TO MINH HIEN

DevOps Engineer

Hanoi, Vietnam

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RECOGNITION

2020 Recognized as outstanding employee of the year 2020 at Vantixinc.

EXPERIENCE

May 2022 – Present **SITE RELIABILITY ENGINEER**

Torus Engineering
Project: Belle Pro

Tools and techniques: AWS Cloud Computing, EC2, EKS, Secret Manager, Cognito, VPC, OpenSearch, AWS XRay, KubeFlow, SSO with SAML and OIDC.

Project Description: BellePro is a digital solution for professional dermatologist providers and doctors to first and foremost get second opinions on their prediction routine. Along with the state of the art AI technology in the field of skin diseases and cancer, BellePro also provide a wide variety of useful tools to help providers digitize and automate some part of the process for before, during and after a patient's visit.

Responsibilities:

- Research and install OpenSearch self-host (SSO with OIDC) on EKS for cost optimization.
- Research and install KubeFlow on a k8s on-premise cluster.
- Setup Alert on OpenSearch, Grafana, and AWS CloudWatch for running service.

Jun 2021 – Feb 2022 **DEVOPS ENGINEER**

Vantix Inc., Vingroup Advanced Analytics
Project: Public Road Test Tool

Tools and technique: Rancher Kubernetes Engine, Azure Monitoring Service, PagerDuty, Azure DevOps Service, Helm, K8s YAML manifest, Grafana, Prometheus, Elasticsearch, Kibana, Harbor, Traefik, Metallb.

Project Description: The tool is developed to support the validation and verification process during Public Road Test, where the data is collected in the real-world driving environment. This tool takes responsibility for processing and visualizing to the analyzer to carry issues with the ADAS software. Data is analyzed in a semi-automated fashion, which means that the tool itself only identifies any potential issue with the extracted data, Reviewer is required to make the final judgment if there is any issue or bug with the ADAS software output.

Responsibilities:

PERSONAL STATEMENT

More than two years working as a DevOps engineer, I consider myself a dynamic person, a fast learner, able to communicate well at work (both English and Vietnamese). DevOps work requires understanding how the whole system works as well as quickly researching new technologies so that they can be optimally applied to the system automatically. Based on my own experience, I strongly believe that I can join any company or project with the mindset to develop an automation-oriented mentality.

SKILLS

- Soft Skills and Communication Skills
- Azure Cloud Service
- CI/CD
- Script Programing
- Kubernetes

- Research, design and implement the suitable infrastructure for on-premise service, which includes installing OS for servers, installing Kubernetes cluster using RKE2 behind a network proxy.
- Research and implement load balancer for the Kubernetes cluster with metallb and traefik
- Install storage class (NFS), Logging service (Elasticsearch, Kibana), and Monitoring service (Prometheus, Grafana) for the Kubernetes cluster.
- Create Dashboard on Kibana and alert rule to Pagerduty, which helps our system reach 99.9% SLA
- Develop Dockerfile and Helm chart for all components of the project.
- Design and implement CI/CD pipeline for the project using Azure DevOps. Which includes developing a bash script and python script for CI and CI/CD pipeline as YAML file.
- Install Dev environment using Proxmox (A hypervisor tool for creating VM and Passthrough GPU)

Nov 2020 ↓ Feb 2021 + **SYSTEM ENGINEER**

Vantix Inc., Vingroup Advanced Analytics
Project: Autopilot

Tools and technique: CMake, docker, Azure Kubernetes Service, C++, Azure Cloud Computing, Azure DevOps Service.

Project description: Autopilot project aims to bring the best autonomous technologies to the VinFast car, not only serving the Vietnamese market but also competing at the world level.

Responsibilities:
- Define a dependencies (open-sources and packages) control flow for the project, packing the development environment into docker images, which enables developers to immediately begin working on a previously unfamiliar source code.
- Design and implement the CI/CD automated process included source code quality control and Integration Test reporting, which serves as an important platform for teams across the project to operate effectively.

Nov 2019 ↓ Oct 2020 + **DEVOPS ENGINEER**

Vantix Inc., Vingroup Advanced Analytics
Project: Vinhr

T**ools and technique:** Docker, Azure DevOps, Python, Bash script, Azure Cloud Computing service (Databrick, Azure storage account, Azure Function App, Azure App Service, Azure VM, Azure IoT Hub, Azure IoT Edge, Azure Machine Learning Service.)

Result and recognition: - Develop an automation-oriented mentality thanks to the guidance from my superior who worked at Microsoft as a principal lead. - Further improve my skills in DevOps, CI/CD pipeline design, Linux, bash script, Python programming. - Recognized as outstanding employee of the year 2020.

Project description: VINHR - WORKFORCE PERFORMANCE INSIGHTS TO HELP BUSINESSES THRIVE (https://www.vantixinc.com.vn/en/vinhr). Researched and developed by Vantix to improve Vingroup's labor-intensive business productivity, VinHR combines a powerful human activity recognition system using an AI model and a self-developed IoT sensor-based device (Vantix vBand). It can gather, process, and analyze large

amounts of data from thousands of individual workers. Thanks to precise performance insights, managers connect to the workforce patterns to make confident decisions to optimize the work process. Businesses become data-driven and able to innovate, get ahead, and adapt to challenging environments. VinHR creates a continuously improving environment: Its cycle flow collects and measures the decisions' outcomes to drive incremental changes and long-term success. They reach higher production thanks to more efficient workers that can enjoy a more balanced work/life.

Responsibilities:

- Research to identify suitable techniques for the project. Python, Databrick, Azure cloud computing was selected to help build the tool ASAP.
- Design and implement CI/CD process for all services of the project using Azure DevOps Server, Azure Cloud Computing, which ensure the best quality of products that reached the customer.
- Research and develop the data inference pipeline from scratch using Databrick and Azure Data Factory to process raw collected data into meaningful human-readable reports.
- Set up Monitoring and Incident Tracker Management System using Azure Monitor Service, PagerDuty, Azure Alert Service to help monitor vBand Gateway and all running services. This system helps archived the MTTM (Mean time to mitigate) less than **60 minutes** per month.
- Participated in optimizing the vBand Gateway (Python, Azure IoT Edge Service), which resulted in a gateway device (Intel NUC) that can transfer data (via Bluetooth Low Energy technique) for 50 vBands per night (**8 hours - 192MB/vBand**) to Azure Cloud.
- Develop an administrator page to help manage (add, delete, modify and show status) vBand Gateway using Python Django Framework.

Jul 2018 ↓ Mar 2020 + **RESEARCH**

Machine Learning & Applications Laboratory at PTIT

Reference Extraction from Vietnamese Legal Documents - Ngo Xuan Bach, Nguyen Thi Thanh Thuy, Dang Bao Chien, Trieu Khuong Duy, To Minh Hien, Tu Minh Phuong- SoICT 2019: *Proceedings of the Tenth International Symposium on Information and Communication TechnologyDecember*

EDUCATION

Sep 2015 ↓ Mar 2020 + **POSTS AND TELECOMMUNICATIONS INSTITUTE OF TECHNOLOGY**

BSc in Information Technology

- 3rd prize in Analysis in Vietnam National Mathematics Olympic in 2nd semester 2015-2016
- Graduated with 3.07/4.0 GPA