Gia Huy Thai

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Education

VNUHCM - University of Science Sep 2023 - present
Bachelor of Science, Honor Program in Faculty of Information Technology *CGPA: 3.83/4.0*

Hoang Le Kha Highschool for the Gifted, Tay Ninh Sep 2020 - May 2023
Specialized in Mathematics *GPA (Grade 12): 9.5/10.0*

Projects

Multi-Dataset Image Classification | | *AI Viet Nam Capstone Project* Jan 2025

- Developed an interactive Streamlit-based web application for classifying images from MNIST and Cassava Leaf Disease datasets using the LeNet architecture.
- Customized two LeNet variations: one for grayscale (MNIST) and another for RGB (Cassava), with real-time predictions and confidence scores.
- Tech Stack: Python, PyTorch, Streamlit.

Simple Proxy Server | | *HCMUS Computer Networking Project* Dec 2024

- Developed a Windows-based proxy server with a GUI, supporting HTTP/HTTPS requests, logging, and blacklist management. Implemented request handling using Winsock and user interactions with WinAPI.
- Deployed the server with configurable port settings and features like real-time client/hostname monitoring and detailed logging in text files.
- Tech Stack: C++, Winsock, WinAPI.

Image Depth Estimation | | *AI Viet Nam Capstone Project* Aug 2024

- Developed a depth estimation system generating disparity maps from stereo images using pixel-wise and window-based matching with $\mathcal{L}_1$, $\mathcal{L}_2$, and Cosine Similarity metrics.
- Evaluated the system on real-world datasets, producing grayscale and colorized visual outputs.
- Tech Stack: Python, OpenCV, NumPy.

Image Segmentation using KMeans | | *Personal Project* Jul 2024

- Developed an interactive web application for image segmentation using the KMeans clustering algorithm, deployed on Streamlit.
- Enabled users to upload images or input image URLs, adjust cluster parameters, and visualize original and segmented results.
- Tech Stack: Python, Streamlit, OpenCV, scikit-learn.

Knight's Tour Visualization | | *Personal Project* Apr 2024

- Implemented a dynamic visualization of the Knight's Tour problem on an $n \times n$ chessboard using the p5.js library, allowing users to visualize the Knight's movements and algorithmic problem-solving.
- Integrated backtracking algorithms to find all possible solutions for smaller boards, showcasing the problem's complexity.
- Techstack: JavaScript, p5.js

Skills

Programming Languages	C/C++ (Advanced), Python (Advanced), R (Basics), JavaScript (Basics)
Frameworks and Libraries	NumPy, Matplotlib, Pandas, OpenCV, Scikit-learn, Pytorch, Streamlit
Mathematical Foundations	Calculus, Linear Algebra, Probability and Statistics, Matrix Calculus
Soft Skills	Problem Solving, Critical Thinking, LaTeX, Adaptability

Awards

Mobius Ribbon Challenge | **First Prize** Apr 2025
Awarded top honors in a faculty-level Mathematics and Computer Science competition

Faculty of Information Technology, HCMUS | **Dean's List 2023-2024** Dec 2024
Recognized for outstanding academic performance in the 2023–2024 academic year

Rencontres du Vietnam | **Vallet Fellowship 2023** Aug 2023
Prestigious scholarship awarded for academic excellence and research potential

Vietnam National Olympiad | **Third Prize on Mathematics** Mar 2023
National recognition for advanced problem-solving in Mathematics (2022–2023)

Extracurricular Experiences

AIVN Research Group | *Member* Feb 2025 - present
- Organized technical seminars on Mamba architecture, state-of-the-art Mixture-of-Experts (MoE) approaches, and DeepSeekMoE.
- Explored potential applications of sparse expert models for enhancing efficiency in medical AI systems.

AI Viet Nam | | *Community Member* Feb 2024 - Jun 2025
- Joined an organization that offers Artificial Intelligence and Data Science courses.
- Participated in career networking and received guidance on pursuing MSc and PhD research.

AIVN Research Group | *Member* Jun 2024 - Sep 2024
- Performed literature reviews and summarized papers on Cardiac MRI Reconstruction.
- Organized introductory seminars on fMRI image processing techniques.

AngelHack Hackathon | | *Participant* Jun 2024
- Designed an object detection system to recognize beer brands using Object Detection and Optical Character Recognition (OCR).
- Built a user-friendly interface with Streamlit, leveraging Python libraries (EasyOCR, OpenCV, Transformers) and the Salesforce BLIP model to generate image captions and provide business insights.

Vietnam School of Science 2023 | *Participant* Aug 2023
- Learned fundamental research methodologies through interactive sessions.
- Collaborated in a team to win first prize in Science-A-Thon Challenge.

Math and Science Summer Program 2023 | | *Mentee* Jul 2023 - Aug 2023
- Worked with a mentor to learn advanced Mathematical Finance concepts.
- Applied R programming to solve finance-related problems and analyze data.

STEM Express Program | | *Participant* Aug 2022 - Oct 2022
- Designed and developed an educational game for children to learn waste classification.
- Won first prize in the STEM Project Competition at the end of the program.