THANG PHAN CHAU

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RESEARCH INTERESTS

Large Language Models, Vision-Language Models, Large Model Reasoning, Multimodal Learning, Efficient Learning.

EDUCATION

University of Information Technology, Vietnam National University (VNU-HCM) Sep. 2020 - Mar. 2025
Ho Chi Minh City, Vietnam.
Majoring in Data Science. GPA: 3.5/4.0.
Thesis: ViSoBERT: A Pre-Trained Language Model for Vietnamese Social Media Text Processing. Mark 4.0/4.0.

WORK EXPERIENCES

AI Center, FPT Software, Vietnam. Mar. 2024 - Present
AI Research Resident

Topic: Language Large Models, Multimodal Learning, Agent-based Systems, AI4Code.

Project: *AgileCoder Dynamic Collaborative Agents for Software Development based on Agile Methodology.*

- Proposed a novel multi-agent framework, powered by LLMs and Agile, allowing for flexible and dynamic progess, thereby enhancing the adaptability and the likelihood of success.
- Developed a dependency graph capturing the relationships among code files for efficient code generation.
- Conducted comprehensive experiments to demonstrate the efficacy of the proposed method. Our project on GitHub has received over **410 stars** from the community.

Project: *CodeMMLU: A Multi-Task Benchmark for Assessing Code Understanding Capabilities of CodeLLMs.*

- Developed a synthesis pipline to construct a new benchmark with nearly 20,000 questions, spanning diverse domains, to evaluate the depth of software and code comprehension in LLMs.
- Conducted extensive experiments to analyze the behavior of various LLMs in code understanding and reasoning, revealing that GPT4o or Claude Chain-of-Thought (CoT) reasoning fails in many scenarios.

On-going Project: *Visual Long Program of Thought.*

- Develop vision-language model for agentic tasks to enhance long-form reasoning and tool-using code capabilities.
- Address several limitations in Vision-Language Models (VLMs) like GPT4V that fails to tackle tasks, such as fine-grained object detection and many object counting.

The UIT@NLP Group, University of Information Technology, Vietnam. Nov. 2022 - Aug. 2024
Undergraduate NLP Research Student

Topic: NLP, Pretrained Language Models.

Project *ViSoBERT: A Pre-Trained Language Model for Vietnamese Social Media Text Processing.*

- Introduced a new pre-trained language model for Vietnamese social media tasks.
- Achieved state-of-the-art (SOTA) performance on multiple Vietnamese social media benchmarks.
- Our public model on Hugging Face receives approximately **2.5K** downloads per month and got total **88k** downloads up-to-date.

Project *Link Prediction for Wikipedia Articles as a Natural Language Inference Task*

- Introduced a novel approach that frames the prediction of links between Wikipedia articles as a Natural Language Inference task
- Our method achieved a top-3 position on the private test leaderboard in DSAA-2023 Competition.

SELECTED PUBLICATIONS

(*) denotes equal contribution.

CodeMMLU: A Multi-Task Benchmark for Assessing Code Understanding Capabilities of CodeLLMs
Dung Nguyen Manh, **Chau-Thang Phan**, Nam Le Hai, Thong T. Doan, Nam V. Nguyen, Quang Pham, and Nghi D. Q. Bui.
Proceedings of the 30th International Conference on Learning Representations **(ICLR 2025)**[pdf]

AgileCoder: Dynamic Collaborative Agents for Software Development based on Agile Methodology
Minh Huynh Nguyen, **Chau-Thang Phan**, Phong X. Nguyen, and Nghi D. Q. Bui.
Proceedings of The 2nd ACM international conference on AI Foundation Models and Software Engineering (**FORGE 2025**) [pdf]

ViSoBERT: A Pre-Trained Language Model for Vietnamese Social Media Text Processing
Quoc-Nam Nguyen*, **Chau-Thang Phan***, Duc-Vu Nguyen, Kiet Van Nguyen.
Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2023, oral paper**), [pdf].

Link Prediction for Wikipedia Articles as a Natural Language Inference Task
Chau-Thang Phan*, Quoc-Nam Nguyen*, Kiet Van Nguyen.
Proceedings of the 2023 IEEE 10th International Conference on Data Science and Advanced Analytics (**DSAA-2023, short paper**), [pdf].

TECHNICAL SKILLS

Programming: C/C++, Cmake, Git, Docker, Python.

Framework: Pytorch, Tensorflow, vLLM (VLMs and LLMs serving for Agentic evaluation), Transformers.

AWARDS AND HONORS

- Outstanding Research Student (2021, 2022, 2023).
- University Academic Achievement Scholarship (2022).
- Third Prize at DSAA-2023 Competition.
- Student Volunteer Award: EMNLP2023

CONFERENCE PRESENTATIONS

EMNLP2023 Oral Presentations Dec. 2023

- Paper: ViSoBERT: A Pre-Trained Language Model for Vietnamese Social Media Text Processing.
- Location: Singapore

SERVICES & VOLUNTEERS

- Reviewer:
  - **EMNLP** (2023).
- Student Volunteer:
  - **EMNLP** (2023).