

Contact

www.linkedin.com/in/minhnguyentong02 (LinkedIn)
github.com/minhngt62 (Personal)

Top Skills

Agile Methodologies
Artificial Intelligence (AI)
SQL Server Integration Services (SSIS)

Languages

English (Professional Working)
Vietnamese (Native or Bilingual)

Publications

Out-of-distribution Detection via
Nearest Neighbors and Null Vectors
on Principal Feature Space

Minh Nguyen Tong

BSc. DS&AI @HUST, AI Engineer @Viettel
Hanoi Capital Region

Summary

I am an undergraduate pursuing a Bachelor's degree of Data Science & Artificial Intelligence at Hanoi University of Science and Technology (HUST). I am interested in AI-relevant applications and eager to study the professional workflow and procedures to design and build completed, and even successful smart products. In other words, development operation and management are what I am developing for now.

Experience

Viettel High Tech

1 year 9 months

AI Engineer

November 2023 - Present (1 year 5 months)

Hanoi, Hanoi, Vietnam

Researched and developed machine learning models and data-centric solutions to serve business use cases and products (e.g., VMS and SMH).

Contributions highlighted:

- Efficient labeling: Minimize the cost of utilizing PROD big data for machine learning. UAT demonstrated 80% reduction in labeling cost, 5-10% data volume to reach 95% full-training, 2-5% performance boost over previous state-of-the-art solutions.
- Video synopsis: Optimize the management cost of large surveillance archive. UAT demonstrated high-quality "compressed" videos with 50% reduction in processing time, 90% reduction in surveillance time.

Maintained and optimized machine learning models on production including various configurations (i.e., cloud, on-premise, edge) that are relevant to surveillance and tracking. Contributions highlighted:

- Out-of-distribution rail: Automatically filter irrelevant data (adhere to data quality dimension), which does not contain any objects of interest to PROD models. Staging benchmarks demonstrated the models' recovery to below 50% FPR@95, competitive to previous academic methods.

Viettel Digital Talent

July 2023 - October 2023 (4 months)

Hanoi, Hanoi, Vietnam

- Research deep learning compression techniques for videos and images using custom encoder-decoder architectures and auto-aggressive framework with implicit representation.
- Approach foundations of modern artificial intelligence (e.g., foundation models, knowledge graph, neuro-symbolic AI,...) and studied popular applied fields (e.g., computer vision) and its applications.

The International Research Center for Artificial Intelligence (BK.AI) Machine Learning Research Assistant

December 2022 - Present (2 years 4 months)

Hanoi, Hanoi, Vietnam

Our research group focuses on some fundamental problems of Machine Learning in general and Deep Learning in particular. We also study to use modern technologies from Machine Learning to other application areas.

- Mainly research on Optimal Transport theory and its regularization methodologies to mitigate convergence and computational complexity issues.
- Collaborate with team members to conduct literature reviews on research directions of the lab, focusing on Machine Learning and its applications; and assist in designing experiments and methodologies.
- Engage as a teaching assistant for newcomer lab training and on-site university lectures.

Sun Life

7 months

Data Engineer

October 2022 - January 2023 (4 months)

Ho Chi Minh City, Vietnam

The department is responsible for delivering combination of data services to provide functionality for the end-user or client:

- Collaborate with different teams to develop ETL/ELT pipelines, support UAT performed by Client Benefits and deploy on PROD environment for serving internal business.
- Migrate paginated reports and data from databases on-premises to cloud servers using integration services with data governance for semantic mapping.

Digital Initiatives

July 2022 - October 2022 (4 months)

Hanoi, Hanoi, Vietnam

The Digital Initiatives department is established to apply cutting-edge technology (artificial intelligence,...) to the company's business, achieving productivity and optimizing products and services.

- Research and design conversational AI (button/free-text service chatbot) which is expected to automate general customer queries and client benefit services.

Cinnamon AI

AI Trainee

June 2022 - September 2022 (4 months)

Hanoi, Hanoi, Vietnam

Cinnamon Summer AI Bootcamp 2022 is a hands-on class that teaches coding, artificial intelligence, how to build a product from scratch, and careers in tech, for any students worldwide to join annually. We studied deep learning (computer vision, NLP), workflows and relevance (SCRUM, Docker, AWS,...) and building a deep learning minimum viable product (MVP) – Table Extraction from Unstructured documents.

My responsibility in MVP project:

1. Responsible for the Table Structure Recognition (TSR) task and resolved it using DETR - Detection Transformer (<https://arxiv.org/abs/2005.12872>).
2. Defined the business orientation, and designed a lean canvas to sum up the business model.

VIS Laboratory

Machine Learning Intern

May 2022 - June 2022 (2 months)

Hanoi, Hanoi, Vietnam

Participated in developing multi-task reinforcement learning agents that can deal with multiple simulated board games (splendor, machi koro,...).

Education

Hanoi University of Science and Technology

Bachelor's degree, Data Science and Artificial Intelligence · (2020 - 2024)

High School for Gifted Students, Hanoi University of Science,
Vietnam National University
High School Diploma, Physics · (2017 - 2020)