases.
- **Technology Stack**:
  - RAG System: Embedding Models + Vector Database (Milvus) + TeleChat LLM
  - Evaluation Tools: Self-developed Evaluation Framework + Data Processing Scripts + Result Visualization
- **Main Contributions**:
  - **Knowledge Base Construction**: Participated in administrative data cleaning and structured processing
  - **LLM Testing and Optimization**: Conducted large-scale answer quality testing, collected and analyzed model responses to 20000+ real administrative queries

Project 1: Haikou Police Administrative Knowledge Base   2024.07.25 - 2024.09.25