

JETSADA JINAKA

SOFTWARE ENGINEER

Contact

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ABOUT ME

It's supposed to be hard. If it were easy, everyone would do it!

I am graduated with a bachelor's degree in computer engineering at Chiangmai University. Now, I am Ground station Software Engineer at the Thai Space Consortium (TSC) under the National Astronomical Research Institute of Thailand (NARIT). I am passionate about the program and coding. I am keen to continue learning new skills and enjoy working in software and learning new things.

SKILLS

Computer Languages: C#.Net, Python, Typescript, NextJS, NestJS, ReactJS, Golang

Database: MySQL, PostgreSQL, MS SQL Server), NoSQL (MongoDB)

Containerize: Docker, LXC Containers

Virtualization & VM management: Ubuntu server, Raspberry Pi, Proxmox VE

CI/CD & Automation: Jenkins

Monitoring & Virtualization: Grafana

WORK EXPERIENCE

TSC Mission Ground Control Software
(Software developer engineer at NARIT)

Jan 2024 - Present

- Designed and optimized database schemas, using PostgreSQL (main) for structured mission data and MongoDB for flexible telemetry storage.
- Built RESTful APIs with Golang (Echo Framework) to manage command flows, telemetry, and device control.
- Implemented WebSocket communication for real-time command and telemetry exchange between NARITCubePlatform and TSC-1 satellites.
- Developed as part of the Ground Control main server, enabling end-to-end communication between satellites and ground stations.
- Extended the system to control and monitor ground station RF modules(UHF,S-Band, X-Band)for real-time data, transmission, reception, and processing

Ground Station Server Monitoring and Virtualization
(Software developer engineer at NARIT)

October 2024 - Present

- Designed and managed TSC Ground Station server infrastructure using a Dell PowerEdge R650xs configured as a Hypervisor with Proxmox VE.
- Deployed the Main Server on Ubuntu Linux to process mission data and run the Ground Control Software for satellite communication and device control.
- Implemented LXC containers for modularized services, including
 1. PostgreSQL – structured mission database
 2. MongoDB – telemetry and unstructured data
 3. Jenkins – CI/CD automation for continuous integration and deployment
 4. Grafana – real-time monitoring and visualization of system performance
- Built a robust monitoring system covering the entire ground station server stack, ensuring reliability, scalability, and end-to-end observability of ground station operations.

Heang leasing service & Digital platform

May 2023 - Jan 2024

(Fullstack developer at Heng Leasing Co.,Ltd.)

- Develop and enhance the Heng Leasing Service focusing on Heng Credit Customer Risk and the Heng Digital Platform, using Next.js with LINE LIFF integration and building APIs with .NET Core

CMU-ACAD (Senior Project)

Nov 2022 - March 2023

- Designed and optimized MySQL schema and deployed on Amazon RDS to ensure reliable and efficient academic data storage.
- Built RESTful APIs with NestJS to handle scheduling logic, semester workflows, and integration with external systems.
- Developed a full-stack web application using ReactJS + Tailwind CSS, providing a modern and responsive interface for students and staff.
- Implemented authentication and authorization through CMU OAuth 2.0 for secure, single sign-on access.
- Created an algorithm-driven scheduling system to automatically generate academic calendars, covering the entire process from course registration, teaching schedules, grade submissions, to semester closure.
- Added calendar duplication and archiving features to streamline semester planning and reuse past academic structures.

Certificates & Licenses

- Thai Amateur Radio License – Intermediate Level (กศนช., Thailand) – Call Sign: E25YUU
- U.S. Amateur Radio License (HAM) – General level (FCC, USA) - Call Sign: KO6EME

EDUCATION

Bachelor of Computer Engineering

Chiangmai, Thailand

Chiangmai University, Computer Engineer

2019-2023