Haoji Bian

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EDUCATION

Northwestern University   Evanston, IL
- Master of Science in Electrical and Computer Engineering, GPA: 4.0/4.0   Start at Sep 2024 (Estimate)

University of Wisconsin-Madison   Madison, WI
- Bachelor of Science in Computer Science & Data Science   Jan 2021 - Dec 2023
- GPA: 3.96 / 4.00 (top 2%), Dean's List for 5 Semesters

SKILLS

- **Programming Languages:** C/C++, Java, SQL, R, Python, TypeScript, JavaScript, CSS, HTML, C#, PHP
- **Software Development:** Vue, Flask, Express.js, React, Node.js, Spring Boot, Nginx, REST, GCP, AWS, Kafka, RabbitMQ, Oauth2, MySQL, NoSQL, MongoDB, Pandas, Spark, MapReduce, Redis, AWS S3, PostgreSQL, K8s
- **Operating Systems & Teamwork:** Windows, UNIX, Linux, SVN, Git, Docker, Agile, Scrum, Kanban, CI/CD, Jira,

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 according to their location
- Improve user experience and smooth interaction by introducing **debouncing** and **throttle** in **React**, reducing unnecessary repetitive API requests and user missteps by 80%

Katfun.com   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 10 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%
- 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

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 **Oauth2** third-party auth (Google, Apple) 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%

Airlines Analysis with Distributed Computing System | *Python, Spark, Hadoop, Docker, Flask*   Madison, WI
Data Analyst & Backend Developer   Jan 2022 - May 2022
- Implemented and deployed a distributed system on **AWS** with **Hadoop**, enabling parallel processing of large datasets across multiple machines using **MapReduce and Spark**, reducing starvation and processing time
- Deployed systems and managed network traffic on 3 **AWS** machines with containerization tools **Docker** and **K8s**
- Built a backend using **Flask**, communicating the results of data analysis with the front end through **AWS SQS**