LUONG DAC NGUYEN

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I'm on a path to becoming an AI Engineer who understands not just how models work, but how they fit into complete, production-ready systems. My interest naturally extends beyond model performance to how AI can be deployed, scaled, and maintained reliably.

EDUCATION

University Of Information Technology - Vietnam National University – Ho Chi Minh City **Aug 2023 - Present**

Third-Year Student In The Data Science Bachelor's Program

- Cumulative GPA: 9.24 – Highest in Data Science major (as of present)

- Academic Encouragement Scholarship - 3/4 semesters

- Language certification: IELTS 6.0 (4/2023)

Certification: Introduction to Statistics, Machine Learning Specialization, Deep Learning Specialization (Stanford Online | DeepLearing.AI), SQL Beginner To Expert (Udemy), SQL Advanced/Intermediate Certificate (HackerRank), Google Data Analytics Professional Certificate (In progress), The Linux Foundation - Open Source Software Development, Linux and Git Specialization (In progress), IBM AI Engineering Professional Certificate (In progress).

TECHNICAL SKILLS

- **Programming Languages**: Python, SQL, Bash, C++.
- **Technologies & Tools**: LangChain, Git, FastAPI, Docker, Azure, PowerBI, Ubuntu/Linux VPS.
- **AI Engineering Skills**: Data Preprocessing and Dataset Construction, Retrieval-Augmented Generation (RAG), Web crawling & API integration, Model deployment and evaluation, Agent-based workflows, ML system design.
- **Collaboration & Development**: Technical documentation, Research-driven implementation, Independent learning, Cross-team communication.

EXPERIENCE

Academic Leader – Academic Club, Information Systems Department **Aug 2024 – Present**

Lead all academic activities across multiple subject groups within the department's student-led club. Organized and facilitated both in-person and online review sessions, focusing on peer learning and exam preparation. Previously led study teams for Linear Algebra, Probability & Statistics, and Database Systems, while also developing structured review materials to support academic success across cohorts.

Artificial Intelligence for Interdisciplinarity Club - UEL **Oct 2024 - Present**

Learn on the application of artificial intelligence across various fields, particularly in economics.

Host of talk show AI For All: **Dec 2024 - Mar 2025**

Served as the primary host for 4/7 technology talk shows at the club. Directly facilitated and guided discussions with prominent industry speakers. Developed specialized content and directed conversations on advanced AI topics including RAG in e-commerce, AI applications in education, business management, and financial market analysis.

ACADEMIC COMPETITIONS

National-Level Awards

Runner-up – Web3 & AI Ideathon 2025 **Mar 2025**

- One of the largest national ideathons, gathering over 1,000 teams and top-tier AI/Web3 projects from across Vietnam.
- Secured Runner-up with "NongTri AI" – a domain-specific chatbot solution for smart agriculture.

3rd Prize – Math Model Challenge Hanoi 2024 **Aug 2024**

- A national mathematical modeling competition for university and high school students, which has been held 10 times, attracting wide participation and recognition.

University-Level Awards

1st Prize – ISE SPARK OF IDEA FALL 2024 **Oct 2024**

- Won First Prize in university-level innovation competition hosted by UIT.

PROJECTS

Nông Trí AI - Smart Agriculture Chatbot **Jan - Mar 2025**

Developing an intelligent chatbot utilizing Retrieval-Augmented Generation (RAG) technology to support farmers, especially with knowledge about coffee, pepper, and durian. The system integrates advanced Vietnamese embeddings and an optimized, multi-branch parallel RAG pipeline.

- **Vietnamese Embedding:** Optimized text representation using the `vietnamese-embedding` model.
- **RAG Pipeline:** Built an end-to-end RAG pipeline for question reformulation and contextual retrieval, with multi RAG optimization techniques like multi-queries, routing database,...
- **Tech Stack:** FastAPI, ChromaDB, Langchain, Langsmith, Hugging Face models, Netlify, Windows/Linux server hosting.
- **Deployment:**
  - Product Introduction: nongtri.netlify.app
  - Chatbot Demo: nongtrichat.netlify.app

Black-Scholes Model In Options Pricing Finance **Oct - Dec 2024**

Essay in Advanced Probability and Statistics Course: Explain the mathematical basis of the Black-Scholes model using Brownian motion, stochastic differential equations, Ito's lemma, and economic knowledge of options and derivatives markets

- Responsible for Part II of the report: Stochastic Differential Equations SDEs

Analysis of ICT Recruitment Trends and Development of a Recommendation System **Mar - June 2025**

Conducted research, collection, and analysis of a large dataset of ICT job postings to identify trends, and built an interactive dashboard to visualize the data.

- Built and deployed an automated data scraping system using **Selenium and BeautifulSoup** on a VPS to collect over 4,000 job postings from websites such as **TopCV**, integrating anti-bot mechanisms like IP rotation and request throttling, and developed a module to automatically retry failed requests, ensuring data integrity.
- Performed comprehensive data analysis, from organizing the raw data to building an interactive dashboard with **Power BI** to visualize key recruitment trends.
- Conducted foundational research on the ICT job market and existing recommendation systems to define the project's scope and objectives.

Modeling Insulin–Glucose Interaction to Ensure Stability and Homeostasis **Aug 2024**

Developing a model that represents the interaction between insulin and glucose, ensuring stability and reflecting the body's homeostasis. The model should control glucose primarily through insulin and be personalized for at least one patient based on meal data and blood glucose levels.

- Researching factors related to glucose concentration and the two types of diabetes.
- Used ordinary differential equations (ODEs) to predict glucose concentration dependence on related hormones, improving model accuracy by including glucagon.
- Developed a second model using a sigmoid function to represent glucose from food, showing a better fit with real data compared to the original model.

LEADERSHIP & EXTRA-CURRICULAR ACTIVITIES

Class Monitor **Aug 2023 - Present**

Awarded Outstanding Class Monitor 2024

- Led and supported a class of 60 students, serving as the main communication channel between the student body and university administration (Achieved the Outstanding Class Monitor 2024, awarded to only 11 class monitors across all cohorts in the university).

Member, UIT Leader Club **Aug 2023 - Present**

Achieved Top 5 in the Student Leader Competition 2024 - A traditional university-wide competition lasting nearly two months with 4 challenging rounds, focusing on general knowledge, presentation skills, arts, leadership, and critical thinking.

- Contributed to organizing multiple university-wide workshops attracting large audiences.

Awards & Recognition

- **Student with 5 Good Merits 2024, University Level:** A prestigious award for comprehensive excellence in academics, ethics, physical fitness, volunteerism, and integration.
- **3rd Prize**, Ambassador of Reading Culture 2025.