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## Publications

- 1 **Vu, Hieu M** and Tan Minh Nguyen (2025). “Angular Steering: Behavior Control via Rotation in Activation Space”. In: *Advances in Neural Information Processing Systems*. **Spotlight (top 3.5%)**.
- 2 Son, Nguyen Hong, **Hieu M Vu**, Tuan-Anh D Nguyen, and Minh-Tien Nguyen (2022). “Jointly Learning Span Extraction and Sequence Labeling for Information Extraction from Business Documents”. In: *2022 International Joint Conference on Neural Networks (IJCNN)*. **Oral**. IEEE, pp. 1–8.
- 3 Nguyen, Tuan-Anh D, **Hieu M Vu**, Nguyen Hong Son, and Minh-Tien Nguyen (2021). “A Span Extraction Approach for Information Extraction on Visually-Rich Documents”. In: *Document Analysis and Recognition-ICDAR 2021 Workshops: Lausanne, Switzerland, September 5–10, 2021, Proceedings, Part II* 16. **Best Paper Award**. Springer, pp. 353–363.

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## Education

**Bachelor Degree, Computer Science (Honours Programme)** **2020**  
*UET - Vietnam National University, Hanoi* *GPA: 3.83/4.00 (Rank: 1st/700+)*  
• **Highest Ranking Graduate.**

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## Honours and Awards

**Best Paper Award** **2021**  
*ICDAR 2021, Workshop on Document Images and Language*

Paper title: [A Span Extraction Approach for Information Extraction on Visually-Rich Documents](#)  
Accepted for oral presentation and awarded the Best Paper Award at [Workshop on Document Images and Language, ICDAR 2021](#).

**Certificate of Highest Ranking Graduate** **2020**  
*UET - Vietnam National University*  
Awarded to students graduate with the highest GPA amongst the graduating class.

**Certificate of Merit for Excellent Graduation** **2020**  
*Vietnam National University*  
Awarded by the President of Vietnam National University to students with excellent academic performance and level of conduct during a 4-year undergraduate programme.

**Certificate of Excellent Thesis Defence** **2020**  
*UET - Vietnam National University*  
Awarded to the best thesis of the Undergraduate Thesis Defence Committee.  
Thesis title: A Layout-aware key-value relation predicting model for document images.

**Top 4 Zalo AI Challenge 2018 - Voice Track (Individual participant)** **2018**  
*Zalo, VNG Corporation*  
Finished at 4th place on the Private Leaderboard of the Voice Gender/Accent Classification challenge.  
[Zalo AI Challenge](#) is an annual Kaggle-like competition hosted by Zalo - one of the biggest tech companies in Vietnam. In 2018, the competition attracted over 700 teams competed in 3 challenges.

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## Professional Services

**Teaching/Mentoring**  
*Cinnamon AI Bootcamp 2020, 2022, 2023*

- Mentored groups of 3-4 students.
- Designed syllabus, prepared entrance tests, interviewed candidates.
- Prepared materials and gave lectures on Language Modelling and Transformers.

**Reviewer**  
*ICLR 2026, MoFA @ ICML 2025, XLLM-Reason-Plan @ COLM 2025*

## Experience

### AI Research Engineer

July 2024 — Present

*Torilab*

- **Building AI avatars.**
  - Conducting research on controlling LLMs' behaviours without prompting (i.e. activation steering).
  - LLMs fine-tuning (SFT, DPO, classification), prompt engineering, LLMs serving (vLLM, sglang, LitServe) with dynamic batching.
  - Developing the core framework for the customizable chatbots with memory, tool use, dynamic prompts and multi-turn interactions.
  - Other random tasks: User's engagement detection with head-pose tracking; Image Generation with Diffusion-based models and LoRAs; multi-speaker diarization.

### AI Research Engineer

Nov 2018 — May 2024

*Cinnamon AI*

- **Developed RAG-based applications.**
  - Co-creator of **kotaemon** (24.5k+ ★): An open-source tool for local RAG application built for both end users and developers.
  - Built demos for LLM-powered applications targeting the Insurance domain.
- **Researched, developed, and implemented AI solutions for Document Image Understanding.**
  - Information Extraction and Cross-lingual adaptive pre-training for a low-resource language (Japanese).
  - Created new technical assets by introducing new Information Extraction models that became the new standard for client projects. Increased the f1-score by 2% - 7%.
  - Publish **papers** on Information Extraction at peer-reviewed conferences, 1 Best Paper Award at DIL-ICDAR'21.
- **Developed data-driven products and processes.**
  - Implement synchronization and local version control for the internal data management system.
  - Initiated data standardization, defined and implemented processes regarding data life cycle and organization.
- Other tasks: Support cross-department alignment; Conduct/Facilitate technical sharing sessions; Training/Mentoring.

### Undergraduate Research Assistant

Aug 2017 — Sep 2019

*IOT Lab, UET - Vietnam National University*

- **Predictive models for wellbore data using machine learning and statistical methods.**
  - Facies/rock type classification; Time-series Analysis; Permeability Regression; Integrated Prediction Error Filter Analysis (INPEFA) curve calculation; Cumulative and Federated Learning.

## Personal Projects

### **Kotaemon** (24.5k+ ★) - An open-source tool for local RAG application.

Jan 2024 — May 2024

*Open-source project, Co-creator*



- A local RAG-based tool for chatting with your documents. Built with both end users and developers in mind.
- For end users: A local Question Answering UI for RAG-based QA.
- For developers: A framework for building your own RAG-based QA pipeline.

### **Data Utility Improvement Experiment for DECAF**

Oct 2022 — Nov 2022

*Personal research*



- A personal research on Causal Inference, Algorithmic Fairness and specifically the paper **DECAF: Generating Fair Synthetic Data Using Causally-Aware Generative networks**.
- Improved data utility of the DECAF method using alternating graph during synthesis while still achieving similar level of fairness.

### **Gender/Accent Classification for Vietnamese short voice recordings**

Aug 2018 — Sep 2018

*Zalo AI Challenge 2018*



- Classify the speaker's voice in a recording (typically under 3 seconds) by gender and regional accent.
- **4th place** on the Private Leaderboard, achieved **79.208% accuracy** in 10 days as an **individual participant**.