Tarit Witworrasakul

778-927-9764 | tarit.witworrasakul@gmail.com | linkedin.com/in/wtarit | github.com/wtarit | wtarit.me/

EDUCATION

University of British Columbia   Vancouver, BC
Bachelor of Science in Computer Science (Outstanding International Student Award)   *September 2023 – May 2027*

WORK EXPERIENCE

Software Developer Intern   June 2024 – August 2024
Applicad Public Company Limited   *Bangkok, Thailand*
- Developed a full-stack real-time face recognition web application using Next.js, enabling customer identification
- Built a backend service in Python with FastAPI for face vector comparison using ChromaDB, integrated with a PostgreSQL database for storing User Data, and linked it to the existing internal customer database
- Implemented an Email OTP authentication system using NextAuth Credentials Provider, with a custom Python backend for email delivery via SMTP and credential validation and utilized Next.js middleware for role separation
- Deployed the application on an on-premises Ubuntu server using Docker and Docker Compose

TECHNICAL EXTRACURRICULARS

UBC Uncrewed Aircraft Systems Design Team - Software Developer   September 2023 – Present
- Migrated MissionPlanner-Scripts, an interface between a backend system and ArduPilot, to a cross-platform architecture using Pymavlink, eliminating reliance on Windows-only MissionPlanner client scripts
- Upgraded the MissionPlanner-Scripts project to Python 3, leveraging enhanced type annotations and improving code readability and maintainability
- Developed Object Detection, Classification, and Localization software for finding targets from a drone utilizing fine-tuned YOLOv8 model with tiled inference and PARSeq Text Recognition model
- Reduced time to create training dataset by implementing dataset generator using OpenCV and imgaug

PROJECTS

WasteWizard (nwHacks 2024 Honorable Mention Award) | *Node.js*   January 2024
- Developed a full-stack web application for waste tracking and management using HTML, CSS, and JavaScript
- Implemented REST APIs using Express.js and MongoDB with Mongoose ORM for saving bin cleaning logs and providing data to admin dashboards
- Deployed the application on Azure VM, enabling public access with secure HTTPS through Caddy web server

Ring Notify | *Typescript, Golang, React Native, Firebase, PostgreSQL, Azure*   October 2023 – Present
- Developed a mobile application for urgent alert notifications via call screen functionality using React Native and React Native CallKeep
- Built REST APIs for user registration and IoT-triggered notifications, leveraging Golang with Echo and Firebase Cloud Messaging for sending out alerts to mobile devices, and managed user data in PostgreSQL
- Automated deployment to Azure VM with Docker and GitHub Actions with HAProxy as a reverse proxy

TH-EN Machine Translation | *Python, Huggingface, Gradio, PyThaiNLP*   April 2023 – July 2023
- Implemented a data processing pipeline to clean and normalize Thai text, including vowels, signs, and Unicode characters, for SCB-1M and OPUS finetuning datasets
- Conducted comparative finetuning of mT5 and NLLB-600M models using Huggingface Trainer with full-finetuning and LoRA techniques
- Improved translation accuracy by 42% from pretrained model, achieving a 27.37 BLEU score on the IWSLT 2015 test set through full-finetuning of the NLLB-600M model

TECHNICAL SKILLS

Languages: Python, Typescript, Dart, C, C++, Java, Golang
Libraries & Frameworks: React, NextJS, OpenCV, Huggingface, Pandas, NumPy, FastAPI, Streamlit, Gradio, Flutter, Arduino, Echo, JUnit, Swing
Developer Tools: Git, GitHub, Linux, Docker, Docker Compose, Postman, Cloudflare, Firebase, Google Cloud Platform, Microsoft Azure, Supabase, Vercel, ChromaDB, PostgreSQL, HAProxy