Krasirit Pairotamonchai

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EDUCATION – PRESENT

- Bangkok University, Bachelor of Engineering Artificial Intelligence Engineering and Data Science GPA 3.82

TECHNICAL SKILLS / SOFT SKILLS

Programming
- Python
- SQL
- Html & Css

Tool
- Tableau
- Git
- Docker
- Fastapi

Knowledge
- Computer Vision
- Machine Learning
- Deep Learning
- NLP
- PostgreSQL
- API

Soft Skills
- Curiosity and Lifelong Learning
- Adaptability and Flexibility
- Embracing and Celebrating Change

EXPERIENCES

R&D Part-time Mango Consultant

- **AI in ERP Development:** Engineered and optimized OCR solutions for specialized business documents to improve data entry automation.
- **Strategic Research:** Conducted comprehensive competitor analysis to identify AI integration opportunities, driving organizational digital transformation.

R&D Intern Mango Consultant

- **Production-Ready OCR:** Developed and deployed an Invoice OCR system into the production environment.
- **NLP & Word Matching:** Implemented a word-matching algorithm to handle semantic variations and typos, ensuring data consistency across ERP modules.
- **AI Agent Integration:** Architected an AI Agent prototype utilizing AWS services to streamline internal workflows.

PROJECTS

Multi-Agent System for ERP (Senior Thesis)

- Developed a sophisticated Multi-Agent System featuring a Manager agent for task orchestration and planning.
- Implemented specialized agents (Inventory Control, Planner, Fill-form) using MCP (Model Context Protocol) servers for secure tool-calling.
- Enforced strict data privacy by ensuring agents only access information through authorized tool calls without direct database exposure.

AI Tutor for SQL

- Designed a prompt engineering framework to evaluate student SQL queries against gold-standard solutions.
- Developed an automated grading system that provides feedback based on query logic and accuracy.

Course Data Extraction (University Project)

- Leveraged Gemini LLM to build an OCR pipeline for extracting structured course information from diverse PDF documents across all university faculties.

COMPETITIONS

TESA Top Gun Rally (2024 - 2025)

- **2025 (Defense Innovation):** Developed an Object Detection & Tracking system to identify and monitor drones in real-time, distinguishing them from birds or other objects for national defense.
- **2024 (Acoustic AI):** Built a predictive maintenance model using signal processing to detect machine anomalies from frequency data.

PROJECTS

Guess Who Project (BU Open House)

- **Character Prediction Engine:** Implemented a system to predict characters from natural language descriptions using Speech-to-Text (STT) and NLP vectorization.
- **Semantic Querying:** Developed a pipeline to convert spoken descriptions into vectors, enabling accurate identification of characters based on semantic similarity.

Thai Gold Price Prediction

- **Time-Series Forecasting:** Conducted a comparative study of multiple models including ARIMA, SARIMA, LSTM, and XGBoost to identify the most accurate approach for predicting Thai gold price fluctuations.

Book Recommendation System

- **Advanced Vectorization:** Engineered a recommendation engine comparing three vectorization methods: Statistical-based, Word Embedding, and SentenceTransformer to optimize semantic search performance.
- **Content-Based Filtering:** Developed a system that suggests books based on user interests by calculating cosine similarity across vectorized book descriptions.

COMPETITIONS

PSAT Health Hacks (2024 - 2025)

- **2025 (Prevention):** Currently developing a system for early detection of minute physiological changes to prevent chronic diseases.
- **2024 (Digital Health):** Created an AI-driven drug safety alert system to prevent adverse drug-to-drug interactions (DDI) and suggest safe alternatives.

AI Thailand Benchmark 2025

- **Fine-tuned Large Language Models (LLMs) across three core benchmarks:** Machine Translation, Automatic Speech Recognition (ASR), and Question & Answering (Q&A).

PAN-SEA AI Developer Challenge 2025

- Developed **"Interview Prep AI"** a platform using OCR, TTS, and STT to simulate realistic interview scenarios based on a user's specific resume and career goals.

NSC 2025 (National Software Contest)

- **Scam Detection Software:** Proposed and developed an AI-driven tool to analyze voice patterns and speech keywords to detect and alert users of potential call center scams in real-time.

ACTIVITIES

ChaiyoGCP Activity (Season 4 & 5)

- **Cloud Practical Experience:** Successfully completed hands-on challenges and labs using various Google Cloud Platform (GCP) services, gaining proficiency in cloud-based AI and data infrastructure.

REFERENCE Available upon request