Nathakrit Chuajeen

Software Engineer with a strong specialization in data-driven applications and machine learning. Proven ability to deliver high-impact solutions. Seeking to leverage backend and ML expertise to build robust, intelligent systems.

EDUCATION

- **2016- 2020** Bachelor's degree
  Computer engineering,
  Khonkaen univerity,
  GPAX: 2.94

SKILLS

- **Programming languages**: **Python**, C#, JavaScript, Go, SQL
- **Frameworks & Libraries**: Pandas, Seaborn, PyTorch, NumPy, Scikit-learn, Flask, FastAPI, PyQt, React
- **Databases:** PostgresSQL, MySQL, MongoDB, Firebase
- **Other tools:** Docker, Git, MQTT, Web3

Personal details

- **name :** Nathakrit Chuajeen
- **birth date :** 20 April 1998
- **nation :** Thai

Contact

+66(956163888)

Nathakrit.cha@gmail.com

linkedin.com/in/natakritc

WORK EXPERIENCE

2023 - Present CPF Food and Beverage Co. Ltd

- Engineered an end-to-end defect detection system by integrating a **Hyper-spectral camera** with a real-time AI model. Developed a PySide user interface for live monitoring and utilized the Modbus protocol to connect with the factory PLC, enabling a**utomated rejection** of foreign objects from the vegetable production line that can replace human workers.

- Developed APIs for a data visualization project to optimize machine utilization on factory lines. Implemented MQTT to send machine data every minute, performed time-series analysis to find bottlenecks, and processed data for decision-making. **Improved Overall Equipment Effectiveness (OEE) from 20% to over 80%** in a few days.

- Worked on object detection software for a factory production line, helping optimize calculations to **under 300 milliseconds**. I assisted with installing and configuring cameras and lighting for data collection, contributed to preprocessing and labeling datasets for training, and helped train models that **achieved 100% recall**. I then supported deploying these models on edge devices running Linux, working to optimize for minimal latency and enhance software performance for better stability and efficiency.

2022 - 2023 Khonkaen university

- Developed a predictive application for aquaculture farms that uses sensor data and machine learning to forecast and manage water quality, **promoting optimal growth for aquatic life**. Automated data transfer from edge devices to servers, analyzed time-series data for insights, trained a time series prediction model and integrated machine learning models with web application, including notifications .

2020 - 2022 CPF Food and Beverage Co. Ltd

- Forecasted shrimp weight by analyzing the correlation between size and weight in the factory production line. I collected and cleaned the shrimp size data, preparing it for training. Built a machine learning regression model, comparing different algorithms (like polynomial, SVR, and random forest)to find the best fit, with the final Random Forest model achieving the highest predictive accuracy.

PROJECTS

Freelance projects

Weighing App

- **Re-engineered** a legacy weighing machine application into a modern, user-friendly desktop app using PySide6. The new system connected directly with PLCs via ModbusTCP, improving operational speed, accuracy, and flexibility over the previous version by simplifying the user workflow and ensuring reliable local data storage with SQLite.

Nurse Activity Tracking App

- **Developed** a comprehensive nurse activity tracking application to streamline patient care documentation. The system included a secure authentication module, a digital patient records system, and an interface for hourly activity logging. It also featured a dashboard that generated insightful summaries and charts by nurse or patient case to improve workflow analysis.

Agricultural Store

- **Architected and developed** a full-stack e-commerce platform from scratch for an agricultural store, designed to manage over 20,000 products and 120,000 images. The system featured an intuitive admin console for easy management of products and promotions, and was containerized and deployed on a custom-configured, SSL-secured server.

Personal projects

Face Recognition System

- **Built and trained** a facial recognition model **with 95% accuracy** using TensorFlow and OpenCV for a student attendance system. The application could identify registered students, measure emotional sentiment, detect unregistered faces from a live CCTV feed, and was designed to automate and enhance classroom monitoring.

Autonomous Image Labelling App

- **Created** a web-based, locally-run application to automate and accelerate the image labeling process for machine learning datasets. This internal tool was designed to significantly reduce the manual effort and time required to prepare data for training computer vision models.