NGUYỄN QUANG ANH

AI Engineer / Machine Learning Engineer

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PROFESSIONAL SUMMARY

Computer Science student and AI Engineer Intern building multimodal video-understanding, vector-retrieval, semantic-clustering, and computer-vision systems. Experienced with PyTorch, pretrained multimodal models, vector search, inference infrastructure, and AWS-based AI workflows.

EDUCATION

Hanoi University of Science and Technology — **2024 - Present**
Computer Science - Cumulative GPA: 3.96/4.0 — *Hanoi, Vietnam*

- Coursework: Machine Learning, Artificial Intelligence, Data Structures and Algorithms, Databases, Computer Networks, and Operating Systems.

EXPERIENCE

AI Engineer Intern — **Jul 2026 - Present**
DeviationLab — *Hanoi, Vietnam*

- Build multimodal pipelines that transform social-video signals into vector representations for semantic retrieval, clustering, and trend analysis.
- Integrate pretrained InternVideo2 and CLAP models with Parquet-based visual, audio, and textual inputs and Qdrant vector indexing.
- Develop semantic-search and clustering workflows using vector similarity, MiniBatch K-Means, and HDBSCAN.
- Work with AWS EC2/S3, Triton, ONNX, gRPC, ClickHouse, Parquet, and PyArrow while optimizing batching, data movement, storage, and inference workflows.

AI Research Trainee — **Nov 2025 - Jul 2026**
AI4LIFE Laboratory — *Hanoi, Vietnam*

- Evaluated object-detection and multi-object-tracking pipelines for dense traffic-video analysis.
- Prepared datasets, corrected annotation inconsistencies, converted formats, and built reproducible evaluation workflows.
- Analyzed occlusion, missed detections, class confusion, ID fragmentation, and trajectory failure cases using Linux, CUDA, Conda, tmux, and Git.

PROJECT

Dog Breed Image Classification System — **GitHub**
Python, PyTorch, Scikit-learn, MLP-Mixer

- Curated a balanced 10-class dataset of 10,000 images from approximately 20,000 raw images through automated collection and manual quality control.
- Compared KNN, SVM, Decision Tree, and MLP-Mixer baselines and trained the Mixer with AdamW, EMA, Mixup, warmup, DropPath, and spatial augmentation.
- Achieved 73.32% Top-1 and 86.99% Top-3 test accuracy and built a local web interface for top-k inference.

SELECTED ACHIEVEMENTS

- HUST Academic Encouragement Scholarship for semesters 2025.1 and 2025.2.
- 2024 National High School Exam: 29.15/30 in A00; highest A00 score in Nam Định Province and highest scores in A00, B01, A01, and D07 at school.

TECHNICAL SKILLS

Programming	Python, C, C++, SQL, Git, Linux
AI / Machine Learning	PyTorch, Scikit-learn, InternVideo2, CLAP, MLP-Mixer, YOLO, SAM2, FCN-rLSTM
Retrieval / Clustering	Qdrant, Semantic Search, Vector Embeddings, MiniBatch K-Means, HDBSCAN, UMAP
Generative AI (Learning)	LLMs, RAG, LoRA, QLoRA, AWS Bedrock
AI Systems / Cloud / Data	Triton, ONNX, gRPC, CUDA, AWS EC2/S3, ClickHouse, Parquet, PyArrow
Computer Vision / Tools	OpenCV, ByteTrack, CVAT, Conda, tmux

LANGUAGES

Vietnamese: Native English: Intermediate; able to read technical documentation and research papers.