

Haoji Bian

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EDUCATION

Northwestern University

Evanston, IL

- Master of Science in Electrical and Computer Engineering

Sep 2024 – May 2025(Estimate)

University of Wisconsin-Madison

Madison, WI

- Bachelor of Science in Computer Science & Data Science
- GPA: 3.96 / 4.00 (top 2%), Dean's List for 5 Semesters, Summa Cum Laude

Jan 2021 - Dec 2023

SKILLS

- Programming Languages:** C/C++, Java, SQL, R, Python, TypeScript, JavaScript, CSS, HTML, C#, PHP
- Software Development:** Spring Boot, Fast API, Flask, Express.js, React, Vue, Node.js, Nginx, REST, Kafka, RabbitMQ, OAuth2, MySQL, NoSQL, MongoDB, Pandas, Spark, MapReduce, Redis, PostgreSQL, K8s
- Platform:** Windows, UNIX, Linux, SVN, Git, Docker, Agile, Scrum, Kanban, CI/CD, Jira, GCP, AWS, Azure

PROFESSIONAL EXPERIENCES

One Community Global

San Gabriel, CA

Full Stack Software Developer

Aug 2023 – Present

- Slice and streamline tens of thousands of pieces of user records up to 1GB of data using **Kafka** with no loss
- Implement a hierarchical permission system for a 200-person group and handle user authentication with **RESTful API** using **Express.js & MongoDB**, allowing for role-based access control with fine-grained permissions
- Use **RSA** and **base64** encryption algorithms for important files to secure the transmission of critical information
- Sort users and entities by geographic order using **PostgreSQL**, and map them on **Google Map API**
- Improve user experience and smooth interaction by introducing **debouncing** and **throttle** in **React**, reducing unnecessary repetitive API requests and user missteps by 80%

Katfun LLC

Chicago, IL

Full Stack Software Engineer | Project Manager | Co-founder

March 2023 – Present

- Co-fund and develop "**Katfun.com**", a platform dedicated to enhancing the experience for the pet community
- Utilize **MERN** and **REST**, deploy with **Nginx** on **AWS** - a responsive, stable web that ran for 1 year with no crash
- Using **Redis** to distribute cache along with **MongoDB** cloud database to guarantee the stability and consistency of user data, reduce the bottleneck of direct disk access, and improve data throughput by up to 5 times
- Use **Cloudflare CDN** proxy with **AWS S3** to solve the problem of insufficient network bandwidth when thousands of users access massive media resources at the same time. Boost user resource loading time by 70%
- Constructing a recommendation system through **OpenAI embedding** model and **vector searching** in **MongoDB**
- Manage the entire project lifecycle, from conceptualization to deployment, to ensure timely delivery and quality assurance, updating 10+ production versions in Agile practice using **Git**, **Scrum** and **Jira** as a Project Manager

Epic (Capstone)

Madison, WI

Data Engineer & Backend Developer

Jan 2023 - May 2023

- Fine-tuned and trained an **OpenAI** model on **Azure API**, enable agents to use a more professional tone of voice
- Created a **vector searching** database with medical-related data, managed cases and doctor notes with an **Embedding** model, and AI explanations to improve users' efficiency in finding and understanding cases
- Streamed AI responses using **Flask** on **Python** and the **Server-Sent Event (SSE)** protocol, providing users with a natural and smooth AI communication experience and enhanced user satisfaction

Hikvision Co., Ltd

Zhejiang, China

Embedded Software Development Intern

Sep 2020 - Jan 2021

- Designed a video encoding feature for a Dashboard Camera using **C** on a **Linux system**, enabling the uploading of over 50GB of videos per day to servers via **REST** protocol, improving server efficiency by 30%
- Created Python test scripts for automatic debug log generation, accelerated issue identification by 25%, enhanced debugging efficiency by 30%, and reported 7 potential logical bugs in software source code
- Implemented a driver in C utilized **Linux kernel** module programming and **TCP/IP** network, facilitating direct Wi-Fi connectivity between users' mobile phones and cameras, enabling users to view and stream live video

PROJECT EXPERIENCES

Web Development for Cattery | Java, Vue, Spring Boot, SQL, Restful API, Redis, OAuth2, S3

Minneapolis, MN

Full Stack Web Developer

April 2023 - Nov 2023

- Adapt **Spring Security** with Google, Apple **OAuth2** third-party auth, incorporating **Stripe** API and encryption protocols, strengthen applications against threats during payment transactions, with zero vulnerability
- With **Vue.js**, and strategic application of **search engine optimization** best practices and optimized user interface layouts, the platform improved search engine rankings in key product categories by 40%