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Summary

AI Engineer with extensive experience in developing conversational AI solutions and language processing systems. I am passionate about leveraging my expertise in creating multimodal chatbots, implementing natural language understanding systems, and optimizing AI models. My background in leading cross-functional teams to deliver cutting-edge technologies in the banking and technology sectors positions me to add immediate value to your team. Currently researching mitigating hallucinations in large language models, I am eager to apply my academic insights and practical experience to help your team navigate complex technological challenges and drive business transformation through AI-powered innovations.

Specialties: Large Language Model, Natural Language Processing, Speech Technology, Chatbot, Artificial Intelligence, Machine Learning, Deep Learning, Data Engineering, MLops.

Education

2024 – 2026
(expected)

- ◇ **MSc, University of Copenhagen**, IT and Cognition.
Recipient of Danish Government Scholarship.
Achieved **1st** place in the Multilingual Text Detoxification (TextDetox 2025) Competition by fine-tuning the Gemma-3 model, combined with a data augmentation strategy
Relevant Courses: Online and Reinforcement Learning, Computational Cognitive Science, Vision and Image Processing, Language Processing

2017 – 2021

- ◇ **BSc, Hanoi University of Science and Technology**, Computer Science
Thesis: *Vietnamese Natural Language Understanding in Context-Aware Conversations*
GPA: **3.62**, In-Major GPA: **3.82** | Best Presentation Award | Valedictorian
Relevant Courses and Projects:
 - **Web Technology and Online Services:** Developed an Online Learning Platform for managing students, lectures, and classrooms, integrating chat and meeting functionalities via Twilio.
 - **Deep Learning and Its Applications:** Built Movie Controller, a Chrome extension for YouTube that enables video control through gesture recognition. Collected, processed, and trained a gesture detection model for deployment.

Skills

- ◇ Extensive experience with the entire ML process, including data collection, model training and evaluation, and deployment to production.
- ◇ Proficient in programming tools: Python, JavaScript, OOP, Pandas, PyTorch, TensorFlow, NLTK, Scipy, Matplotlib, Git, AWS, Azure, Docker, Terraform, FastAPI, Flask, HuggingFace, LlamaIndex, Langchain.
- ◇ Strong data analysis and visualization skills.
- ◇ Experience in fine-tuning LLMs and building Retrieval-Augmented Generation (RAG) systems.

Employment History

Research Assistant, Aalborg University

01/2025 – PRESENT

Mitigating LLM Hallucinations

- ◇ Developing an automated training evaluation pipeline and researching the impact of fine-tuning on reducing hallucinations in large language models.

Teaching Assistant, IT University of Copenhagen

01/2025 - 05/2025

Natural Language Processing and Deep Learning

- ◇ Assisted in course instruction by preparing assignments, supporting students during classes, and providing grading and constructive feedback. Helped facilitate a productive learning environment by addressing student questions and reinforcing key concepts.

AI Engineer, Veriserve Vietnam

02/2023 - 08/2024

Internal LLMs Chatbot

- ◇ Developed an internal multimodal chatbot using LlamaIndex and OpenAI's ChatGPT-4, facilitating seamless inquiry and response for company documents.
- ◇ Enhanced agent adaptability by integrating additional tools such as a Python interpreter, edge device controllers, and Pandas queries over large Excel files.
- ◇ Built an internal library to effectively read and extract information from multiple data types, including PDF, PPTX, DOCX, XLSX, and images.

Surface Defect Image Generation

- ◇ Adapted the SinDiffusion model for few-shot learning, training on a 20-sample dataset to achieve a 0.04 SIFID score in replicating real-world defects on product surfaces.
- ◇ Integrated the paint2image feature, offering users customization options and control over the synthesis process.
- ◇ Built a user-friendly web application built on Streamlit that simplify image generation process.

AI Engineer, Vbee Joint Stock Company

12/2019 to 09/2022

AICallCenter

- ◇ Led a team of 4 members to solve problems related to AI Call Center System.
- ◇ Researched speaker adaptation strategies to incorporate new voices into Vietnamese multi-speaker speech synthesis models, resulting in an 85% reduction in required training data, while effectively handling English loanwords and noisy data.
- ◇ Constructed and deployed auto-scale real-time speech synthesis system on AWS EKS and built CI-CD pipeline using Git action.

SmartDialog

- ◇ Analyzed common typing errors in Vietnamese chat history to build models for automated error correction. Specifically, implemented a new Transformer-based Vietnamese diacritic restoration model for the banking domain, achieving 98% accuracy and tripling speed.
- ◇ Developed a context-aware Vietnamese Natural Language Understanding system for the banking domain, handling small, unbalanced datasets with 97% accuracy, improving intent classification by 20% and slot tagging by 12%, and reducing training time by 3.5x and inference time by 7.5x on CPU.
- ◇ Built a system to assist in chatbot dataset building, including collecting and analyzing historical data, suggesting viable intents, and conducting semi-automated data labeling.

Publication

- ◇ Trang, N. T. T., **Anh, D. T. D.**, Viet, V. Q., Woomyoung, P.(2022). Building Vietnamese Conversational Smart Home Dataset and Natural Language Understanding Model Interspeech 2022
- ◇ Trang, N. T. T., **Anh, D. T. D.**, Viet, V. Q., Woomyoung, P.(2022). Advanced Joint Model for Vietnamese Intent Detection and Slot Tagging EAI INISCOM 2022
- ◇ **Anh, D. T. D.**, & Trang, N. T. T. (2020). TDP – A Hybrid Diacritic Restoration with Transformer Decoder. Pacific Asia Conference on Language, Information and Computation, pp.76-83