NGUYEN DINH DANH

Ho Chi Minh City, Viet Nam • henry.41148@gmail.com • (+84) 365 739 985 • linkedin.com/in/henry41148
henry41148.github.io • kaggle.com/henry41148

Aspiring AI engineer and educator with hands-on experience in deep learning, NLP, and computer vision. As a programming teacher, I simplify complex technical topics for students of all levels. I combine technical expertise with teaching experience to make abstract AI concepts clear, practical, and easy to apply in real-world settings.

WORK EXPERIENCE

Programming Teacher   **Oct 2024 - Present**
Algorithmics International School   **Ho Chi Minh City, Viet Nam**

- Deliver 15+ classes weekly across Python, AI, Web Dev, and Unity for students aged 10–16, in both fully English and bilingual formats.
- Co-designed an AI course now offered at local campus, covers Polars for data analysis, classic ML models (KNN, Decision Tree, Random Forest), and neural networks using PyTorch.
- Created a Pre-Unity course to prepare students in core math and logic concepts; early students sucessfully transitioned into the main Unity track.
- Guided students through hands-on, end-to-end projects, achieving 90%+ project completion and strong re-enrollment into advanced tracks.

Visiting Teacher   **Jun 2025 - Aug 2025**
Vietnam Australia International School   **Ho Chi Minh City, Viet Nam**

- Teach coding classes to 14–20 students per session in both fully English and bilingual formats, fostering an engaging and effective learning environment.
- Designed and delivered a 10-lesson Game Development course using Roblox Studio, introducing students to key concepts in game mechanics and Lua scripting.
- Co-designed and launched VAS's first cross-campus Esports competition, with participation from over 200 students; responsible for planning the format, managing technical setup, and running the event across campuses.

PROJECTS

Spatio-Temporal Graph Neural Networks for Traffic Forecasting   **Dec 2024 - Feb 2025**
Team size: 2 members | Deep Learning & AI Research

- Conducted an in-depth literature review and hands-on implementation of state-of-the-art GNN architectures for traffic prediction
- Benchmarked models such as DDGCRN, STWave, and AGCRN on real-world traffic datasets (PeMS) using MAE, RMSE, and MAPE as evaluation metrics
- Replicated and validated experimental results from original papers, achieving comparable performance on large-scale spatio-temporal benchmarks

Medical Chatbot ⧉   **Sep 2024 - Oct 2024**
Team size: 1 member | LLM

- Collected and structured 45,000+ doctor-patient interactions from iCliniq to build a custom medical Q&A dataset
- Fine-tuned a T5 transformer model to map symptoms to possible conditions and generate natural-language answers
- Deployed a live, interactive chatbot using Gradio on Hugging Face Spaces, allowing real-time medical query responses
- Demo video: https://youtu.be/nPS5KBo5zhU

Big Data Analytics: PCY Implementation in PySpark ⧉   **Mar 2024 - Mar 2024**
Team size: 5 members | Big Data

- Analyzed large-scale shopping basket data using the PCY algorithm to identify frequent item pairs and generate association rules
- Implemented the full pipeline in PySpark, including data preprocessing, hash bucket optimization, and multi-pass scanning
- Applied distributed computing with PySpark to process large-scale transaction datasets efficiently, enabling scalable analysis of frequent itemsets and simulating real-world market basket scenarios.

Weather and traffic forecasting application   **Nov 2023 - Nov 2023**
Team size: 2 members | ML + Android

- Built a custom IoT device with environmental sensors to collect real-time data (e.g., temperature, humidity, air quality)
- Preprocessed collected data and applied machine learning models to forecast environmental trends
- Developed an Android app to visualize sensor data and deliver real-time predictions to end users
- Demo video: https://youtu.be/fEdR2XuSrMw

EDUCATION

Ton Duc Thang University   **Oct 2021 - Oct 2025**
Bachelor of Science, Computer Science

- GPA: 8.24 / 10
- Semester GPA: 8.6 / 10

Phuoc Vinh Highschool   **Sep 2018 - Sep 2021**
Highschool Diploma

- Valedictorian, High School Entrance Exam - Ranked top 1 among enrolled students, 2018.
- Valedictorian of A01 stream at graduation - Top scorer in Math, Physics & English cohort.

SKILLS

Languages: Python, SQL, JavaScript, Java, C#

Data Science & AI:

Models & Concepts: Classic ML (scikit-learn), Deep Learning (PyTorch, CNN, RNN/LSTM), Transformers (Hugging Face)

Data & Visualization Tools: Pandas, Polars, PySpark, NumPy, Matplotlib, Plotly

Web Development:

Backend: Flask, Node.js

Frontend: HTML, CSS, JavaScript

Game Development: Unity

LANGUAGES

Vietnamese (Native proficiency) • **English** (Professional working proficiency)

CERTIFICATIONS

TOEIC - Score: 860 by **ETS (Educational Testing Service)**   **Apr 2025**

Transformer Models and BERT Model by **Google Cloud Skills Boost**