

Nguyễn Tiến Khang

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EDUCATION

Ho Chi Minh City University of Technology, VNU-HCM <i>Bachelor of Engineering in Computer Science</i> - GPA: 3.2/4.0 (8.1/10) - OISP Scholarship, Semester 242 - Relevant Coursework: Data Structures, Computer Architecture, Discrete Mathematics, Programming Languages, Database Systems, Software Engineering, Operating Systems	Ho Chi Minh City, Vietnam <i>Oct 2022 — Present</i>
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CERTIFICATIONS

AWS Certified Solutions Architect -- Associate , Amazon Web Services	Jul 2026
IELTS 7.0 , IDP Vietnam	May 2022

EXPERIENCE

Undergraduate Research Assistant Data Science Lab, HCMC University of Technology - Designed and developed RESTful APIs with FastAPI and PostgreSQL for data ingestion and management in computer vision systems. - Implemented and trained convolutional neural network models for object detection in surveillance camera scenarios.	Sep 2024 — Feb 2025 <i>Ho Chi Minh City, Vietnam</i>
Independent Software Developer Independent - Explored and implemented federated learning workflows for privacy-preserving model training across distributed clients. - Contributed to open-source repositories through code reviews, issue triaging, and technical discussions on GitHub.	Jan 2025 — Present <i>Ho Chi Minh City, Vietnam</i>

PROJECTS

Art Museum Companion App - Built a full-stack museum companion platform using SwiftUI, NestJS, PostgreSQL, and ChromaDB. - Developed mobile frontend screens, backend APIs, authentication flows, and database integration for artwork and tour management. - Integrated semantic search and AI-assisted recommendation features using vector database workflows. - Designed data models for artworks, artists, rooms, collections, tours, saved items, and assistant conversations.	Feb 2026 — May 2026
Library Management System - Designed and developed a university library management system using .NET, FastAPI, React, PostgreSQL, MongoDB, and Docker. - Applied a layered architecture to improve maintainability, modularity, and separation of concerns. - Implemented asynchronous backend services exposing REST APIs for borrowing, returning, and catalog search. - Validated frontend workflows and backend APIs using Selenium and Postman.	Sep 2025 — Dec 2025
S3-MRS: Self-Studying Room Management System - Developed a full-stack web application for managing university self-studying rooms using React, TypeScript, Express.js, PostgreSQL, MongoDB, Docker, and Railway. - Implemented backend services for reservations, user management, room availability, and administrative workflows. - Containerized services with Docker and deployed the system on Railway for cloud-based hosting.	Jan 2025 — Jun 2025
Simple P2P BitTorrent File Transfer App - Developed a peer-to-peer file transfer application inspired by BitTorrent protocols using Python. - Implemented peer discovery, file chunking, seeding, and piecewise file reassembly for decentralized file sharing. - Built a lightweight tracker service to manage peer metadata and file availability.	Oct 2024 — Jan 2025
Real-time Traffic Object Detection	Jan 2026

- Implemented a real-time object detection pipeline for traffic scenes using Python, PyTorch, YOLO, and Google Colab.
- Fine-tuned pretrained detection models on a public traffic dataset.
- Visualized detection results on images and videos using bounding boxes and confidence scores.

EXTRACURRICULAR ACTIVITIES

BK-FC Trần Hưng Đạo High School

Nov 2022 --- June 2023

- Provided admissions counseling for high school students, helping them explore university programs, major choices, application pathways, and sharing campus life.

Youth Union Secretary, CC22KHM1

2022 --- 2026

- Led class-level Youth Union coordination, including student communication, activity planning, administrative support.

SKILLS

- **Languages:** Python, C/C++, JavaScript, TypeScript, Swift, Kotlin, SQL, R, HTML/CSS
- **Frameworks:** React, Next.js, Node.js, Express.js, .NET, FastAPI, Spring Boot, Tailwind CSS, PyTorch, NumPy, Pandas, Matplotlib, scikit-learn
- **Tools:** Git, Docker, Postman, Selenium, Railway, Render, AWS, Firebase, Azure, Jira, GitHub, GitLab, Figma, Google Colab, Apache Kafka
- **Databases:** PostgreSQL, MySQL, MongoDB, ChromaDB