Chumphon, Thailand, 86110
Open to relocating
internationally

+66 91 040 8652
jomariya.son@gmail.com

Ariya Sontrapornpol

in linkedin.com/in/ariya-sontrapornpol/ jomariya23156.github.io

Programming languages: Python, SQL, JavaScripts, C++, C

SKILLS

MLOps/DevOps: Docker, Kubernetes, Helm, MLflow, ClearML, Git, DvC, Airflow, Prefect, GitHub Actions, Gitlab CI, FastAPI, Flask, Gunicorn, Nginx, Grafana, Prometheus, Evidently, GCP, AWS
Machine Learning: TensorFlow, Keras, PyTorch, Scikit-learn, spaCy
Other: LangChain, Kafka, Ray, Spark, Streamlit, OpenCV, Postgres, pytest, HTML, CSS, React

EDUCATION

Mahidol University
Degree: B.Sc. in ICT
Major: Computer Science
GPA: 3.41/4 (Second Class honor)

PROFESSIONAL EXPERIENCE

Machine Learning Engineer   **Perceptra**   **March 2022 - Present**

Deployed machine learning models to 100+ hospitals nationwide, accelerating cancer detection, to save lives.

Accomplishments:

- Enhanced existing model serving, achieving 3-4x faster inference time by resolving bottlenecks.
- Designed model serving architectures for 14+ disease prediction services (averaging 85%+ AUC), covering a wide range of model types.
- Revised Docker-based ML platform and infrastructure for 35% smaller image size and 3x faster builds.
- Streamlined ML workflow under strict data privacy restrictions, boosting team efficiency and system reliability.
- Optimized CICD pipelines with Gitlab CI, automating testing, builds, and deployment resulting in faster deployment times and eliminating manual work.
- Developed a YOLOv7 model to identify artifacts in mammogram images, achieving 83% mAP@0.5. This enabled dataset cleansing for improved downstream model performance.
- Developed outlier detection models and pipelines, purging 1% of low-quality data; boosted AUC by 1.7%, sensitivity by 1.6%, and specificity by 2.5% across diseases.
- Introduced MLOps best practices, including data versioning (DvC) and drift detection (Evidently, alibi), and translated leading-edge academic research into production-ready solutions.

PROJECTS

Personal website: jomariya23156.github.io (for additional information and projects)

Full-stack On-Prem MLOps system for Computer Vision: github.com/jomariya23156/full-stack-on-prem-cv-mlops

"One config, One command" from Jupyter Notebook to serve Millions of users

- Designed, implemented, and containerized a general-purpose on-premises MLOps system for computer vision tasks, streamlining data versioning, reproducibility, deployment, and monitoring.
- Designed with user-friendliness in mind, requiring only one config and one command to launch the entire system.
- Enhanced system reliability and insights by applying research-inspired techniques for data drift detection (image data), GradCAM for explainability, and DeepChecks for data validation.
- Built a robust model serving stack using Nginx, Gunicorn, and FastAPI, streamlining configuration for efficient deployment.

Sales Forecast MLOps at Scale: github.com/jomariya23156/sales-forecast-mlops-at-scale

Highly scalable Cloud-native Machine Learning system for Demand forecasting

- Built the production-grade cloud-native system for demand forecasting supporting on-prem and cloud deployment, distributed model training, and dual-mode (batch and online) inference for diverse workloads.
- Automated model retraining with real-time data streaming (Kafka) to maintain accuracy with up-to-date data.
- Optimized scalability by leveraging Kubernetes, Airflow for orchestration, Ray for distributed training (1,000+ models under 10 mins), and Spark for high-performance data processing and pipelines.
- Automated 15+ image build/push runs with CI/CD (GitHub Actions), streamlining updates across cloud/on-prem.
- Empowered users with a UI-driven experience for on-demand model retraining and deployment, improving efficiency and accessibility.

EzFit: Startup's MVP

Gamification and Multi-user Empowered by AI.

- Led development of AI-driven, gamified fitness app's core features as part of a startup initiative.
- Built and optimized real-time exercise tracking models for edge deployment (TensorFlow Lite), achieving high accuracy across exercises:
  - Push-ups (99%)
  - Jumping jacks (96%)
  - Squats (92%)
  - Leg raises (91%)
  - Lunges (84%)
  - Bicycle crunches (84%)
  - Mountain climbers (72%)
- Integrated pose estimation and classification models, and developed the cross-platform mobile app experience with React Native.
- Conducted market validation and data analysis to inform product direction and ensure solution feasibility.
- Contributed to overall startup strategy, including financial modeling, marketing plans, and securing grant funding through successful pitch presentations.

Awards:

- Received a grant and advanced to demo day at Startup Thailand League 2021, one of the largest startup competitions in Thailand.
- Finalist at INNO for Change 2021, a competition organized by one of the top-tier business universities in Thailand.

Main tools: React Native, Expo, Firebase, TensorFlow, Tensorflow Lite, TensorFlowJS, Mediapipe

COMPETITIONS

- Finalist at National Software Contest 2022
- Qualified Representative of Mahidol University at Startup Thailand League 2021 (received a grant and advanced to the demo day)
- Top 12% in Data Science of Shopee Code League 2021
- 6th place at Thailand Machine Learning for Chemistry Competition 2021 (TMLCC)
- Finalist at INNO for Change 2020&2021 by NIDA