

# Khoa Ngo Vu Anh

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## PROFESSIONAL SUMMARY

A computer science graduate with strong experience in developing enterprise applications using Java-related technology stack. Skilled in backend development across multiple frameworks including Angular, React, and Jakarta EE, with solid understanding of relational databases and microservices. Experienced in Agile and Scrum environments, capable of designing and implementing robust backend services, gRPC integrations, and scalable frontend interfaces. Recognized for strong self-learning ability and research-oriented thinking—continuously exploring new frameworks, architectural patterns, and optimization techniques to deliver reliable software.

## AWARDS AND CERTIFICATIONS

**Toeic Listening & Reading: 890/990** | IIG Vietnam

May 2025

## TECHNICAL SKILLS

**Languages :** Java, SQL (Postgres: PLSQL, SQL Server, MySQL), JavaScript, TypeScript, HTML, XML, JSON, CSS, SCSS, Python, Protobuf

**Frameworks Jakarta EE:** Jakarta Persistence API, Jakarta Web Service, Jakarta Bean Validation, Jakarta Transactional API, Quarkus, Spring Boot, Spring Framework, Spring Batch, Project Lombok, Mapstruct, SmallRye Mutiny, JUnit, Rest Assured, Java Stream API, Mockito, Apache Log4j, Slf4j, Hibernate, Caffeine cache, Redis, Bootstrap, React, Next.js, Angular, Ant Design, Material UI, Tailwind CSS, Webpack, Vite, Redux Toolkit, RxJS, Node.js, Express.js, ESLint, Sequelize, Socket.io, Winston Logging, RabbitMQ, FastAPI, Jest

**DevOps and API Tools :** Wildfly, JBoss, Git, Docker, Open API (Swagger), Postman, GraalVM, Podman, Maven, Gradle, Apache Tomcat

**Cloud and Security Tools :** Linux (Ubuntu, CentOS Stream 10), BurpSuite, Azure

**Others :** Agile (Scrum/Kanban), Agile Release Train, SOLID, Design Patterns, Microservices, Domain-Driven Design, Hexagonal Architecture, Clean Architecture, Dependency Injection, Two-Phase Locking, WebSocket, Exception handling, Repository pattern, Data Transfer Object pattern, n + 1 query problem, Data Access Object pattern, Functional programming paradigm (Lodash, Vavr, etc), gRPC, Email service (Quarkus mailer, Node mailer), Jira, named queries, native queries, criteria queries, aggregate queries, entity graph, JSON Web Token, Unit Testing, Server Side Rendering, REST API, Professional English (speaking, writing, reading, listening), Command-Query Responsibility Segregation pattern, Confluence.

## EXPERIENCE

**Full-stack software engineer** | BKCoreTech

Feb 2025 – Sep 2025

- Developed and maintained full-stack web applications using React, Node.js, and Express, focusing on modular design and fast delivery.
- Created interfaces with React and Ant Design, improving user experience.
- Integrated APIs and state-management logic with Redux and TypeScript, ensuring predictable data flow.
- Directly interacted with database functions to retrieve complex data.

**Java developer** | Axon Active

Jul 2024 – Nov 2024

- Developed contract-management applications for an enterprise insurance system using Java, Quarkus, and Hexagonal Architecture.
- Implemented gRPC communication and RabbitMQ-based non-blocking messaging across distributed services, which reflects the business workflow.
- Collaborated within an Agile Release Train, achieving 80% unit-test coverage through JUnit and Mockito, thereby contributing to quality assurance.
- Queried MySQL with transactional boundary and optimized ORM mappings to ensure the sensitive data consistency
- Participated minimally in Angular frontend development for customer portal

## EDUCATION

Ho Chi Minh City University of Technology

**Bachelor in Computer Science**

— GPA : 7.54/10

Sep 2020 - May 2025

## PROJECTS

**HCMUT HRM** | Node.js, TypeScript, PostgreSQL, Sequelize, Docker, Redis, Socket.io, Vite, React, Ant Design Feb 2025 - Sep 2025

- Full-stack monolithic HR management system for HCMUT Department of Human Resource covering staff lifecycle, leave/travel workflows, training, retirement, system administration including permission control using Node.js 20, TypeScript 5.8 and React 18.3
- Did the business analysis with the HCMUT Department of Human and University Administrators
- Designed and implemented a modular Express backend that dynamically loads feature modules, centralizing middleware, hooks, and utilities for consistency and reuse.

- Built role-based access control using session-based authentication with Redis sessions and permission checks for routing and API authorization with real-time notification.
- Developed REST APIs for core human-resource business features including staff management, leave workflows, business trips, maternity leave, resignation, training verification, and retirement policies with robust validation and error handling.
- Perform batch updates for category data on a regular basis.
- Designed database ERD, written ORM tables and PLSQL database functions for complex queries.
- Took use of Redux Toolkit to manage front-end states and used Ant Design library and adopted Ant Design library to decorate the UI
- Bundled the website with Vite and deploy the application via Docker and Nginx on development environment.
- Wrote unit tests with Jest for backend modules with 70% coverage
- Configured ESLint and TypeScript to lint the project at the build time
- Made use of RabbitMQ to implement work queue for heavy tasks and exchange messages with HCMUT Finance application and HCMUT Learning Management System
- Restrict access to the sensitive data with two-phase locking mechanism and Jakarta Transactional API

**Gluon** | Java, Quarkus, Gradle, Hibernate, Caffeine, Hexagonal Architecture, SmallRye Mutiny July 2024 - Nov 2024

- A microservice-oriented insurance application for a Swiss insurance enterprise named Mobiliar covering insurance policy management and contract management using OpenJDK 21 and Quarkus 3.15.2
- Implemented the hexagonal architecture of the backend application including model, application, adapter, and bootstrap layers
- Implemented caching layer to minimize the workload of the database server.
- Developed REST API with Jakarta EE built-in Web services in Quarkus for contract terms including pricing, coverage terms and endorsements
- Defined protobuf file for gRPC message and interacted among related services
- Wrote unit tests using Mockio and JUnit 5 with 80% coverage
- Wrote queries in named queries, criteria query builder, entity graph and named native queries to retrieve data from MySQL 8.4 and Oracle Database 21c
- Built attribute-based access control authentication for authorization
- Employed Quarkus built-in mailing server to implement mailing service
- Reused team-built Angular components to implement customer portal
- Improved code quality with SonarQube Enterprise edition
- Re-used the team-built Azure pipeline to deploy the application on Debian hosts
- Implemented non-blocking operations including message exchange with SmallRye Mutiny API
- Collaborated with teammates and customers following Scrum and Kanban method on the Jira platform
- Maintain the documentation of software components on Atlassian Confluence.

**MedStar** | Java, Spring Boot, Maven, Spring Repository, PostgreSQL, React, Next.js Sep 2024 - Dec 2024

- Modular monolithic healthcare management system for university assignment covering appointment management and prescription management with an API Gateway
- Designed and implemented three-layer architecture of the back-end application including controller, business and data layer
- Used Spring Repository to interact with SQL Server
- Implemented API Gateway with Open Feign
- Bundled website with Webpack 5
- Used Spring transaction to protect data from SQL anomaly
- Built the graphical user interface with Next.js 15 and React 18, decorated the website with Tailwind CSS