

Pongchanok Nuamteam

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EDUCATIONS

Master of Electrical Engineering

King Mongkut's University of Technology Thonburi

14 August 2017 - 15 July 2021

Bangkok, Thailand

- *Deep Learning, Image Processing and Computer Vision, Optimization Techniques, Probability and Stochastic Processes*

Bachelor's of Electronics and Telecommunication Engineering

King Mongkut's University of Technology Thonburi

1 Jan 2022 - Present

Bangkok, Thailand

- *Computer Programming, Software Engineering, Probability and Statics, Machine Learning*

WORKING EXPERIENCE

Seagate Technology (Thailand) Co. Ltd

Electrical Engineer Internship

Build a web demo for stock management using React.js as the frontend, Node.js (Express) as the backend, and SQL as the database. There are approximately 300 products in the small warehouse. then visualize all the data to make a report.

- *Classify products into a table, collect the data by hand, and then export to Excel.*
- *Build a UI to visualize the data in the warehouse.*
- *Build a backend to control the data.*
- *Export the report as a PDF file to reduce time spent checking stock per mount.*

King Mongkut's University of Technology Thonburi

Personal Protective Equipment Detection Project (Vision & Image Processing)

For this project, we cooperated with Panasonic Singapore to detect people who didn't prepare protective equipment on the construction site. This project aims to reduce accidents on the construction site.

- *Labeled the datasets for the training set, testing set, and development set, there are five classes.*
- *Training the YOLOv3 model and tracking the experiment to get maximum accuracy.*
- *Building demo APIs with Flask*

Tele-Rehabilitation System (ASR)

This project aims to assist individuals with laryngeal damage by using Wav2Vec2 models in collaboration with NSTDA. Most patients lose the ability to communicate with people in society. Using ASR might help decipher difficult communications.

- *Transform Thai labels into phonetic labels.*
- *Prepare ASR data set from raw data, clean data, and tokenized data to make a training dataset and testing dataset*
- *Augment the raw dataset by adding noise to make the model more robust against noise.*
- *Training the model on a supercomputer (LANTA) with a multi-GPU (A100x4) to make the most efficient model*
- *Post-processing and evaluating the model to make the report*

Demo Django Marketplace

As a proof of concept for full-stack development, create a Django demonstration project and host it on the AWS Cloud (EC2).

How to Develop and Use Cloud Applications As a proof of concept for full-stack development, create a Django demonstration project and host it on the AWS Cloud (EC2). How to Develop and Use Cloud Applications

- *Build the Frontend, create the Model*
- *Set up the Environment with Docker*
- *Testing and Deploy to AWS*

SKILLS

- **Programming Language:** Python, R, JavaScript, SQL
- **Machine Learning Framework:** Pytorch, MLFlow, Pandas, and Numpy
- **NLP Implementation Skills:** Text Classification, Sentiment Analysis, and Translations (such as Seq2Seq)
- **Vision Implementation Skills:** Image Classification, Object Detection (such as VGG, ResNet, YOLO)
- **ASR Implement Skills:** Wav2vec2 and Whispers models
- **Frontend Framework:** React.js
- **Backend Framework:** Express.js Flask
- **DevOps or MLOps:** AWS Cloud, Docker, MLFlow
- **HPC:** Slurm-Scripts