Nguyen Thieu Huy

AI Engineer Intern

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OBJECTIVE

Final-year AI student seeking an AI Engineer Intern role to apply machine learning and deep learning skills in building practical, scalable AI solutions.

WORK EXPERIENCE

Institute of Electronics, Informatics and Automation   Hanoi, Vietnam
AI Engineer Intern   *June 2025 – Jan 2026*

- ○ Developed and optimized data preprocessing pipelines in Python for applied AI and intelligent automation projects.
- ○ Implemented and tested machine learning and deep learning algorithms for pattern recognition and prediction tasks.

- ○ Conducted model evaluation and performance analysis, supporting experimental validation of AI systems.
- ○ Collaborated with researchers and engineers to translate research ideas into implementable AI solutions.

AI Laboratory, Thuyloi University   Hanoi, Vietnam
AI Research Assistant   *Feb 2024 – June 2025*

- ○ Designed and trained machine learning and deep learning models for real-world datasets, focusing on accuracy and generalization.
- ○ Built end-to-end AI workflows using Python, PyTorch, and Scikit-learn, including data cleaning, feature engineering, training, and evaluation.
- ○ Performed hyperparameter tuning and comparative experiments to improve model performance.
- ○ Analyzed and summarized state-of-the-art research papers (IEEE, arXiv) to inform model design and technical decisions.

PROJECTS

DentalGPT: Vietnamese Dental Healthcare AI Assistant   *Graduation Project Python, PyTorch, HuggingFace, PEFT/LoRA, LangChain, ChromaDB, FastAPI, Docker*

- Fine-tuned an **8B-parameter LLM (DeepSeek-R1)** using LoRA/PEFT for Vietnamese dental healthcare applications.

- Built a **RAG** pipeline with ChromaDB vector store, FAISS indexing, and KeyBERT-based keyword extraction.

- Developed a FastAPI backend with **streaming inference** and support for multiple reasoning modes.

- Implemented **Chain-of-Thought prompting** with structured outputs to enhance medical reasoning and response consistency.

- Assessed generation quality using **Perplexity** and semantic similarity metrics (BLEU, ROUGE, METEOR, BERTScore).

3D Human Pose Estimation   *Python, PyTorch, Graph Neural Networks, Computer Vision*

- Designed and analyzed **GraphMLP**, a lightweight architecture combining **MLP-Mixer and Graph Convolutional Networks** for 3D human pose estimation from 2D keypoints.

- Achieved **49.2 mm MPJPE on Human3.6M**, outperforming MLP-Mixer, GCN, and PoseFormer while using **70% fewer parameters**.

- Demonstrated strong **cross-dataset generalization** on MPI-INF-3DHP (MPJPE = **80.1 mm**) and efficient scalability to video-based pose estimation.

Fire and Smoke Detection (RGB-Thermal pair images) *PyTorch, OpenCV, YOLO*

- Developed a multi-modal object detection system using visible and thermal images.

- Designed a dual-backbone **mid-fusion architecture** for robust fire and smoke detection.

- Achieved mAP@0.5 of **78%** on a custom RGBT dataset.

EDUCATION

Thuyloi University Hanoi, Vietnam
B.S. in Artificial Intelligence & Data Science *Aug 2022 – May 2026*

- **GPA**: 3.43/4.0
- **Relevant Coursework**: Machine Learning, Deep Learning and Applications, Statistics

HONORS & AWARDS

Best Paper Award — ICAI 2025: For the paper *"AMAF-Net: Training-Free Multi-Modal Alignment for Fine-Grained Counterfeit Fruit Detection"*.
Academic Excellence Scholarship: Two consecutive semesters.

CERTIFICATIONS

DeepLearning.AI Deep Learning Specialization: Neural networks, CNNs, RNNs, sequence models, optimization.
Samsung Innovation Campus - AI Course: Completed with Very Good grade
English Proficiency: CEFR (B2 – good at Speaking), Vietnamese (Native)

SKILLS

Languages: Python, C++, C
Frameworks: PyTorch, Sklearn
Computer Vision: YOLO, CLIP, ViT, OpenCV

NLP: Transformers, BERT, LLaMA, QLoRA
MLOps: Docker, Git, Linux, MLflow
Tools: Jupyter, VSCode, Pycharm