LE HUY

Backend-focused Software Engineer | Full-stack TypeScript

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GitHub | Portfolio

PROFESSIONAL SUMMARY

Software engineering student specializing in backend architecture, transactional state machines, and relational data integrity with TypeScript, Node.js, and SQL databases. Experienced in designing concurrency-safe APIs, queue-backed background workers, cryptographic verification gates, and strictly typed contracts.

EXPERIENCE

Software Engineering Intern | Trung My Tay Ward People's Committee Jun – Aug 2026

- Addressed manual data entry errors and formatting divergence across administrative filings by engineering a schema-driven document pipeline (Form Management) for 213 registered legal templates.
- Guaranteed template-to-artifact fidelity and prevented silent corruption through automated locked-contract audits, achieving 100% placeholder parity across the entire 213-form corpus.
- Industrial Internship coursework evaluated and graded 10/10 (A+) by HUFLIT.

Freelance Full-stack Developer | PeaceNest Jul – Aug 2026 (concurrent)

- Eliminated double-booking risks and checkout pricing discrepancies by owning the end-to-end reservation API: availability discovery, server-authoritative quote snapshots, and time-bounded holds in PostgreSQL.
- Shielded frontend features from API breaking changes during mid-project scope shifts by extracting a standalone @room/booking domain package with shared TypeScript and Zod contracts.

KEY PROJECTS

PeaceNest | Boutique Hotel Reservation Engine | github.com/lhcaps/Hotel

- Engineered a quote → hold → booking state machine using Drizzle ORM migrations, enforcing rate-plan pricing, seasonal rules, and coupon reconciliation before finalizing reservations.
- Prevented stranded room inventory from abandoned checkouts by scheduling BullMQ background workers with Redis key TTLs to atomically release expired holds.
- Guarded administrative endpoints with role-scoped RBAC and built an HMAC-based OTP guest pass system for secure unauthenticated reservation tracking.

Parkly | Smart Parking & Gate Operations | github.com/lhcaps/parkly

- Resolved concurrent gate barrier race conditions across ALPR cameras, loop sensors, and RFID readers by implementing a token-based Redis ownership lock (SET PX NX with Lua release script).
- Hardened edge media ingestion via HMAC device signatures (x-device-signature), strict MIME validation, tenant site-scoping, and time-bounded presigned view URLs (1–604,800s TTL).
- Guaranteed reliable delivery of gate events to external microservices by implementing a transactional outbox pattern drained by BullMQ workers with idempotency deduplication.

Form Management | Legal Document Automation Platform | github.com/lhcaps/Form-Management

- Built a dual compilation pipeline where declarative Zod schemas power interactive client forms while a server-side Handlebars engine compiles pixel-perfect OpenXML DOCX legal filings.
- Engineered an automated multi-tier contract verification gate that evaluates 213 locked document contracts, passing 1,278 automated checks with zero blocking defects.

TECHNICAL SKILLS

TypeScript, JavaScript, Node.js, NestJS, Express, REST APIs, PostgreSQL, MySQL/MariaDB, Prisma, Drizzle ORM, Redis, BullMQ, Docker, Linux, GitHub Actions, Playwright, Vitest, Zod

EDUCATION & CERTIFICATIONS

HUFLIT | B.Sc. Information Technology (Software Engineering) | GPA 2.99/4.00 Expected 2027

- IELTS Academic 6.5 (Historical achievement, examined 2023)