

KANTINAN RUJIRARUANGPORN

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SUMMARY

Recent Computer Science graduate with experience in machine learning, LLMs, and data engineering pipelines. Strong foundation in Python and frameworks like PyTorch, scikit-learn, and XGBoost. Passionate about leveraging AI to solve complex problems, architecting end to end data systems, and have to drive impactful results as a Data Scientist, ML Engineer, AI Engineer, or Data Engineer.

EDUCATION

Bachelor of Science Program in Computer Science
Kasetsart University

April 2026

CERTIFICATIONS & TRAINING

KBTG M.A.D. Bootcamp & Hackathon 2024 KBTG & TU NEXT Oct – Dec 2024

- Selected as top 80 participants. Earned certifications in Predictive AI, Large Language Models (LLM), and Human-AI Interaction.
- Applied Generative AI techniques (ComfyUI, LangChain) to develop innovative solutions in the **M.A.D. Hackathon**.

Data Science Excellence Initiative (Data Scientist Track) depa & daydev Nov-Dec 2025

- Completed intensive training in Data Science pipelines, covering data preprocessing, modeling, and evaluation standards.
- Passed the competency assessment for professional Data Scientists.

EXPERIENCE

Co-operative Education

May 2025 – Oct 2025

Quick Transformation Public Company Limited

Customized Business Central reports and ERP extensions using AL, and supported workflow and version control through Azure DevOps and Git. Updated the Android application by modernizing its threading structure and integrating REST APIs with Business Central. Improved the codebase by introducing a Base Activity, applying a modular architecture, and enhancing data handling and reliability through updates to the Realm Database.

TECHNICAL SKILLS AND LANGUAGES

- Programming Languages: Python, C/C++, Java, Kotlin, JavaScript, HTML5, CSS, Microsoft AL Language
- Libraries/Frameworks: NumPy, Pandas, Scikit-learn, PyTorch, TensorFlow, Seaborn, Matplotlib, React, LangChain, ComfyUI, FastAPI
- Data Analysis: Machine Learning, Deep Learning, SQL, Data Visualization (Tableau)
- Tools: Git, Azure DevOps, Google Cloud, Docker, Android Studio
- Thai Native, English Intermediate, Japanese Beginner

PROJECT

AI Perfume Sommelier Hybrid RAG & Agentic

2026

- Engineered a Hybrid Search RAG pipeline combining Dense (**Qdrant**) and Sparse (**BM25**) retrievers, re-ranked via Cross-Encoder (bge-reranker-base), utilizing metadata filtering for strict ingredient-exclusion constraints.
- Architected a ReAct agent using **LangGraph** to maintain session-persistent conversational memory, integrating dynamic tool-calling (DuckDuckGo Search) as a fallback for out-of-domain queries.
- Implemented input guardrails to prevent prompt injections, serving the agent and web UI via FastAPI
- Technologies Used:** Python, LangChain, LangGraph, Qdrant, FastAPI, Gemini API, Groq

Algorithmic Trading Strategy Optimization

2025-2026

- Engineered an end to end quantitative trading pipeline in Python, utilizing **PyTorch** and CUDA to train deep sequence models (**LSTM, GRU, BiGRU**) across local environments and RunPod cloud GPU clusters (RTX 3090/4090).
- Architected a multi-source data ingestion system using Google BigQuery to process GDELT global news sentiment, integrating it with institutional-grade OHLCV data via Tiingo API to strictly prevent look-ahead bias.
- Implemented robust model validation utilizing Walk-Forward Analysis (**WFA**) with 22-day embargo gaps, successfully mitigating data leakage and outperforming tree-based benchmarks (XGBoost, LightGBM, CatBoost).
- Developed dynamic execution logic governed by a P85 prediction confidence threshold and ATR-based SL, utilizing the Triple Barrier Method for advanced dynamic labeling.
- Technologies Used:** Python, PyTorch, Google BigQuery, Scikit-learn, Pandas, RunPod

FreshLink Supply Chain Management System Analysis

2024

- Architected data structures (Class and ER diagrams) and mapped system flows (DFD) to define robust order processing logic and minimize development errors.
- Designed Sequence and Collaboration diagrams to streamline software architecture planning.

LLM Using RAG for Diabetes-related Queries

2023

- Architected a Retrieval-Augmented Generation (RAG) pipeline utilizing Llama 3.2 3B Instruct to deliver accurate, domain-specific medical advice.
- Optimized LLM inference performance by implementing 8-bit quantization, and engineered robust semantic search using multilingual-e5-large embeddings to significantly mitigate model hallucinations.
- Technologies Used:** Python, Llama 3.2, LlamaIndex, Hugging Face, Vector Database, Google Cloud

Predicting Future Movie Revenue

2023

- Achieved an R-squared of 0.81 and RMSE of 75.98 by optimizing and deploying an XGBoost Regressor, significantly outperforming the Linear Regression baseline.
- Engineered a comprehensive data pipeline processing 930k+ TMDb records, applying categorical encoding, temporal feature extraction, and feature selection to capture seasonal revenue trends.
- Technologies Used:** Python, scikit-learn, XGBoost, pandas, NumPy, Gradio

Travel Buddy Desktop Application

2023

- Built a JavaFX desktop application implementing MVC architecture for modular UI design.
- Developed a custom CSV-based data management system handling CRUD operations, file management, and Role-Based Access Control for user authentication.
- Technologies Used:** Java, JavaFX, MVC Pattern