

# Ha Van Ninh

Position: AI Engineer

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## CAREER OBJECTIVE

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To leverage deep expertise in AI, Machine Learning, and IoT to drive technological innovation and develop scalable, socially beneficial solutions. My objective is to bridge the gap between theoretical research and practical implementation, evidenced by peer-reviewed publications and active participation in the scientific community. Concurrently, I seek to cultivate technical excellence within the team through dedicated mentorship and knowledge sharing.

## EDUCATION

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**Thai Nguyen University of Information and Communication Technology – Thai Nguyen University** 2019 - 2024

Major: Information Technology

Graduated with Distinction (GPA: 3.59/4.0)

2021:

- Third Prize at the ICTU 2021 Startup Creativity Competition

2022:

- Received an Honorable Mention at the ICTU 2022 Startup Creativity Competition

2023:

- Achieved excellent performance in the 2022 scientific research activities

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**Thai Nguyen University of Information and Communication Technology – Thai Nguyen University** 2025 -  
11/2026 (Expected Graduation)

Master of Science in Computer Science

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## WORK EXPERIENCE

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**HACHITECH SOLUTION TECHNOLOGY SERVICE AND DEVELOPMENT COMPANY LIMITED** 10/2022 - 04/2023

### Intern

- Worked with Laravel and the MVC model
- Analyzed and designed a user database management system
- Utilized MySQL for database management
- Front-end development using ReactJS

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**CMC Global** 10/2023 - 10/2024

### Software Engineer

- Programming in Golang
- Implementing Clean Architecture principles
- Working with PostgreSQL database management system
- Analyzing and proposing solutions in collaboration with clients

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**Geoinformatics Research Center** 10/2024 - 03/2025

### Software Engineer

- Worked with geospatial data and mapping applications such as GeoServer and QGIS.
  - Analyzed and designed geographic information systems (GIS) for efficient data management and visualization.
  - FastAPI
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**Teaching Assistant**

- Mentoring undergraduate students in conducting scientific research and developing technical projects.
- Conducting independent and collaborative research in Computer Vision and Deep Learning.
- Supervising student coding practices and troubleshooting complex programming issues.

**CERTIFICATIONS**

Completing the requirements of Python - World Friend Korea ICT e-Volunteer Program in VIETNAM	2021
APTIS B2	2024
IELTS 5.0	2025

**AWARDS & HONORS**

First Prize at the ASEAN-INDIA Hackathon 2021	2021
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**SKILLS**

<b>Programming Languages:</b>	<ul style="list-style-type: none"> <li>• Python</li> <li>• PHP</li> <li>• Javascript</li> <li>• Golang</li> <li>• R</li> </ul>
<b>Database Management Systems:</b>	<ul style="list-style-type: none"> <li>• MongoDB</li> <li>• MySQL</li> <li>• PostgreSQL</li> </ul>
<b>AI</b>	<ul style="list-style-type: none"> <li>• Computer Vision</li> <li>• Neural Language Processing</li> <li>• Machine Learning</li> <li>• Deep Learning</li> </ul>

**PROJECTS**

<b>Central Food Wholesales</b>	10/2023 - 10/2024
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**Backend Developer**

- **Team Size:** 10
- **Technologies:** Python, Golang, Microservices, Monorepo, PostgreSQL, GraphQL, RESTful API, IAM/RBAC, CI/CD (GitHub Actions).
- **Key Responsibilities & Achievements:**
  - Architected and developed high-performance backend services using Golang within a Microservices architecture to ensure system scalability and maintainability.
  - Implemented a robust security framework featuring Identity and Access Management (IAM) and Role-Based Access Control (RBAC) to secure sensitive retail data.
  - Optimized data retrieval processes by integrating GraphQL and RESTful APIs, enhancing the efficiency of front-end data consumption.
  - Developed automated reporting modules capable of complex Graph viewing and seamless Excel exports for business intelligence.
  - Contributed to solution design and system analysis, ensuring technical implementations aligned strictly with client business requirements.

<b>Smart Notification Bell</b>	06/2022 - 01/2023
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**Team Lead**

- **Team Size:** 5

- **Technologies:** Python, Computer Vision (OpenCV), Deep Learning, WebSockets.
- **Key Responsibilities & Achievements:**
  - Designed and engineered the end-to-end system architecture, focusing on the integration of Deep Learning models into a production-ready environment.
  - Developed and fine-tuned a high-accuracy Facial Recognition model leveraging state-of-the-art Computer Vision techniques.
  - Implemented real-time, low-latency communication between the AI engine and the client interface using WebSockets.
  - Managed the full software development life cycle (SDLC), from initial system analysis to final deployment, securing a high rank in the ICTU Startup Creativity Competition.

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## Drowsiness Detection System Applied On Car

06/2022 - 01/2023

### Team member

**Publication:** *Journal of Science and Technology (JST - TNU)* | <https://doi.org/10.34238/tnu-jst.7498>

**Technologies:** Python, Computer Vision, Deep Learning, WebSockets.

### Key Responsibilities & Achievements:

- Conceptualized and implemented a specialized Computer Vision system, validating the methodology through rigorous academic research.
- Authored and published technical findings in the *Journal of Science and Technology*, demonstrating the system's efficiency in Deep Learning-based processing.
- Engineered a Python-based backend capable of handling high-frequency data streams via WebSockets.
- Synthesized complex system requirements into a formal design, bridging the gap between theoretical research and practical software deployment.

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## DermaRAG | AI-Powered Dermatological Diagnostic Assistant

04/2025 - 03/2026

### Team Lead

**Technologies:** LLM, RAG (LangChain), Computer Vision (CNN), Python (FastAPI), VueJS, Vector Database (Chroma), Database (PostgreSQL)

**Description:** Developed a specialized diagnostic support system for 88 common dermatological diseases in Vietnam, integrating medical knowledge retrieval with visual recognition.

### Key Responsibilities & Achievements:

- **Team Leadership:** Led a cross-functional team to design and implement the system architecture, ensuring seamless integration between the AI backend and VueJS frontend.
- **Data Engineering:** Curated a comprehensive medical dataset covering symptoms, treatments, and prevention for 88 diseases, including a specialized image database for 60 conditions to train Computer Vision models.
- **Advanced RAG Pipeline:** Engineered a RAG-based workflow using LLMs to extract clinical symptoms from user queries and retrieve relevant medical insights from a localized knowledge base.
- **Interactive Diagnosis:** Implemented an intelligent multi-turn conversation logic that generates clarifying questions when initial user input is insufficient, improving diagnostic precision and user experience.
- **Multimodal Integration:** Combined Computer Vision for image-based lesion analysis with LLM-based symptom processing to provide a holistic diagnostic report.

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## PUBLICATIONS

1. Nguyen, DB., Duong, DT., Tran, QQ., Ha, VN., Quach, XT. (2026). An Efficient Deep Learning-Based Pneumonia Detection Using Chest X-Ray Image Augmentation. In: Nguyen, N.T., *et al.* *Advances in Computational Collective Intelligence. ICCCI 2025. Communications in Computer and Information Science*, vol 2748. Springer, Cham. [https://doi.org/10.1007/978-3-032-10209-6\\_14](https://doi.org/10.1007/978-3-032-10209-6_14)
2. Nguyen, DB., Ha, VN., Ngo, HH., Duong, TT. (2025). A Hybrid Approach: Transformer and LSTM Combination for Text Summarization in Vietnamese. In: Nghia, P.T., Thai, V.D., Thuy, N.T., Huynh, VN., Van Huan, N. (eds) *Advances in Information and Communication Technology. ICTA 2024. Lecture Notes in Networks and Systems*, vol 1205. Springer, Cham. [https://doi.org/10.1007/978-3-031-80943-9\\_9](https://doi.org/10.1007/978-3-031-80943-9_9)
3. Nguyen, V. H., Vu, Q. H., Ha, V. N., Tran, Q. Q., & Ngo, H. H. (2023). Drowsiness detection system applied on car. *TNU Journal of Science and Technology*, 228(07), 46–54. <https://doi.org/10.34238/tnu-jst.7498>
4. Tran, Q. Q., Nguyen, V. H., Ha, V. N., & Nguyen, T. T. (2024). Using LSTM deep learning model in stock price prediction. *TNU Journal of Science and Technology*, 229(15), 103–111. <https://doi.org/10.34238/tnu-jst.11554>