# **HUY PHAM (AEHUS)**

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## PROFESSIONAL SUMMARY

I'm Huy Pham, an NLP Scientist with over two years of experience specializing in Large Language Models (LLMs). Currently, at ZaloAI, I'm responsible for developing models for Vietnamese language tasks, image captioning, dialogue systems, and model pre-training.

I've co-developed VinaLLaMA, Vietcuna. These two model series are one of the first Large Language Models in Vietnam . I'm also co-authored of ViDeBERTa, which was accepted at EACL 2023.

I'm passionate about new technologies and innovative ideas, especially in Generative AI.

## PUBLICATIONS & MODELS

#### ViDeBERTa - EACL 2023

The 17th Conference of the European Chapter of the Association for Computational Linguistics

A new pre-trained monolingual language model for Vietnamese, pre-trained on a large-scale corpus of high-quality and diverse Vietnamese texts.

#### **VinaLLaMA**

The powerful Vietnamese LLM models with in-house data

Co-developed VinaLLaMA, a Vietnamese LLM outperforming other models on diverse tasks with thousands of downloads monthly. We continue-training these models from LLaMA with our collected data, including in-house synthetic data.

## Vietcuna

The first generation of Vietnamese LLMs

Co-developed Vietcuna, the first LLM for the Vietnamese community, based on BLOOMZ with Vietnamese instruction data.

# BARTpho+R-Drop - The 10th STSOISP

The 10th Science and Technology Symposium for OISP Students

Enhanced BARTpho performance for Vietnamese text summarization using R-Drop regularization.

## RESEARCH & WORK EXPERIENCE

## Zalo AI, VNG Corporation

Jul 2023 - present

LLM Scientist

- Develop the image generation models to generate images based on Vietnamese text description
- Developed vision language models for image captioning, OCR and vision question answering. Our model achieve 42.6, which is the highest results on MTVQA
- Lead development of KiLM for Vietnamese language tasks, focusing on dialogue systems. In this project, we improve our model upto 95% of GPT-40 ability on our in-house benchmark, which is based on TencentLMEval
- Preparing synthetic data for fine-tuning KiLM, which lead this model achieves 66.07, surpass GPT-4 on VMLU, utilizing techniques such as instruction tuning and synthetic data generation.
- Handling the massive pre-training data from variety domains for KiLM, our Large Language Model.
  Furthermore, I work on research about different domain weighting strategies in pre-training.

AI Research Engineer

- Co-authored ViDeBERTa, a state-of-the-art Vietnamese pre-trained model, presented at EACL 2023.
- Designed and implemented a chatbot using embedding search and Retrieval-Augmented Generation (RAG) systems. With this solution, we achieve third prize at AIC Hackathon 2023
- Researched efficient fine-tuning methods for transformer models like: LoRA, Prefix-tuning, Adapter,...
- Researched efficient transformer architectures to reduce the complexity of attention mechanisms.

# FPT Software Quy Nhon AI, FPT Corporation

Jan 2022 - Apr 2022

AI Engineer Intern

• Contributed to floor plan recognition projects, detecting architectural elements in images.

#### RESEARCH INTERESTS

- Multi-modality Large Language Models.
- Multilingual Large Language Models.
- Small Large Language Models
- Enhance the LLM abilities on specific tasks.

## TECHNICAL SKILLS

- Expertise in fine-tuning large-scale models (LLMs, VLMs) and prompt engineering.
- Extensive experience with Langchain, Hugging Face, Axolotl, and Retrieval-Augmented Generation (RAG) systems.
- Strong understanding of transformer architectures and their efficient variants.
- Proficient in multi-modal (image-text) and multilingual (English, Vietnamese) model development.
- Experience with prominent models: Gemma, Qwen, LlaMA-2, Mistral, GPT-3/4.
- Developed chatbots and semantic search systems using large language models.

#### LEADERSHIP AND SOCIAL ENGAGEMENT

- AI Facilitator at Build With AI HCMC 2024.
- Mentor in NLP at GDSC Hackathon 2024.
- External Relations Lead, GDSC Hackathon 2023.
- Guest Speaker on leadership at GDSC Summit 2023.
- Chapter Lead, Google Developer Student Clubs (GDSC), 2022-2023.

## **EDUCATION**

# Ho Chi Minh City University of Technology

2019-2023

2019

BSc in Computer Science

IELTS 6.5

Long An High School for the Gifted

2016-2019

Specialized in Math, Provincial Olympiad Scholar