

Nguyễn Tiến Khang

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EDUCATION

Ho Chi Minh City University of Technology, VNU-HCMUT

Ho Chi Minh City, Vietnam

Bachelor of Science in Computer Science

Oct 2022 — Present

- **GPA:** 3.2/4.0 (8.1/10)
- **OISP Scholarship:** Semester 242

CERTIFICATIONS

SQL Associate Certificate — DataCamp

Aug 2026

IELTS 7.0 — IDP Vietnam

May 2022

EXPERIENCE

Data Science Lab, Ho Chi Minh City University of Technology

Sep 2024 — Feb 2025

Undergraduate Research Assistant

Ho Chi Minh City, Vietnam

- Implemented and trained convolutional neural network models for object detection in surveillance camera scenarios.
- Supported experimental model evaluation and analysis in an academic research environment.

PROJECTS

Intelligent Restaurant Management System

Jan 2026 — Jun 2026

React | TypeScript | NestJS | PostgreSQL | Apache Kafka | Kong Gateway | Docker

(github.com/karuufumi/IRMS)

- Developed a full-stack restaurant management platform supporting menu management, order processing, table workflows, and administrative operations.
- Applied Hexagonal Architecture principles to separate domain logic, application services, infrastructure adapters, and external integrations.
- Replaced periodic polling with a Kafka-based publish-subscribe update flow, reducing order and status update latency from approximately 5 seconds to 1.2 seconds in controlled testing.

Mobile Museum Companion

Feb 2026 — May 2026

SwiftUI | Figma | NestJS | PostgreSQL | ChromaDB

(github.com/karuufumi/Museum-Companion)

- Built a mobile museum companion application for artwork discovery, guided tours, saved items, and museum navigation.
- Developed mobile interfaces based on Human-Centered Design Principles, backend apis, and database integration for artwork and tour management.
- Prototyped a ChromaDB-backed retrieval-augmented generation workflow for semantic artwork search and museum-related question answering.

Digital Library Management System

Sep 2025 — Dec 2025

.NET | FastAPI | React | PostgreSQL | MongoDB | Docker | Postman

(github.com/karuufumi/Library-Mngt)

- Developed a university library management system through a five-sprint Scrum development cycle covering planning, implementation, testing, and review.
- Built a FastAPI-based API gateway supporting authentication and authorization workflows using OAuth 2.0 concepts and two-factor authentication.
- Applied layered architecture to improve maintainability, modularity, and separation of concerns.
- Validated backend APIs and user-facing workflows using Postman and structured manual testing.

Simple Noise Protocol Implementation

Apr 2026 — Present

Python | WebSocket | POSIX

(github.com/karuufumi/Mini-Noise)

- Implemented a simplified secure communication protocol based on the Noise Protocol Framework.

- Developed cryptographic message-flow components including handshake processing, key agreement, authenticated encryption, and secure message exchange.

Computer Hardware Benchmarking using Statistical Learning Approaches
R | Python | Pandas | NumPy | scikit-learn | Matplotlib

Jun 2024 — Feb 2026
(github.com/karuufumi/Computer-Benchmark)

- Built a reproducible hardware benchmarking workflow in R and later extended it into a Python data-processing pipeline.
- Designed a pipeline for benchmark data cleaning, feature preparation, statistical analysis, model experimentation, and visualization.
- Applied statistical learning methods to compare hardware performance and identify patterns across experimental benchmark results.
- Generated visual reports and evaluation outputs for performance interpretation and academic reporting.

TECHNICAL SKILLS

- **Programming Languages:** Python, C/C++, TypeScript, JavaScript, C#, Swift, SQL, R, HTML/CSS
- **Backend & Web:** NestJS, FastAPI, .NET, Node.js, Express.js, React, Next.js
- **Data & ML:** PyTorch, NumPy, Pandas, scikit-learn, Matplotlib
- **Infrastructure & Tools:** Git, Docker, Apache Kafka, Postman, Selenium, AWS, Azure, Firebase, GitHub, GitLab, Jira
- **Databases:** PostgreSQL, MySQL, MongoDB, ChromaDB

EXTRACURRICULAR ACTIVITIES

BK-FC Trần Hưng Đạo High School
Admissions Counselor

Nov 2022 — Jun 2023
Ho Chi Minh City, Vietnam

- Provided admissions counseling to high school students on university programs, major selection, application pathways, and campus life.

CC22KHM1
Youth Union Secretary

2022 — 2026
Ho Chi Minh City, Vietnam

- Coordinated class-level student communication, activity planning, and administrative support.