

Hoang Duc Manh

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Summary

Backend-focused Computer Science student with hands-on experience building production-style systems in Java and Spring Boot. Applied Hexagonal Architecture with Domain-Driven Design (DDD), JWT-based authentication, event-driven cache invalidation, and integration testing with Testcontainers. Also contributed to a real-world banking integration project as a backend developer at EnsoAI using C# and ASP.NET Core. Interested in secure backend systems, API design, and scalable service development.

Skills

Programming: Java, C#, SQL

Backend Development: Spring Boot, Spring MVC, Spring Security, Spring Data JPA, Hibernate, ASP.NET Core, RESTful API Design, Hexagonal Architecture (Ports & Adapters), Domain-Driven Design (DDD)

Databases & Cache: PostgreSQL, MySQL, Redis, Relational Database Design, ER Modeling

Testing & Quality: JUnit 5, Mockito, Integration Testing (Testcontainers), API Validation, Exception Mapping

Tools and Technologies: Git, Maven, Docker, Postman, Swagger/OpenAPI, IntelliJ IDEA

Core Concepts: OOP, SOLID Principles, Authentication/Authorization, AOP, Logging (SLF4J / Logback / MDC)

Experience

EnsoAI	Mar 2026 – Present
<i>Backend Developer</i>	<i>Hanoi, Vietnam</i>

- Developed backend modules for a document-management integration system connecting the CIC (Credit Information Center) with LPBank.
- Built RESTful APIs using ASP.NET Core and C#, focusing on business logic and system integration flows rather than UI concerns.
- Collaborated on technical documentation and system design, mapping data flows between external CIC services and internal database layers.
- Applied object-oriented design principles and separation of concerns to keep modules maintainable across a multi-developer team.

Projects

Smart Task Management API	Dec 2025 – Mar 2026
<i>Technologies: Java, Spring Boot, Spring Security (JWT), PostgreSQL, Redis, Maven, Docker, Swagger/OpenAPI, Testcontainers</i>	

- Architected the system using **Hexagonal Architecture (Ports & Adapters) with Domain-Driven Design (DDD)**, isolating domain logic from infrastructure through port interfaces and adapter implementations.
- Implemented lightweight **CQRS** at the application layer, separating read and write paths for task operations to improve maintainability.
- Built **event-driven Redis cache invalidation** using Domain Events and `@TransactionalEventListener(AFTER)`, ensuring cache consistency only after successful database commits.
- Developed full authentication flows: register, login, refresh token rotation with token family tracking, logout, and email verification via Redis OTP.
- Built task use cases: create, update, delete, change status, assign/unassign, get by ID, and filtered listing with pagination using JPA Specification.

- Implemented role-based access control and JWT authentication filter with BCrypt password hashing and secure token handling.
- Wrote unit and integration tests with JUnit 5, Mockito, and Testcontainers (PostgreSQL/Redis) for core business flows and repository adapters.
- Standardized API error responses with a global exception handler and documented endpoints via Swagger/OpenAPI.
- *Repository:* github.com/DevFreshman/Smart-Task-Management

VNStock Analyzer

Apr 2026 – Present

Technologies: Java, Spring Boot, Spring Data JPA, PostgreSQL, Native Query, Maven

- Built 5 analytics features on real Vietnamese stock data (HSG, FPT, VIC, VCB, VNM): Market Snapshot, Top Gainers/Losers, Volume Spike Detection, Price Trend with Moving Average, and Industry Performance.
- Applied advanced SQL window functions (`LAG()`, `PARTITION BY`, `ROWS BETWEEN`) and CTEs for complex time-series and ranking queries.
- Used interface-based native query projections and JPA Specification pattern for dynamic filtering across analytics endpoints.
- Designed `VolumeSignal` enum (`SPIKE` / `NORMAL` / `DROUGHT`) as a domain-level classification for volume anomaly detection.
- *Repository:* github.com/DevFreshman/VNStockAnalyzer

Seeds & Trees E-Commerce Platform

Jan 2025 – May 2025

Technologies: Java 21, Spring Boot, Spring Security (JWT), Spring Data JPA, MySQL, ReactJS, Axios, Maven, Swagger/OpenAPI

- Architected and developed a full-stack e-commerce platform for plant seedlings as sole backend developer and team lead.
- Designed and implemented 30+ RESTful API endpoints for authentication, product catalog, shopping cart, order processing, and transaction history.
- Implemented JWT-based authentication with BCrypt password encryption and Google OAuth login.
- Designed normalized relational database schema with ORM mappings using Spring Data JPA and Hibernate.
- Integrated JavaMailSender to send automated HTML order confirmation emails after successful purchases.
- *Repository:* github.com/DevFreshman/e-commerce-web

Education

Troy University (at Bach Khoa Hanoi)

2022 – 2026

Bachelor of Science in Computer Science

Hanoi, Vietnam

- Relevant Coursework: Object-Oriented Programming, Data Structures and Algorithms, Database Systems, Software Engineering, Operating Systems, Security, Artificial Intelligence

Certifications

- IELTS — British Council (2023), Overall Band 6.0

Additional

English: Upper-Intermediate (IELTS 6.0)

Career Goal: Backend engineer focusing on secure and scalable systems, with long-term direction in system design and distributed services

Availability: Coursework completed May 2026, degree expected November 2026; available for full-time immediately