

Hongrui Liu

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SKILLS

Java, Python, Django, React.js, JavaScript, C++, Spring Boot, Spring Security, JWT, RabbitMQ, Kafka, Hibernate, MySQL, MongoDB, PostgreSQL, Flutter, Redis, Next.js, Angular, Tailwind CSS, Docker, Nginx, GCP, Firebase, AWS, RESTful API, JUnit, React Native, Kotlin, Swift, JIRA, Confluence

PROFESSIONAL EXPERIENCE

Mobile Software Engineer Intern, PadMatch, Boston, Massachusetts

July 2023 - Present

- **Led the end-to-end design and launch** of a tenant-focused mobile application using the **Flutter framework**, enhancing the login process and interface in collaboration with UI/UX designers, which resulted in a **20% increase in user engagement** through improved security measures and a more intuitive user experience.
- **Developed and integrated a suite of backend APIs** using **Django**, facilitating critical functionalities such as **tenant login and maintenance request submission**. Utilized **AWS RDS PostgreSQL** for robust database management, ensuring data integrity and consistency. This backend was seamlessly connected to a **Flutter-based frontend**, enhancing the **full-stack architecture**, and contributing to a **30% uptick in process efficiency and user transaction speed**.
- **Implemented a cloud-based monitoring system** utilizing **Firebase Cloud Messaging and Google Cloud Functions**, automating real-time database surveillance and instant notification dispatch to tenant applications upon new message arrival, which **optimized system responsiveness and improved communication efficiency by 30%**.
- **Participated** in team meetings and **agile development processes**, regularly **reviewing code**, and providing constructive feedback to other team members. Utilized **Jira** for task tracking and **Confluence** for documentation, facilitating effective team collaboration and project management.
- **Drove the strategic release** of the application across **Google Store and Apple App Store**, achieving a **30% rise in stakeholder engagement** and surpassing user acquisition targets by **25% within the first quarter**, bolstering market presence and user base growth.

Software Engineering Intern, Chongqing Kungang Technology Co., Ltd., China

May 2021 - July 2021

- **Leveraged Spring Security, Spring Cloud API Gateway, and JWT** to establish a robust **authentication and authorization** framework, enhancing system security for employees and administrators. Post-implementation achieved a **50% faster anomaly response** and maintained **zero security breaches**.
- **Led the creation of an employee safety education module and risk tracking system** using **Spring Boot**, reducing safety hazards by **70%** and reinforcing the company's commitment to **safety and risk management**.
- **Engineered** an asynchronous confirmation system with **RabbitMQ** for video clock-in, **automating acknowledgments and improving email response times by 90%**, while handling over 100 videos daily, which boosted **user satisfaction**.
- **Participated** in all phases of the software development lifecycle, contributing to a project that received a **95% satisfaction rating** from stakeholders after deployment, indicating high approval of the developed solutions.

Software Engineering Intern, Beijing Qianfeng Internet Technology Co., Ltd, China

May 2020 - July 2020

- **Implemented React.js and Tailwind CSS** to develop a **responsive UI** for the **medical appointment** web project's front-end, achieving a **40% improvement in page load times** and a **25% increase in user engagement**, earning stakeholder acclaim for markedly enhancing the **user experience** across multiple devices.
- **Integrated Redis** to cache doctor appointment schedules, reducing average **data retrieval times by 70%** under **high concurrency**, ensuring swift and reliable access to scheduling information, and improving the **user experience during peak traffic**.
- **Optimized** web performance by deploying **Nginx** for **load balancing**, leading to a **35% reduction in server response times** and a **50% increase in traffic handling capacity** during peak periods, demonstrating enhanced **backend optimization and system scalability**.
- **Enhanced** database operation efficiency by integrating **Hibernate** with the **Spring Boot** framework for data persistence, achieving a **20% improvement in query performance**, thereby solidifying my expertise in **Java and backend development**.

EDUCATION

Northeastern University, Portland, ME

Sep 2022 - Dec 2024

- Master of Science, Computer Science
- Relevant Coursework: Algorithms, Programming Design Paradigm, Mobile Application Development

Chongqing University of Technology, Chongqing, China

Sep 2018 - Jun 2022

- Bachelor of Science, Computer Science
- Relevant Coursework: Data Structures, Database Design, Computer Networks, Operating Systems, Compilers, Computer Architecture