VU HOANG LONG

Senior Software Engineer
Email: longhv.dev@gmail.com   **Location**: Ho Chi Minh City

Professional Summary

Full-Stack Developer (2019–present) specializing in **high-load microservices** and modern frontend development. Proven ability to **design scalable architectures, optimize performance, and deliver engaging UIs**. Passionate about **building systems that handle millions of users reliably**.

Skills

- **Back-End Development**: **TypeScript/JavaScript**, **NestJS**, Express.js, HTTP API, WebSocket, SSE, **MongoDB**, **PostgreSQL**, MSSQL, **Redis**, **Kafka**, **RabbitMQ**, BullMQ.
- **Front-End Development**: **React**, react-native, **MobX**, **zustand**, Ant Design, MUI, TailwindCSS, HTTP API, WebSocket, SSE, react-router, react-query, react-hook-form, react-spring, usehooks.
- **Others**: Cloudflare, **Git**, GitLab CI, **Docker**, **docker-compose**, Nginx, Linux.

Professional Experience

Software Engineer @ Confidential Company (01/2019–05/2025)

<u>Project Objective</u>: Apply **microservices** to build a **scalable and high-performance online gaming platform**, integrating third-party games, supporting online payments, and providing **stable operations for a large user base**.

<u>Back-End Development</u> (primary focus)

Technologies Used: TypeScript, NestJS, PostgreSQL, Redis, Kafka, RabbitMQ, Docker.

My Role:

- Collaborated with stakeholders to define business requirements and translate them into **robust backend API designs** and **database schemas**.
- Designed and implemented a **DDD high-load microservices** backend architecture to **handle large volumes of concurrent users**.
- Created multi-stage Docker images for various services to support CI/CD workflows.
- Monitored backend performance; optimized query speed through PostgreSQL indexing and implemented batch inserts to improve write throughput.
- Applied backend performance enhancements; implemented rate limiting and Cloudflare protections to mitigate bot traffic and prevent DDoS attacks.
- Participated in incident response and bug fixing during live operations.

Front-End Development

Technologies Used: Typescript, ReactJS (with Vite), React Router, React Hook Form, HTTP API, WebSocket, SSE, zustand, TailwindCSS, react-spring, usehooks.

My Role:
- Integrated UI components with **backend APIs**, ensuring seamless data flow and full application functionality.
- Implemented real-time features using **WebSocket and Server-Sent Events (SSE)**, significantly enhancing user engagement and responsiveness.
- Developed a highly **responsive** and navigable user interface using ReactJS and react-router, styled with TailwindCSS for consistent and adaptable layouts across various screen sizes.
- Streamlined form handling and improved data validation through the implementation of react-hook-form, leading to a more efficient and error-free user input process.
- **Managed application state** effectively using zustand, contributing to improved performance and simplified component logic.
- Enhanced user experience through the integration of smooth and engaging animations using react-spring.

Key Outcomes & Achievements:
- Successfully built and operated a scalable online gaming platform with **80,000 active users** and a peak **CCU of 1,500**, capable of handling up to **6,000 requests per second**.
- Achieved **95% of requests responding under 200ms** through backend performance optimizations such as PostgreSQL indexing, batch inserts, and application-level as well as Cloudflare rate limiting to mitigate bot traffic and DDoS attacks.
- Delivered a **secure, responsive, and user-friendly UI/UX** with **real-time updates** powered by **WebSocket and SSE**, ensuring seamless integration with backend systems.
- Enhanced user engagement and responsiveness through smooth animations, efficient form handling, and optimized application state management.
- Provided a fully integrated and interactive cross-device experience, combining high-performance backend architecture with a modern, intuitive front-end.

Education

Bachelor of Software Engineering @ Thai Nguyen University (2018–2021)

Languages

Vietnamese: Native
English: Professional