

NAM DOHYUN

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EDUCATION

National University of Singapore

Bachelor of Computing in Computer Science, Honours

Aug 2020 - Jul 2026

WORK EXPERIENCE

Nested Technologies Inc. (Singapore), Software Development Intern

Jan 2026 - Present

- Architected a 12-node autonomous AI agent pipeline with LangGraph to automate complex workflows (Intent Classification, CRUD), reducing manual quotation entry time by 90%.
- Developed a custom RAG system with an OpenAI-embedded Vector Database and persistent cache, ensuring zero-hallucination product specifications.
- Engineered a Batch Executor system with Python's concurrent.futures to parallelize multiple product creation requests, achieving 5x faster response times for complex multi-item quotations compared to sequential processing.
- Optimised a VLLM-based OCR pipeline for processing PDFs and images; executed real-time memory profiling via tracemalloc and psutil, and utilized lazy-loading strategies to maintain a stable memory footprint under heavy loads.
- Established a proprietary hybrid pricing engine resolves costs through tiered priority logic (Combination > Tiered > Single Attribute), supporting thousands of potential product configurations with automated fallback mechanisms for edge cases.

Hyundai Motors Group Innovation Centre Singapore (Singapore), DevOps Intern

Jul 2025 - Dec 2025

- Automated GitLab CI/CD pipelines to Harbor Registry, reducing deployment turnaround by 40% and managing containerized services via Kubernetes (Rancher).
- Scripted global production rollouts for Kia's Slovakia factory using PowerShell, automating PostgreSQL, SSL, and Pgpool configurations for high availability.
- Developed an MES data schema for Kafka-to-PostgreSQL flows and a ThingWorx user-role module to streamline access for 100+ users.

PROJECTS

Omniversity - Global Exchange Student Platform, Full Stack Developer

Jan 2025 - Jul 2025

- Devised a microservices-based exchange platform utilizing Spring Cloud and React Native, integrating RabbitMQ for event-driven communication to ensure data consistency across a distributed system.
- Designed a Neo4j recommendation engine analysing student metadata and module history, improving user connection accuracy by 20% while simplifying collaboration via comprehensive API documentation for a 5-man team.

TravelWise - Travel Site Recommendation Platform, Full Stack Developer

Jan 2025 - May 2025

- Built an ETL pipeline and recommendation engine using Flask and React/TypeScript, processing 5K+ Reddit records into a searchable database with <200ms query latency via React Query.
- Architected a 5-service containerized system (Docker) deployed on Google Cloud Run operating Terraform (IaC), integrating a CI/CD pipeline with 80%+ code coverage via Playwright and Pytest.

COMMUNITY SERVICE

Rinschool Missionary, Python Teacher for students in Japan and Lebanon

Aug 2024 - Dec 2024

CERTIFICATIONS

- AWS Certified Solutions Architect - Associate (2025)
- NUS Database Systems Focus Area (Merit)

KEY SKILLS

- Languages: Python, Java, Golang, JavaScript (ES6+), TypeScript, PowerShell, SQL. Backend: Spring Boot, NestJS, Express.js, Django, FastAPI, RabbitMQ, Kafka. Frontend & Mobile: React, React Native, Vue.js, TypeScript, TailwindCSS, Shadcn/UI. Infrastructure: AWS (Solution Architect Assoc.), Docker, Kubernetes, Terraform, GitHub Actions. Databases: PostgreSQL, MongoDB, Neo4j, Redis, Sequelize, SQLAlchemy.
- Language: Korean (Native), English (Native), Chinese (Intermediate), Indonesian (Beginner)