



ARIYA SONTRAPORNPOL

MACHINE LEARNING ENGINEER / MLOPS ENGINEER

PROGRAMMING LANGUAGES: PYTHON, SQL, JAVASCRIPT, JAVA, C, C#, AND R

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KAGGLE: [HTTPS://WWW.KAGGLE.COM/JOMARIYA](https://www.kaggle.com/JOMARIYA)

ABOUT ME

I am passionate about making impossibilities become possibilities and reality through the power of Programming and Technology. Currently, I'm enthusiastically pursuing more knowledge in Deep Learning, Computer Vision, and XR. I do self-learning a lot about these bleeding-edge technologies. I deeply believe one day, these technologies will shape our world and create a new world that we couldn't imagine. That's why I jumped into this field. As a hard worker with a growth mindset, I always learn new things about programming every day. Moreover, I am addicted to self-development and becoming a better version of myself. That drives me to get out of my comfort zone and try to make difficult things happen. I've never given up on what I want and who I want to be even though it was tough and hard because I believe that those things will make me grow even stronger.

EDUCATION

MAHIDOL UNIVERSITY 2018 - 2022

Degree: B.Sc. in ICT

Major: Computer Science

Cumulative GPA / GPAX: 3.40

Activities: Raknong 2019, MUICT Openhouse 2019, MUICT Standcheers 2019, and more...

SUANSRIWITTAYA SCHOOL 2012- 2018

Program: Gifted Math-Science

I graduated high school with a GPAX of 3.69 and I was a representative of my school in the computer skill competitions for 5 years.

CERTIFICATES

- Deep Learning Specialization | Coursera (5 courses)
- Python for Everybody Specialization | Coursera (5 courses)
- Virtual Reality Specialization | Coursera (5 courses)
- Deep Learning and Computer Vision A-Z | Udemy
- 365datascience program (34 courses)
- And a lot more...

AI / DATA SCIENCE SKILLS

SKILLS: Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, Data Analytics, Data Visualization, Data Pipeline, ML Model Deployment, CICD, MLOps, Testing

PACKAGES: numpy, pandas, opencv, scikit-learn, scikit-image, tensorflow, keras, pytorch, matplotlib, pytest, pythainlp

OTHER TOOLS: Flask, Django, FastAPI, Nginx, React, React Native, Docker, Kubernetes, DVC, MySQL, MLflow, ClearML, Git, Gitlab CI

LANGUAGES

-Fluent in Thai (native) -Advanced in English
Duolingo English Test: 130

WORK EXPERIENCE

MACHINE LEARNING ENGINEER

PERCEPTRA 06/2022 - Present

Responsibilities

- Implement, adapt, and improve state-of-the-art neural networks / techniques from academic papers
- Deploy production-level deep learning models
- Optimize data pipeline and deployment processes
- Design / improve / maintain the full MLOps ecosystem

ML ENGINEER INTERN

PERCEPTRA 02/2022 - 04/2022 (3 months)

Achievements / tasks

- Performed transfer learning with EfficientNet v2 and further adapted network structure to do tuberculosis multi-label classification
- Performed hyperparameters tuning on the new tuberculosis classification model
- Migrated the MLOps platform from MLflow to ClearML for tuberculosis and CXR projects
- Wrote a new utility module for ClearML based projects
- Built and deployed the mammogram services (microservices) with multi-label ensemble models
- Optimized model inference process of the mammogram services to 3-4x faster
- Wrote well-detailed documentation and instructions about model deployment and MLOps

AI ENGINEER INTERN

OBODROID 06/2021 - 07/2021 (2 months)

Achievements / tasks

- Involved in Visual Place Recognition (VPR) for Robot Navigation project.
- Used a pre-trained SuperGlue model and adapted it to work for VPR tasks.
- Collected data from the real operating environment.
- Built the complete data pipeline.
- Built an end-to-end API for VPR.

(full work in GitHub repo "SuperGlue-for-Visual-Place-Recognition" in project section)

PROJECTS

MULTI-FIT STARTUP

This work is in a GitHub Private repo, no public link available

Pain point: People are bored of exercise and lack motivation

Solution: Gamification and Multi-user Empowered by AI

Responsibility in Business Aspect:

- Led and envisioned the team
- Built a full Start-Up plan from scratch
- Built a Financial Model
- Built a Marketing Plan
- Built a pitch deck and pitched to many entrepreneurs and investors
- Did market validation

Responsibility in AI / App Development Aspect:

- Led the dev team
- Analyzed and drew insights with data analytics from a market validation survey
- Collected and preprocessed data
- Adapted pre-trained Pose Estimation model and trained Pose Classification models from scratch
- Deployed real-time ML models on the mobile device
- Took care of everything in the gameplay part

Awards:

- Received a grant and advanced to demo day at Startup Thailand League 2021
- Finalist at INNO for Change 2021

(If you are interested in this startup project, please contact me via my email. I am working on it.)

ABSENTEEISM PREDICTION

<https://github.com/jomariya23156/absenteeism-prediction>

Achieved 75% accuracy on Test set with Logistic Regression to predict whether employees have absenteeism behavior or not, export to MySQL database, and visualize the result on Tableau.

ANIMAL ARTICLE SEARCH ENGINE

<https://github.com/jomariya23156/animal-articles-search-engine>

Scrapped more than 900+ links from livescience.com with bs4, preprocess all articles, and implement the search engine with Elasticsearch on Django web-based application.

OPEN-SOURCE CONTRIBUTIONS

THE HUGGING FACE COURSE

<https://github.com/huggingface/course>

Translated the whole Chapter 4 into Thai language.

FULL-STACK ON-PREMISES MLOPS SYSTEM FOR COMPUTER VISION

★ 23 stars 🍴 2 forks ▶ 4,000+ views on YT

updated on: Dec 15, 2023

<https://github.com/jomariya23156/full-stack-on-prem-cv-mlops>

"1 config, 1 command from Jupyter to serve Millions of users"
Dockerized fully operating MLOps system tailored for Computer Vision tasks from data versioning to model deployment and monitoring including scalable prediction services, data drift detection, GradCAM with web ui, and more.

FACE RECOGNITION WEBSITE LOGIN WITH LIVENESS DETECTION

★ 94 stars 🍴 30 forks ▶ 5,400+ views on YT

updated on: Dec 15, 2023

<https://github.com/jomariya23156/face-recognition-with-liveness-web-login>

Trained a liveness detection model and face recognition model with TensorFlow and dlib, then implemented an anti-spoofing face recognition website login with liveness detection mechanism with Flask framework.

SUPERGLUE FOR PLACE RECOGNITION

★ 25 stars 🍴 4 forks

updated on: Dec 15, 2023

<https://github.com/jomariya23156/SuperGlue-for-Visual-Place-Recognition>

Implemented full-workflow from raw data input all the way to do visual place recognition, with SuperGlue and SuperPoint deep learning model, and display the result on command line or visualization as an image. This is the project from 2 months internship at Obodroid. The end-to-end API and detail of everything (e.g. the approach we use, how to use our files) are detailedly described on GitHub.

FASHION SHOP IMAGES CLASSIFICATION

<https://github.com/jomariya23156/fashion-shop-images-classification>

Achieved various accuracy with CNN on different models and tasks ranged from 73.60% to 99.75% on Test set classifying multi-classes multi-label fashion items images.

COMPETITIONS

- Finalist at National Software Contest 2022
- Qualified Representative of Mahidol University at Startup Thailand League 2021 (received a grant and advanced to 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