Phan Đình Khôi Nguyên

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SKILLS

Languages: Python, JavaScript, Bash, SQL, Java

Frameworks: ExpressJS, Spring Boot

Databases: PostgreSQL, Redis

Cloud Platforms: Azure

Tools: Linux, Docker, Git, GitHub Actions, Jenkins, Terraform

EDUCATION

VNU Ho Chi Minh City University of Technology

Ho Chi Minh City, Vietnam

Expected Jun 2026

PROJECTS

Smart Farm | GitHub | Architecture Diagram

B.Sc. in Computer Science; GPA: 3.10/4.00

- Deployed a smart farm system on **Microsoft Azure** that collects sensor data from IoT devices and allows users to monitor and control the farm remotely.
- Used **Terraform** to automate the deployment of Azure resources, including IoT Hub, Azure Function, and a three-tier web application, utilizing VNet integration and Key Vault for secure communication and secrets storage.
- Developed an **Azure Function** using Python that listens to messages from IoT Hub and stores them in a PostgreSQL database.
- Implemented a multi-stage **Dockerfile** to containerize the ExpressJS backend server and deployed it to Azure App Service, optimizing the resulting image's size.
- Managed a local Mosquitto MQTT broker to facilitate communication between IoT devices and the cloud.

Renting and Reselling Books App | GitHub

- Used **Terraform** to automate the deployment of Azure managed PostgreSQL, Redis service and a Virtual Machine for the backend server.
- Implemented a **Jenkinsfile** to automate building and pushing the mobile app's apk to Google Drive on a local Jenkins server as part of the CI/CD pipeline.
- Developed a RESTful API using ExpressJS and PostgreSQL to manage user accounts, books, utilizing Redis for efficient caching.