

Phuong Nam DANG

AI Engineer | M.Eng Human-Robotics Interaction @ NAIST

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SKILLS

Languages	Python, C/C++, R, MATLAB, Bash/Zsh
ML / DL	PyTorch, TensorFlow, HuggingFace, VLM/VLA, LLM Fine-tuning
Agentic AI	LangChain, LangGraph, Tool Calling, RAG
Speech / NLP	ASR, TTS, Speaker Verification, VAD, NLP
Computer Vision	Object Detection, YOLO, RF-Detr, Segmentation, Pose Estimation
MLOps	Docker, Triton, FastAPI, ONNX, Kafka
Robotics	ROS / ROS 2, Gazebo, Unreal Engine, Flutter
Tools	Linux, Git, LaTeX, Jira

WORK EXPERIENCE

Present June 2025	AI/Robotics Engineer (Permanent full-time), VINMOTION – VINGROUP, Hanoi, Vietnam <ul style="list-style-type: none">Developed embodied task-planning modules using multi-agent workflows and Vision-Language Models for autonomous task execution and decision-making in humanoid robots.Built and deployed model-based and model-free 6DoF object pose estimation modules to improve robotic grasping accuracy.Developed an instruction-following data generation and benchmarking pipeline for VLN training, automating dataset creation and evaluation workflows. <p>ROS 2 Python PyTorch LangGraph Tool calling VLA VLM Gazebo</p>
Sep 2025 May 2025	AI Engineer (Contract full-time remote), AIS – VMO HOLDINGS, Hanoi, Vietnam <ul style="list-style-type: none">Built an end-to-end Computer Vision Acceleration Pipeline to optimize model inference latency for large-scale camera systems, reducing time cost for the development phase 50–70%.Package tracking with RF-Detr model: deployed in warehouse using image streaming via surveillance camera to automate package storage processes, reducing labour costs.LLMs with LangGraph for food-ordering agents: deployed in food-ordering Kiosk to automate the ordering process. <p>Python FastAPI ONNX LangChain LangGraph LLM NLP ASR TTS MLOps</p>
Sep 2025 Nov 2023	Research Assistant (Contract full-time), HUMAN ROBOTICS LABORATORY – NAIST, Ikoma, Nara, Japan <ul style="list-style-type: none">Developed an Android VR See-Through System for medical assessment robots, enabling clinicians to observe patient behaviour through robot sensors.Designed an Unreal-based VR driving simulator with integrated AI driving assistant to enhance training and evaluate driver cognition. (Collaborated with Hitachi Corp, Japan) <p>Flutter Python Unity Unreal Engine ROS 2</p>
Sep 2023 Nov 2021	AI Engineer (Permanent full-time), VIETTEL BIG DATA ANALYTICS CENTER – VIETTEL TELECOM, Hanoi, Vietnam <ul style="list-style-type: none">Built and deployed large-scale speaker verification for Viettel Call Center — serving millions of customers daily with >99% accuracy, reducing manual workload >50%, preventing fraud, and improving customer experience.Developed a voice quality assessment system for call centers, reducing manual review time by 80% and improving ASR performance through better data quality.Participated in VoxSRC 2022 (Top 20) and VLSP 2022; data preparation and implementation of LLM into the My Viettel chatbot platform. <p>Python PyTorch Nvidia NeMo Triton Docker Kafka ASR VAD NLP LLM MLOps</p>

Oct 2021 | AI Intern (Part-time), VIETTEL DIGITAL TALENTS PROGRAM 2021, Hanoi, Vietnam

- Apr 2021
- › Completed intensive training on core AI and Data Science methods under Viettel's national AI talent initiative.
 - › Contributed to a Vietnamese speaker verification system for call-centre voice analytics, later deployed in production.

Python PyTorch Speech Processing NLP

LANGUAGES

- › Vietnamese: Native
- › English: Professional Working Proficiency (IELTS 6.5)
- › Japanese: Conversational

AWARDS & HONORS

- › MEXT Scholarship — Japan (2023)
- › Top 20 — VoxCeleb Speaker Recognition Challenge (VoxSRC) 2022
- › Top 5 — VLSP 2022 Multilingual Speaker Verification
- › Top 10 Candidate — Viettel Digital Talent Program (2021)
- › 3rd Place — CodeWar-Icomm Competition (2021)

EDUCATION

- Oct 2023 – Sep 2025 Master of Engineering in Human Robotics Interaction, **Nara Institute of Science and Technology**, Ikoma, Japan. Research: personalized human-robot interface for autonomous personal mobility vehicles based on passenger personalities.
- Sep 2018 – Sep 2022 Bachelor of Science in Automation and Electrical Engineering, **Hanoi University of Science and Technology**, Vietnam. GPA: **3.52/4.0** – Graduated with Distinction. 2nd place in the Thesis Defense Committee. Thesis: Speaker verification system for telecommunication service.
- 2016 – 2018 Specialization: Physics, **High School for Gifted Students, Hanoi University of Education**, Vietnam.

PROJECTS

FIRE DETECTION FOR AUTONOMOUS FIREFIGHTING ROBOT NAVIGATION

Nov 2021 – Nov 2022

Developed a deep learning-based fire detection system to guide navigation of an autonomous firefighting robot. Implemented and evaluated YOLO and SSD models; deployed on NVIDIA Jetson Nano for edge inference. Collaborated with the Robotics and AI Lab at HUST. Supervisor: Prof. Nguyen Pham Thuc Anh, HUST.

Python PyTorch YOLO SSD NVIDIA Jetson Nano

HANDWRITTEN MATHEMATICAL SYSTEM OF EQUATIONS SOLVER

SEP 2020 – NOV 2020

Built a deep learning-based system to recognize and solve handwritten systems of equations, handling polynomial, high-degree, and no-solution cases. Supervisor: Nguyen Thanh Tuan, Founder of AI4E, NEU.

Python Computer Vision Deep Learning

SWARM UAV MONITORING SIMULATION AND GUI

AUG 2024 – DEC 2024

Designed a GUI and simulation framework for monitoring swarm UAVs in search-and-rescue scenarios. Enabled testing and visualization of swarm coordination algorithms prior to real-world deployment. Collaborated with researchers at VNU-UET. Supervisor: Nguyen Quang Nha, UET-VNU.

Python Simulation GUI

REFERENCES

Prof. Nguyen Pham Thuc Anh

Professor at AI Robotics Laboratory, Hanoi University of Science and Technology

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