RADCHANEEPORN CHANGPUN

Pathumtani, Thailand

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EDUCATIONS

• M.Sc. in Computer Science

Aug 2023 - June 2025 (Expected)

Faculty of Engineering, Chulalongkorn University (part-time curriculum)

Research fields: Chatbot from Thai Large Language Models

Advisor: Assoc.Prof. Peerapon Vateekul, Ph.D.

Relevant courses:

Data Science and Data Engineering Tools, Computer Algorithm, Artificial Intelligence, Pattern Recognition

• B.Sc. in Chemical Engineering

2017 - 2021

Faculty of Science, Chulalongkorn University

Publication:

Nimmanterdwong, P.; **Changpun, R.**; Janthboon, P.; Nakrak, S.; Gao, H.; Liang, Z.; Tontiwachwuthikul, P.; Sema, T. (2021). *Applied Artificial Neural Network for Hydrogen Sulfide Solubility in Natural Gas Purification*. ACS Omega 2021, 6, 31321–31329. [Link to Paper]

PROJECTS

 Classifying Scopus publications using encoder representation from transformers language model (RoBERTa)

I fully fine-tuned a RoBERTa model with prepared Scopus publications data. The fine-tuned model achieved a significant improvement of 40.3% in the Macro F1 Score (0.6687) compared to the baseline model (0.1894) [Link to Project]

- Finetuning Thai Large Language Model (Typhoon) with Open-Source dataset
 I optimized datasets and prompts for instruction fine-tuning of Typhoon 7B using QLoRA,
 improving performance. Human evaluation revealed areas for further refinement in questionanswering tasks [Link to Project]
- Applied Retrieval Augmented Generations (RAG) technique from Scopus data with Open-Source Large Language Models (Llama 13B)

I developed a RAG technique to improve the hallucination of Llama2-13B using the vector database created from Scopus publications. The RAG technique can improve hallucinations in terms of the names of publications, but there is still room for improvement in terms of authors and publication years [Link to Project]

SKILLS

- Machine Learning and Deep Learning: Predictive Models (Regression, Random Forest), Natural Language Processing (NLP), Large Language Models (Finetuning, RAG, Prompt design), Data Science, Neural Networks
- **Developer Tools**: Python, PyTorch, SQL, Langchain, HuggingFace, MATLAB, Scikit-Learn, Pandas, Matplotlib, Linux, Weights and Biases (WandB), TensorBoard, Streamlit, Gradio, PySpark
- Language Score: TOEIC 840/990 (2024), CUTEP 79/120 (2023)

WORKING EXPERIENCE

Chemical Process Engineer, Wood PLC (Foster Wheeler)

Jan 2022 - Jan 2023

- Technical skills: Research skills, Computer Skills (Words, Excel)
- **Soft skills:** Foreigner Collaborations, Interdisciplinary Communication skills, Problem-Solving skills, Analytical skills