

Thai Thanh Nam

Backend Developer

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SUMMARY

Backend Developer (Node.js) with 2+ years of experience in designing and maintaining scalable server-side systems. Skilled in building real-time applications with **WebSocket**, implementing **RESTful APIs**, and optimizing database performance across **SQL Server, MySQL, Redis**, and **MongoDB**. Experienced in handling concurrency, binary data, and ensuring system reliability in production. Developed internal monitoring tools (integrated with **Telegram** and **Slack**) to detect errors, generate reports, and improve incident response time. Focused on delivering efficient, maintainable code and high-performance backend solutions.

EDUCATION

Ho Chi Minh City University of Technology and Education (HCMUTE) 2019 - 2024

Bachelor of Engineering in Computer Science (Information Technology)

GPA: 8.61 / 10

SKILL

Back-end	Node.js, Express.js, Websocket, REST API, JWT
Database	SQL Server, MySQL, MongoDB, Redis
Programming Languages	Java, Javascript, Typescript, Lua
Others	SVN, Postman, Linux, Github Copilot

EXPERIENCE

ONKY 07/2023 - Present

Game Server Developer

(Node.js, WebSocket, Express.js, SQL Server, MySQL, Redis)

- **Developed 20+ real-time multiplayer game servers** using **Node.js** and **WebSocket**, extending the company's core framework to implement custom game logic and support thousands of concurrent users.
- **Designed and implemented RESTful APIs** with **Express.js**, integrated with **SQL Server** and **Redis** for lobby systems and internal tools, enabling efficient session management, player data synchronization, and seamless backend integration.
- **Built a production monitoring tool (SOS Tool)** using **Node.js**, **Express.js**, and **WebSocket**, designed on a **master-worker architecture** with **Redis** for message queueing. Integrated with **Telegram API** and **Slack API** to push real-time error/overload alerts, automate log cleanup, and generate incident reports → reduced average incident response time by 40% and improved overall system reliability.
- **Engineered leaderboard event backend logic** with **SQL Server** and **Redis**, handling ranking, scoring, and result calculation for time-limited events → improved system reliability and fairness.
- **Optimized concurrency flows** by redesigning request handling logic, reducing redundant **SQL queries**, and resolving race conditions → increased throughput and system stability under high load.
- **Implemented dynamic balancing mechanisms** via rule-based algorithms in **Node.js**, enabling controlled win/loss ratio adjustments while ensuring fairness and unpredictability.
- **Developed an internal process manager (KPM)** similar to **PM2**, to manage running game server instances (start, stop, restart, monitor). Implemented in **Node.js**, with built-in log management and health monitoring → simplified server operations, reduced complexity during new game deployments, and enabled flexible control to start/stop game servers.

Game Server Developer Internship*(Node.js, WebSocket, SQL Server, Redis)*

- **Developed a 1v1 Caro (tic-tac-toe) game server** from scratch using **pure Node.js** and **WebSocket**, without relying on frameworks, to demonstrate backend architecture design, request flow handling, and code clarity.
- **Analyzed and documented an existing production game server codebase**, explaining system flow, dependencies, and module interactions to senior developers → showcased strong code comprehension and system analysis skills.
- **Implemented a new multiplayer game server** (undisclosed title) based on company requirements and custom game rules, collaborating with the client-side team to align communication protocols and logic.
- Successfully completed all internship assignments, demonstrating solid fundamentals in **backend architecture, real-time communication, database handling, and production-level code practices**.

FREELANCER**03/2023 - 07/2024****Web Developer***(ReactJS, Express.js, Node.js, MongoDB, JWT)*

- **Designed and developed a full-stack web application** with **ReactJS** (frontend), **Express.js/Node.js** (backend), and **MongoDB** (database) to support online quizzes, course materials, and progress tracking.
- **Implemented authentication and authorization** using **JWT**, ensuring secure access for both students and administrators.
- **Built core features** including quiz-taking, scoring, progress tracking, and user management.
- **Developed a separate admin dashboard** (non-public) for managing users, lessons, and courses with role-based access control.
- Delivered a stable, responsive platform tailored to client needs, enabling efficient online learning and testing operations.

FosTECH**08/2022 - 04/2023****Web Developer***(ReactJS, JavaScript, Webpack, REST API)***Project: Proshop**

- **Developed multiple UI components and product management screens** using **ReactJS**, improving usability for retail store staff.
- **Optimized Webpack configuration** for development and production builds → reduced initial load time and improved build performance.

Project: WLIN CRM

- **Built front-end interface** with **ReactJS** to support customer relationship management operations.
- **Implemented backend API integration** in **JavaScript** for dynamic report generation based on user filters and date ranges → enabled instant reporting and reduced manual workload.

FOSTECH**06/2022 - 08/2022****Web Developer Intern***(ReactJS, JavaScript, Megapay API)*

- **Integrated Megapay third-party payment solution** into an existing **ReactJS** web application.
- **Implemented authentication and transaction flows** based on API specifications to ensure secure payment processing.
- Successfully completed the integration, enabling users to perform payments safely and seamlessly within the platform.