

Profile

Chemical Engineering graduate with interdisciplinary experience in deep learning, embedded AI, and computer vision for real-time perception tasks. Skilled in Python, C++, and CUDA, with hands-on work in object detection, segmentation, and deployment of models on edge NPUs. Experienced in OpenCV and deep learning frameworks for machine perception. Seeking to contribute to robotics and intelligent systems through a junior perception engineer role.

Education

Chemical Engineering, BSE

Ho Chi Minh City University of Technology

October 2019 - November 2023

- GPA: **8.7/10** (Top **10%** of class, First Class Honors equivalent)

Employment

AI Compiler Engineer

BOS Semiconductor ([LinkedIn](#))

July 2024 – Present

- Designed and optimized perception models (YOLOv7/v8) for deploying deep learning models on RISC-V-based NPU hardware for Advanced Driver Assistance Systems (ADAS).
- Developed efficient inference implementation of ResNet, YOLOv7, YOLOv8, and UniAD models.
- Implemented and tuned high-performance C++ kernels for complex operations (e.g., deformable convolution, attention).
- Mentored 6 fresher engineers and documented workflows to ensure code reproducibility and maintainability.

Machine Learning Engineer

Graystone Data Systems Vietnam

February 2024 – April 2024

- Developed computer vision pipelines for segmentation and tracking in real-world challenges under industrial settings.
- Fine-tuned, evaluated and train CNN models using PyTorch and OpenCV.

Projects

Food Ordering Web Application ([Github](#))

ATCOLLABO Hackathon ([Website](#))

December 2023 – January 2024

- Build a backend for a food ordering website (Spring Boot, MySQL, JWT) in a team of 6.
- **2nd prize**, ATCOLLABO Hackathon 2023.

Novel zeolite-based composite preparation for CO₂ adsorption (*Published in Chemosphere, DOI*)

Ho Chi Minh City University of Technology

December 2022 – June 2023

- Co-developed a novel bead-like zeolite-chitosan composite via phase inversion and solvent exchange techniques.
- Characterized material using SEM, XRD, and adsorption isotherms, demonstrated **98% regeneration efficiency**.

Deplastify the Campus – BK CyCup ([Link](#))

Schoolab Asia ([LinkedIn](#))

October 2020 – March 2021

- Led a campus initiative to **reduce single-use plastic** at HCMUT through a reusable cup system.
- Designed, tested, and launched BK Cycup, a borrow-return cup prototype, with support from Schoolab and AYA Cup.

Skills

- **Image Processing:** Object Detection, Segmentation, Feature Extraction
- **Tools & Frameworks:** OpenCV, PyTorch, CUDA
- **Deep learning:** CNNs, Attention Mechanism, Machine Perception and Planning, Model Optimization for Edge Devices.
- **Inference Optimization:** Edge NPU Deployment (YOLOv7/v8, ResNet, UniAD)
- **Development:** Python, C++, Bash, Git

Course Work and Certificates

- **CUDA Programming** – University of Illinois (*Summer 2024*)
- **Machine Learning Specialization** – Andrew Ng
- **Deep Learning Specialization** – Andrew Ng
- **IELTS**: 6.5 Overall (*May 2021*)

Publications

1. Nguyen Minh Phuoc, **Lu Thanh Thien**, Nguyen Thi Truc Phuong, Ngo Tran Hoang Duong, Nguyen Van Dung, Nguyen Quang Long. "Novel chitosan-zeolite X composite beads prepared by phase-inversion method for CO₂ adsorptive capture.". *Chemosphere*, 2024. <https://doi.org/10.1016/j.chemosphere.2024.141538>
1. Cuong D.T., Phuong N.T.T., Phuoc N.M., **Thien L.T.**, Duong N.T.H., Van Dung N., Long N.Q. "Synthesize and Investigate the Applicability of Carbon Dioxide Capture of Zeolite-based Geopolymer Materials.". *Chemical Engineering Transactions*, 2023. [Scopus Record](#)