RADCHANEEPORN CHANGPUN

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Portfolio | LinkedIn | GitHub | Google Scholar

EDUCATIONS

- **M.Sc. in Computer Science** 2023 - 2025

Faculty of Engineering, Chulalongkorn University (GPA: 3.94 /4.00)
Publication:
R. Changpun *et al*., "Agentic Stage-Based LLM Framework for Multi-Turn Mental Health Support Conversations in Thai," *2025 20th International Joint Symposium on Artificial Intelligence and Natural Language Processing (iSAI-NLP)*, Phuket, Thailand, 2025, pp. 1-6
[Link to Paper]
Advisor: Assoc.Prof. Peerapon Vateekul, Ph.D., Titipat Achakulvisut, Ph.D., Professor Arunya Tuicomepee, Ph.D.
Relevant courses:
Data Science and Data Engineering Tools, Computer Algorithm, Artificial Intelligence, Pattern Recognition, Natural Language Processing (NLP), Data Science Architecture, Computer Security, Research Methods in Computer Science

- **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]

WORKING EXPERIENCE

PulseMetrics Pte Ltd **Oct 2025 - Present**
Senior Associate, Data Science

- **High-Scale Data Optimization:** Re-engineered large-scale telematics preprocessing scripts, significantly reducing computational latency and enhancing pipeline efficiency for high-frequency sensor data
- **Cross-Domain Analytics Support:** Contributed to Exploratory Data Analysis (EDA) and strategic reporting for two major business units: **Retail** and **Automotive Retail & After-Sales Services**, helping stakeholders leverage data for decision-making
- **Workflow Automation:** Supported Business-As-Usual (BAU) analytics by assisting in the automation of end-to-end data workflows and reporting to improve data reliability and team productivity

AIMET, The Center of Excellence in Digital and AI for Mental Health **July 2024 – Aug 2025**
Researcher

- Research and design agentic LLM architecture chatbots for mental health support applications
- Collaborate with psychology domain experts to ensure domain alignment of AI solutions
- Lead developer team and mentor interns throughout the chatbot implementation phase

Wood PLC (Foster Wheeler) **Jan 2022 - Jan 2023**
Chemical Process Engineer

- Designed and optimized chemical processes for Thai refinery clients, improving operational efficiency

PROJECTS

- **Dmind Chatbot (Thai Multi-Turn Mental Health Support from LLMs)**
  Research and design of LLM chatbot workflows, coordination with domain experts to align with professional practices, conducting experiments for optimization, and leading research and developer teams throughout development phrase

- **LLM-based Chatbot for Thai Personal Income Tax Question Answering**
  Prepared data using OCR techniques, researched and conducted experiments with LLM techniques (long-context inference, RAG, agentic RAG) to find suitable approaches for the Thai tax domain, evaluated using NLP automatic metrics (BLEU, ROUGE, BERTScore), qualitative analysis, and LLM-based evaluation, and connected to a UI interface with Gradio
  [Link to project]

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

- **Applied Retrieval Augmented Generations (RAG) technique from Scopus data with Open-Source Large Language Models (Llama 13B)**
  Developed a RAG technique to improve the hallucination of Llama2-13B using the vector database, Pinecone, 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), Data Science, Neural Networks
- **LLM Knowledge:** Agentic Workflow, RAG, Finetuning (LoRA, QLoRA)
- **Developer Tools**: Python, PyTorch, SQL, HuggingFace, MATLAB, Scikit-Learn, Pandas, Matplotlib, Linux, Weights and Biases (WandB), Git
- **AI Stacks:** LangGraph, LlamaIndex, LangChain, Autogen