

HUY NGO

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Scholar: [profile](#)

Blog: [Algorithms Coding](#)

EDUCATION

- Computer Science, Posts and Telecommunications Institute of Technology (PTIT), 2017 - 2022. Graduation Thesis score 9.5/10

PUBLICATIONS

- **Ngo Quang Huy**, Tu Minh Phuong, and Ngo Xuan Bach. *Autoencoding Language Model Based Ensemble Learning for Commonsense Validation and Explanation*. [paper](#)
- **Ngo Quang Huy**, Nguyen Duc Manh Tuan, Nguyen Anh Duong, and Pham Quang Nhat Minh. *AimeLaw at ALQAC 2021: Enriching Neural Network Models with Legal-Domain Knowledge*. KSE 2021. [paper](#)

EXPERIENCE

Electronics Research Lab

Intern

Sep 2018 - Jan 2019

- Implementing some Clustering methods on some popular public datasets
- Implementing Transfer Learning for image classification

PTIT Machine Learning and Applications Lab

Research Assistant (Director: Associate Prof. Ngo Xuan Bach, [homepage](#))

Aug 2020 - present

- Conducting experiments on Sequence Labeling tasks
- Conducting experiments on Text Classification tasks
- Proposing an ensemble method based on Autoencoding Language Model (LLMs) for the Commonsense Validation and Explanation task (outperforms the state-of-the-art result)

Aimesoft JSC

AI Research Engineer

Jan 2021 - present

- AimeGPT (Tech Lead, Engineer): Pretraining LLMs (GPT-3) from scratch, evaluation, optimizing, fine-tuning, deploying Text Generation APIs at scales. Building ChatGPT alternative (SFT LLMs combined with Reinforcement Learning from Human Feedback)
- Text To Speech (Tech Lead, Engineer): Creating the whole Text-To-Speech platform of Aimesoft
- Automatic Speech Recognition (Tech Lead, Engineer): building ASR systems for Vietnamese, Japanese
- Voice Cloning (Tech Lead, Engineer): building a voice cloning system
- Text Summarization (Tech Lead, Engineer): doing research using LLMs (GPT-2, GPT-3, BART, T5), designing, building and training LLM based summarization model, deploying APIs at scales
- Toshiba ASR Toolkit (Engineer): Preprocessing data for Romanian and Hungarian to build acoustic models
- Sound Event Detection (Tech Lead, Engineer)
- Vietnamese Legal Processing: participating in the ALQAC 2021 workshop and won Task 2

TECHNICAL SKILLS

- **AI:**
 - NLP/LLMs: Regularly conduct research/experiments using LLMs to address various NLP tasks (such as Sentiment Analysis, Text Summarization, Textual Entailment, Question Answering, Text Generation) or specific use cases. Be able to guide a team to develop a LLM from scratch (including data collection, preprocessing, pretraining, evaluation) then optimize and deploy it. Try to stay up-to-date with latest techniques/papers related to NLP, LLMs.
 - Speech Synthesis: build speech corpus from scratch, build end-to-end neural speech synthesis systems (such as Tacotron 2, FastSpeech 1/2)
 - Speech Recognition: pre-training and fine-tuning Wav2Vec2
 - Voice Cloning
 - Voice Conversion
 - Speech Processing
 - Deep Learning
 - Machine Learning
- **Deep Learning frameworks/tools/libraries:** Python, PyTorch, Numpy, Pandas, Tensorflow2/Keras, Scikit-learn, DeepSpeed, ONNX, Trl, Trlx, Kaldi
- **Software Engineering:** FastAPI, Flask, Linux, Git, Docker
- **Cloud Computing:** Google Cloud Platform (GCP), Amazon Web Services (AWS)

CERTIFICATIONS

Deep Learning Specialization - DeepLearning.AI
[certificate](#)

Nov 2018 - present

Natural Language Processing Specialization - DeepLearning.AI
[certificate](#)

Aug 2020 - present

Natural Language Processing in Tensorflow - DeepLearning.AI
[certificate](#)

Jul 2020 - present

ACTIVITIES AND AWARDS

- Best Presentation Award (KSE 2021, ALQAC). [certificate](#)
- First Prize in Task 2: Legal Textual Entailment (KSE 2021, ALQAC). [certificate](#)
- Second Prize in Task 3: Legal Question Answering (KSE 2021, ALQAC)
- Second Prize in Task 1: Legal Document Retrieval (KSE 2021, ALQAC)

OPEN-SOURCE/PERSONAL PROJECTS

- Graduation Thesis: Common Sense Validation, Explanation and Generation. Score: 9.5/10.
- Contributor of [Huggingface](#), state-of-the-art and largest open-source NLP library. One of my pull requests is to fix generating bad words error.
- My own blog about Data structures, Algorithms (2019). [link](#)
- Implementing GPT-2 from scratch for Text Summarization (2020). [link](#)
- Hidden Markov Model for POS Tagging (2020). [link](#)
- BiLSTM-CRF for POS Tagging (2020). [link](#)
- BERT for POS Tagging on social media text (2020). [link](#)

OTHER SKILLS

Languages English: full professional proficiency. Vietnamese: native.

Management : Leadership, planning, communication, organizational skills, hard skills