Jared He

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A Brief Statement of Purpose:

I am looking for job/intern opportunities at any time in 2025.
I firmly believe that AI technology is the key to truly leading humanity towards happiness and freedom. This principle guides the establishment of my research direction.
I am currently passionate about applying AI in diverse fields and truly excited to see the meaningful outcomes it can create.

Education Background

University of Sydney **08/2024 - TBD**
Master of Computer Science (Advanced)
Awards: **Summer Research Internship** (**Working with Asso. Prof Wei Bao** and **Dr Ruoyu Wu** , 2025 summer, Online Bipartite Matching Problem)
Highlights: *Design, developing and deploying a meeting chat app during 10 weeks as backend leader.*

Nanjing University of Information Science and Technology, China **09/2022-06/2024**
Bachelor of Engineering in Computer Science and Technology (Second Bachelor's Degree)
Accumulate Grade: 89.26/100
Awards: First-Class Scholarship (Twice), Honor Graduate, Merit Student
Highlights: *Algorithm Design and Analysis(99), Computer Organization and Architecture(99), Computer Interface Technology(98), Data Structure(96), Introduction to Neural Network(95), Discrete Mathematics(93), Database System Principles(93), Computer Network(90), Operating System(87)*

Chongqing University, China **09/2017-06/2021**
Bachelor of Engineering in Building Environment and Energy Application Engineering
Awards: Best National Research Program in CQU
Highlights: *Data Science(86)*
Structure modal identification based on computer vision technology (First Author,EI index)
Published in Vibroengineering PROCEDIA Volume 37, 2021, p. 72-77

Research Experiences & Projects:

GroupGo – An online meeting system **10/2024-12/2024**
During a 10-week development cycle, I served as **the backend lead** for a campus-network social and meeting chat application built with the **Spring Boot framework**. I was responsible for leading the end-to-end backend architecture, including designing and implementing the database schema to support scalable, real-time interactions, and developing robust RESTful APIs to handle user authentication, messaging, and friend-matching features. I also oversaw backend code quality and integration with the frontend team, ensuring smooth data exchange and performance optimization. Finally, I deployed and configured the backend services on **AWS**, leveraging cloud infrastructure to achieve reliable uptime, secure data storage, and seamless accessibility for users across the campus network.

GEMINI-Based Contract Summarization and Filtering System **07/2024-09/2024**

I developed a contract filtering system utilizing GEMINI, focused on streamlining the process of contract analysis and summarization. The system implements a data pipeline that processes scraped contract data, passes it through the **GEMINI API** to filter relevant content, and generates summaries with key information. The extracted details are then organized into structured tables for easy review and filtering.

Llama3-based News Recommendation and RAG System **07/2024-08/2024**

I developed a news recommendation and RAG system leveraging NLP techniques and the Llama model. The system operates by first scraping news articles from the web, then using **NLP-based embeddings** to extract key features and generate summaries. Users can either receive personalized news recommendations based on these embeddings or interact with the system through queries. The RAG system integrates real-time news data and NLP techniques to provide contextually relevant responses and recommendations.

Public EC based OpenVPN(systemctl & iptable & ufw & docker) **06/2024-07/2024**

Implemented an OpenVPN server on a public Elastic Compute (EC) instance to establish a secure tunnel, connecting a private physical server at home (without public internet access) and my laptop. Configured DHCP and gateway settings to allow home devices to use the server as **a soft routing proxy** for internet access. Additionally, my laptop in Sydney can securely access my server located in Chongqing via the VPN tunnel. I also configured SSH with specific routes in the SSH config file to ensure traffic passes through the public server before reaching my internal network.

Food Delivery System(Nginx & Springboot & Redis & Mysql & docker) **09/2023-06/2024**

This is the undergraduate project for my second bachelor degree. It's being deployed on the cloud. The system supports a concurrency level **(QPS) of around 500**, meeting the business requirements under high concurrency scenarios. I utilize Java multi-threads and MySQL pessimistic lock to effectively manage concurrent operations.

MIT 6.S081 (Operating System Course Lab) **02/2023-06/2023**

I'm familiar with system calls:(such as fork, sleep, close, pipe, find,xrags,etc.). I achieve the process of creating, synchronous execution and communication pipeline establishment. I learn the concurrent programming by synchronization and state management.

SKILLS:

- Programming Languages: C、C++、Python、Java、Rust
- Tool and Platform: Docker、Ollama、Git、Linux
- IELTS Scores: 6.5(Listening: 7 Reading: 6.5 Speaking: 6 Writing: 6)
- I have practical experience and theoretical knowledge in building and prompting LLM by API.
- I have practical experience and theoretical knowledge in building and tuning neural networks using the Python language and the PyTorch framework.
- I have been closely following the academic and industrial advancements in the fields of cyber security and software engineering.

Awards & Honors:

05/2020-05/2021 Best National Research Program in CQU
09/2022-08/2023 First Class Scholarship of NUIST、Merit Student
09/2023-06/2024 First Class Scholarship of NUIST、Merit Student, Honor