

Worapol Boontanonda

DEV TEAM LEAD · SENIOR SOFTWARE ENGINEER

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”Complete the design before writing the code”

Education

MUIC (Mahidol University International College)

B.SC COMPUTER SCIENCE

- First class honours - GPA 3.57

Nakornpathom, Thailand

Sept. 2014 - Aug. 2018

The University of Edinburgh

M.Sc HIGH PERFORMANCE COMPUTING

- Graduated with Merit

Edinburgh, United Kingdom

Sept. 2021 - Sept. 2022

Certification

AWS Certified Developer - Associate

demonstrated proficiency in writing applications with AWS service APIs Expires Feb 2023

AWS Certified SysOps Administrator - Associate

comprehensive understanding on how to deploy, manage, and operate IT systems on the AWS Cloud - Expires Mar 2024

IELTS - Academic

International English Language Testing System. Overall score: 7.5 - Expires Feb 2023

Skills

Programming

Python, Javascript, Typescript, C/C++, Java, Scala, C#, Bash, Go and willing to learn more

Framework

Django, Django Rest Framework, FastAPI, Pydantic, Celery

Development Tools

Git (Github, Gitlab, Bitbucket), CICD (Gitlab), Jira/Confluence, Asana, Markdown

DevOps

Docker, Kubernetes, AWS, CDK, Terraform, SAM

Database

Postgres/Postgis, MySQL, MicrosoftSQL, DynamoDB, MongoDB, AWS Athena (Presto), Blob storage (S3)

HPC

OpenMP, MPI, CUDA, Slurm, compiling on Intel/AMD/Cray/GNU/NVIDIA

Languages

Thai - Native, English - Highly Proficient, Chinese - Beginner Level

Experience

InspektAI

Bangkok, Thailand (Hybrid)

DEVELOPMENT TEAM LEAD

June 2024 - Present

- Distribute and digest work on Asana, this includes breaking down the requirement breaking down the task and assigning to appropriate team members
- Give comments or modify existing requirement to make it implementable or clarify unclear requirements
- Extend a code that map annotation on the 2D image onto a 3D model using photogrammetry data (cameras xml and point cloud) this includes parallelizing the code and optimizing the algorithm
- Maintain the backend and image processing code
- Manage the overall architecture of the whole system and how everything should be connected
- Manage the infrastructure using both SAM/CDK/Elastic beanstalk
- Database monitoring / maintenance / query optimization
- Setup celery for async processing and parallelize certain part of the backend system

InspektAI

Bangkok, Thailand (Hybrid)

SENIOR BACKEND DEVELOPER

August 2023 - June 2024

- Redesign and implement the database from scratch using Django
- Convert/Rewrite Django server side to Django Rest Framework make sure all endpoints must include a test case
- Migrate data from old database to new database system this includes both images and data
- Create multiple script for new image and machine learning processing pipeline
- Convert existing machine learning and calculation to be in script format
- Setup AWS Elastic Beanstalk for new system for easy scaling and deployment
- Created an automated partial serverless image/3d processing pipeline using aws batch and integrate with existing system (Autoflow)
- Review all backend pull request to control the quality and performance

Envirometrics.io

Bangkok, Thailand (Remote)

GEOSPATIAL ARCHITECT

Sept. 2022 - August 2023

- Migrated a web application from GCP to Azure
- Deploying application into Azure
- Improve map tile loading of a web application by convert from GeoTIFF to cloud optimized GeoTIFF (COGs)
- Evaluate the performance and feasibility of Azure planetary computer and Google's earth engine
- Development of a new remote sensing platform using Django Rest Framework, Celery, NextJS and Azure
- Dockerize machine learning models and convert data science code to be use in production (turning it into a microservice)

EPCC, The University of Edinburgh

Edinburgh, United Kingdom

STUDENT

Sept. 2021 - Aug. 2022

- Threaded programming using OpenMP - benchmarking and optimizing existing program using different scheduling options for parallel loop
- Messaging passing programming using MPI to parallelize existing percolation simulation program
- Benchmarking and optimizing application using different compilers and compilers flags
- Converting an existing serial/CPU application to execute on a GPU using CUDA and OpenMP targets
- Compiling and installing program on a GPU cluster - part of student cluster competition
- Parallel Design Pattern - Parallelizing an N-body (bodies of planets) simulation using MPI
- Maximizing the performance of HPCC and optimizing gprMax CUDA code - part of MSc. dissertation

NEXTY (Toyota Tsusho Nexty Electronics Thailand) / TTMI (Toyota Tsusho Mobility Informatics)

Bangkok, Thailand

DATA ENGINEER

Sept. 2018 - May. 2021

- Converted an existing data science model into a platform
- Wrote serverless backend batch processing system using AWS Lambda in Python and Javascript
- Infrastructure as a code using AWS CDK (Cloud Development Kit) using Typescript for deploying AWS server and serverless application
- Infrastructure as a code using Terraform to deploy AWS EKS Kubernetes Cluster
- Wrote backend API using ExpressJS and Django Rest Framework
- Wrote API documentation and detail requirement of the application
- Fullstack development using NextJS (React + GraphQL)
- Unit testing using Jest for Javascript and pytest for Python
- Implement vehicle route problem solver using greedy and heuristic algorithm in Golang and deploy as a callable REST API using AWS Lambda and API Gateway.
- Wrote frontend application using React

MUIC (Mahidol University International College) / NEXTY (Toyota Tsusho Nexty Electronics Thailand)

Nakornpathom/Bangkok, Thailand

DATA ENGINEER / DEV OPS / BACKEND DEVELOPER

Jan. 2018 - May. 2018

- Wrote a library to launch jobs/tasks on Kubernetes programmatically
- Wrote a data pumper which pump information from the RDS into Kafka
- Wrote a python connector that connect to Kafka and pull information to serve the client
- Deployed web application of the system on docker machine
- Wrote a live stream pumper which pump data from Kinesis into Kafka
- Performance optimization in pumping and consuming data in Kafka

MUIC (Mahidol University International College)/ TTET (Toyota Tsusho Electronics Thailand)

Nakornpathom/Bangkok, Thailand

BACKEND DEVELOPER / DEV OPS

May 2017 - July 2017

- Collaborated in writing the window segmenter program to slice data for data analysis
- Wrote deployment scripts for docker-machine to create AWS EC2 instances
- Deployed and support data science team in running their program on EC2 instances this includes creating a Dockerfile for the data science code

Mahidol University

Salaya, Thailand

GAME DEVELOPER

Jan. 2017 - Dec. 2017

- Developed a Unity C# game call Fuekfon. The game is design for disabled people that receive a stroke and lose the ability to move, it is design to make rehabilitation more engaging
- Maintained Fuekfon game this includes debugging and adding more features
- Add more features to the game such as adding a timer to all the game
- Refactor code to support highscore system for each user

Honors & Awards

DOMESTIC

2016 **Honorable Mention Prize**, Thailand IT Contest Festival

Bangkok, Thailand

INTERNATIONAL

2022 **TeamEPCC Member**, ISC Student Cluster Competition

Hamburg, Germany