



Hoang Manh Khiem

Solution Architect

☎ (037) 805 - 0468
✉ contact@khiem.tech
📍 Hanoi, Vietnam
🌐 <https://about.khiem.tech/>

CAREER OBJECTIVE

Solution Architect & AI Engineer with a strong foundation in backend development, enterprise networking, and AI/ML integration. Experienced in designing secure, scalable, and cloud-ready architectures while building computer vision and NLP solutions. Eager to grow into a versatile professional bridging cutting-edge research with enterprise systems.

EDUCATION

University of Transport and Communications *Hanoi, Vietnam*
BSc in Information Technology *Sep 2022 – Aug 2026 (expected)*

GPA: 3.67/4.0 | 7 merit scholarships | Focus: Artificial Intelligence, Network & Information Systems.

BKACAD Academy of Technology - Hanoi University of Science and Technology *Hanoi, Vietnam*
Certificate Program: Networking Administrator *November 2024 – Apr 2025*

Completed program with 100% final grade. Focused on enterprise network architecture, TCP/IP protocols, LAN/WAN setup, network security, system administration, router/switch/firewall configuration.

AWARDS / ACHIEVEMENTS

- Promotion of scientific research for students Nationwide 2024
- Excellent Prize, Scientific Research, University of Transport and Communications 2023-2024, 2024-2025
- First Prize (Special Round), Third Prize (Rounds 1 & 2) - Student Informatics Olympiad, University of Transport and Communications 2024
- Second Prize - Cardano Blockchain Hackathon 2024 2024
- Creative Idea Award- Cardano Blockchain Hackathon 2025 2025
- Second Prize (God of War Final Round & Online Round) - Algorithm Design Competition, University of Transport and Communications 2023
- Third Prize - Open-Source Software & Maps Hackfest Vietnam 2023

PUBLICATIONS

Co-author – “Evaluation of Attention-Centered YOLO Models to Detect Leaf Diseases”
Presented at the Scientific Conference on New Technology and Applications in Electricity – Electronics – Automation
University of Transport and Communications (UTC), May 2025

PROJECTS

Early Action Recognition

Hanoi, Vietnam

Domain: Computer Vision / Human Action Recognition

Nov 2023 – Jun 2024

Objective: Research and develop an early action recognition model using GCN/ST-GCN/AAGCN with Knowledge Distillation, enabling recognition from incomplete skeleton data.

Key Responsibilities:

- Designed training/inference pipelines with GCN, ST-GCN, AAGCN for skeleton-based action recognition.
- Applied knowledge distillation to reduce training cost by ~75% while maintaining accuracy.
- Optimized GPU resource utilization and built scalable evaluation workflows.

Fruit Disease Detection Using Deep Learning

Hanoi, Vietnam

Domain: Computer Vision / Healthcare AI

Oct 2024 – Jun 2025

Objective: Developed an enhanced YOLOv8-based object detection system to identify fruit diseases with improved accuracy and real-time performance. The system integrates a lightweight EfficientNet backbone and a Feature Pyramid Network (FPN) to capture multi-scale features effectively, addressing challenges like small and clustered disease symptoms

Key Responsibilities:

- Architected and built an end-to-end detection system using YOLOv8 + EfficientNet backbone + FPN.
- Integrated APIs and Dockerized deployment for real-time monitoring.
- Applied transfer learning + augmentation and optimized for speed–accuracy balance.
- Benchmarked with mAP, precision, recall, F1, and top-1 accuracy.

Other Projects (Summarized)

Hanoi, Vietnam

Role: Backend Developer / FullStack Developer / Network and System Architect

Apr 2022 - May 2024

Self-care App Using Data Science: Stress assessment mobile app using NLP + ML pipelines.

Chatbot Admissions Consulting: NLP chatbot with PhoBERT + LSTM + LLM integration, deployed as scalable web service.

School Computer Management System: Managed IT assets, monitored student app usage, automated upgrades.

Student Management WebApp: Online management platform; implemented RLS security, authentication, and scalable database architecture.

Virtual Network Carrier System: Simulate and manage virtual network carriers.

Distributed Traffic Load System: Built load balancing architecture for high-availability traffic management.

SKILLS & TOOLS

Architectural Design: System design, distributed systems, caching strategies, microservices, REST/GraphQL APIs, CI/CD pipelines

Cloud & DevOps: Docker, Linux, VPS/Vercel deployment, GitHub Actions, monitoring/logging tools

Backend & Integration: Python (Django/FastAPI), NodeJS, Java, C#

Databases: PostgreSQL (RLS), MySQL, MongoDB, Neo4J, Oracle

Data Science & ML: PyTorch, TensorFlow, scikit-learn, OpenCV, OpenAI API

Tools & Environments: Anaconda, VS Code, PyCharm, Git, GNOME Terminal, Termius

Languages: Vietnamese (native), English (professional working proficiency)

Professional Traits: Systems thinking, leadership, decision-making, problem solving, adaptability, analytical mindset.

CERTIFICATES

Cisco – CCNA: Switching, Routing, and Wireless Essentials

Mar 2025

Cisco – CCNA: Enterprise Networking, Security, and Automation

Mar 2025

Samsung R&D Vietnam & UTC – Algorithm and Application Program

Aug – Dec 2024