

# Le Thong Minh Triet

(+84) 339276849

✉ triet.lecsk20@hcmut.edu.vn

Machine Learning Engineer

📄 triet-le-thong-minh  
📄 github.com/LeTriet17



I am an aspiring deep learning engineer pursuing a bachelor's degree in computer science at the Ho Chi Minh University of Technology. With two years of hands-on experience, I have developed proficiency in various aspects of deep learning, including computer vision, time series forecasting, and evolutionary algorithms. My academic coursework has provided me with a strong theoretical foundation in machine learning concepts and techniques.

With a passion for continuous learning and creating solutions, I am looking forward to further developing my skills in deep learning methodologies and frameworks. My goal is to channel my enthusiasm for AI research and development into building innovative applications that can address real-world problems in ways that benefit people and society.

## SKILLS

**Programming languages:** C++, C, Python.

**Web Technologies:** HTML, CSS, JavaScript.

**ML/AI:** Pytorch, Tensorflow, Keras, Numpy, Pandas, Matplotlib, Seaborn.

**Miscellaneous:** SQL, Git, Shell, Latex.

## TECHNICAL EXPERIENCE

### REAL-TIME FACIAL EMOTION RECOGNITION SYSTEM

04/2023 — 06/2023

- The system detects faces in images/video streams, aligns them, and classifies emotional states using a pretrained model on a Jetson device.
- To optimize speed and throughput, the models were converted to TensorRT, and a Redis backend was implemented for fast data caching and retrieval.
- A backend API was built with FastAPI to provide inference services and a PyQt app was created for real-time visualization and analysis. The result is an efficient and accurate facial emotion analysis pipeline able to process streams of visual data in real-time at the edge.

### REAL-TIME PIG COUNTING SYSTEM FOR EDGE DEVICES

05/2023 — 06/2023

- Collected and annotated custom dataset of pigs in farms/fields
- Fine-tuned YOLOv7 object detector on this dataset to accurately identify and localize pigs in images and video feeds.
- Implemented object tracking to count pigs crossing designated areas and zones in the camera frame.
- Converted models to TensorRT for optimized inference speed on Jetson hardware. Built a FastAPI backend service to provide real-time pig counts and analytics.

### A FACIAL RECOGNITION AND FACE SEARCH SYSTEM

06/2023 — 07/2023

- The system detects faces in images using MTCNN and extracts face embeddings with FaceNet, a pretrained deep neural network.
- The embeddings are stored in a database, indexed using Faiss for efficient similarity search. New faces can be added to the database via the Python API.
- The project provides an end-to-end facial recognition pipeline enabling fast and accurate face search over large databases.

### VNPT TIME SERIES FORECASTING FOR NETWORK BEHAVIOR ANOMALY DETECTION

10/2022 — 03/2023

Computer Science and Engineering Lab, Pl. Dr. Quan Thanh Tho

Ho Chi Minh University of Technology

- Preprocessed data and developed new features for experimental and model fine-tuning purposes.
- Researched and built deep learning models (LSTM, Bi-LSTM, RNNs) to predict non-routine tasks.
- Currently publishing a paper named "A Systematic CL-MLP Approach for Online Forecasting of Multiple Key Performance Indicators" for The 2nd International Conference on Intelligence of Things 2023.

### USING EVOLUTIONARY ALGORITHM FOR SCHEDULING

04/2022 — 01/2023

Computer Science and Engineering Lab, Pl. Dr. Quan Thanh Tho

Ho Chi Minh University of Technology

- Applied NSGA-II Algorithm to determine the most optimal schedule for each team member in production planning
- Led weekly meeting with clients and advised clients with multiple solutions and priorities.
- Led a group of five students in debriefing, work distribution, supported and oversaw team members' work, and report making.
- I have an upcoming publication titled "Multi-task and Multi-team Work Order Scheduling Using Non-Dominated Sorting Genetic Algorithm II" the ICICT 2023 conference organized by Springer in London, United Kingdom.

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## EDUCATION

**Computer Science and Engineering undergraduate, Ho Chi Minh University of Technology**  
**Current overall GPA, 3.2/4**

10/2020 - Now

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## AWARDS AND CERTIFICATIONS

TRAVEL & PUBLICATION Scholarship.

2/2023

University's Merit-based scholarship.

6/2021, 12/2021, and 6/2022

Academic Incentive Scholarship

2021

Deep Learning Specialization, DeepLearning.AI

2/2023

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## ACTIVITIES

NVIAI SMART TECHNOLOGY COMPANY LIMITED

03/2023 - Now

DevUP Company

10/2022 - Now

Research Assistant at HCMUT VNPT LAB.

10/2021 - Now