PHẠM HOÀNG AN

INTERN

CONTACT

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Giảng Võ, Hà Nội

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EDUCATION

2023- 2026
USTH

- Information and Communication Technology

2020 - 2023
THPT CHU VĂN AN

- Informatics class

CERTIFICATIONS

- Machine Learning Specialization -- Stanford / DeepLearning.AI (Coursera, 2025)

LANGUAGES

- English (Basics)
- French (DELF A2)

PROFILE

ICT student at USTH with hands-on experience in Machine Learning, Computer Vision, and software development. Built end-to-end projects including a multi-model video analysis pipeline and a deep learning classification system with real-time inference. Proficient in Python, with working knowledge of Java and C++. Familiar with cloud environments (Azure VM, Google Cloud) and Git-based workflows.

PROJECT

Computer Vision — 3/2026

Pickleball Match Analysis – Court Detection & Ball Tracking

GitHub: https://github.com/AnHgPham/computer-vision-pickleball-detection-court
Tech: Python, Ultralytics YOLOv8/YOLO11 (PyTorch), OpenCV, NumPy, Kalman Filter, Google Colab

- Built an end-to-end CV pipeline analyzing pickleball match videos: court keypoint detection (YOLOv8-Pose, 12 keypoints), ball tracking (4-stage cascade: YOLO + Classical CV + interpolation), and player detection with automatic team assignment.
- Implemented homography-based zone projection to map camera frames onto a 2D bird's-eye court view; added Kalman filtering with optical flow for temporal smoothing.
- Developed bounce detection (Y-trajectory analysis) with IN/OUT classification and generated triple minimap visualization + shot placement heatmap.

Deep Learning — 11/2025

Waste Classification System

GitHub: https://github.com/AnHgPham/waste-classification
Tech: Python, TensorFlow/Keras, Ultralytics YOLOv8 (PyTorch), OpenCV, TensorFlow Lite, NumPy, scikit-learn

- Led a team of [X] to build a 10-class waste classification system; implemented a baseline CNN and a MobileNetV2 transfer-learning model achieving ~95% accuracy.
- Built a reproducible ML pipeline: dataset exploration, 80/10/10 train/val/test split, training and evaluation (confusion matrix, classification report) using centralized configuration.
- Integrated real-time webcam inference by combining YOLOv8 object detection with the classifier to produce live labels/confidence.

SKILLS

Programming : Python (primary), Java, C++, SQL (basics)

ML / DL : TensorFlow/Keras, PyTorch (Ultralytics YOLO), scikit-learn, TensorFlow Lite

Computer Vision : OpenCV, image processing, object detection, keypoint detection, Kalman Filter

Cloud & DevOps : Azure VM, Google Cloud Compute Engine, SSH, Git/GitHub

Tools : Google Colab Pro, Linux CLI

Soft skills : Ownership, team collaboration, self-learning

AI-assisted dev : Cursor (Claude/GPT), Antigravity, ChatGPT-for prototyping & code review