

# NGUYEN DUONG THANH DU

AI Engineer & System Administrator

+84 886 617 378    Github    LinkedIn    Google Cloud Profile    julowin2002@gmail.com

## EDUCATION

---

IUH - Industrial University of Ho Chi Minh City

10/2020 - 04/2025 (Expected)

Bachelor Dergree in Computer Science Programs.

GPA: 3.62/4.00

## SKILLS

---

**Tools and Languages:** Python, SQL, Git, Docker, Jenkins, Terraform.

**Frameworks and Libraries:** PyTorch, Tensorflow, Sklearn, Pandas, Numpy, OpenCV, Langchain, LlamaIndex, FastAPI, IaaS on Azure.

**Database:** SQL server, MySQL, SQLite3, MongoDB, PostgreSQL.

**Soft skill:** English Communication, Teamwork, Collaborative Work.

## PROFESSIONAL EXPERIENCE

---

### System Administrator

International Trade Council, Ho Chi Minh City, Vietnam

06/2024 - Present

- Work at the International Trade Council, specializing in DevOps and Network Administration with a pioneering focus on comprehensive mail server management and dedicated server for ITC's global operations.
- Installed and managed HESTIA Control Panel on Ubuntu servers, streamlining server management tasks. Led the configuration and maintenance of mail servers, including installation, setup, and management, using Ubuntu servers and Docker.
- Deployed and configured Postal Mail Server on Ubuntu dedicated servers, supporting secure and efficient email services. Developed expertise in DNS configurations, contributing to robust network setups that support extensive organizational communication needs.
- Implemented and optimized email deliverability and security protocols, including SPF, DMARC, and DKIM, to enhance communication efficiencies.
- Conducted thorough mail, testing procedures to ensure high standards of reliability and security in email transmissions.
- Spearheaded blacklist management and mail warm up strategies, significantly reducing the incidence of email blacklisting and improving sender reputation.
- Transmitting events from e.g. a newsletter campaign, deliver it to an analytics platform for tracking. Established server monitoring, alert and feedback protocols.
- Developed and implemented an innovative DevOps pipeline, utilizing Azure Container Instances, Jenkins, Terraform, and GitHub for efficient data crawling operations.
- Designed an automated workflow, triggered by Data Engineers' code pushes to GitHub.
- Integrated Jenkins to orchestrate Terraform, dynamic Azure Container Instance creation.
- Implemented a cost-effective solution, by spawning and terminating containers on-demand, replacing traditional server rentals.

- Demonstrated proficiency in cloud infrastructure, CI/CD practices, and containerization technologies.
- Optimized resource utilization, reduced operational costs through intelligent automation and cloud-native architecture.

## AI Engineer

BlueBolt Software, Ho Chi Minh City, Vietnam

05/2023 - 04/2024

- Built dashboards for analyzing company data, tracking performance, and providing evaluative insights to enhance efficiency and productivity. Created visually impactful reports to highlight data insights and improve data visualization capabilities.
- Deployed Odoo Community (ERP) system on AWS, managing related servers hosting Odoo on the AWS platform. Developed automated scripts for monthly backup of the Odoo database. Managed and maintained operational processes of Odoo.
- Developed a Retrieval Augmented Generation (RAG) Chatbot, using large language models to assist users with medical health inquiries. Crawled and processed medical data, built a vector database stored in PostgreSQL (pgvector), and implemented a RAG pipeline with ChatGPT 3.5 as the language model.
- Deployed the entire RAG Chatbot pipeline to production, enabling users to interact with the chatbot and receive assistance for their medical health-related questions and information needs.
- Configured a Jetson Nano embedded AI platform for face detection tasks, including loading and optimizing pre-trained face detection models onto the Jetson Nano's GPU for efficient real-time facial recognition and analysis.

## PROJECTS

---

### KALAPA Vietnamese Handwritten OCR

[View Detail](#)

Team Project, Challenge

10/2023 - 12/2023

- Developed a Convolutional Neural Network (CNN) to extract image features and integrated it with a BiLSTM model for sequential character recognition.
- Utilized the Connectionist Temporal Classification (CTC) loss function and implemented a CTC decoder to extract the most probable characters, removing duplicates and whitespace.
- Developed in Python 3.9 using TensorFlow, Scikit-learn, Pandas, NumPy, etc.
- Result: Public test top 20 and Private test top 12.

### Medical Document Retrieval Chatbot Prototype

[View Detail](#)

Personal Project

- Built a Retrieval Augmented Generation (RAG) chatbot utilizing Llama-Index, PostgreSQL vector database, and GPT-3.5 for medical document retrieval.
- Implemented data embedding, indexing, and advanced text retrieval techniques like keyword search, semantic similarity, and context-awareness.
- Developed in Python 3.10 using Llama-Index, PostgreSQL vectors database, and OpenAI GPT-3.5.

### K-means Parallel

[View Detail](#)

Personal Project

- Architected and implemented a highly scalable parallel K-means clustering algorithm using the Map-Reduce paradigm on Hadoop, significantly improving processing speed for large datasets.
- Leveraged Python's mrjob library to write Map-Reduce jobs, enabling seamless integration with Hadoop's distributed computing framework.
- Utilizing Hadoop's distributed cache for sharing centroids across all nodes, reducing communication overhead.
- Developed a robust data generation module to create synthetic datasets of varying sizes and dimensions, allowing for comprehensive algorithm testing and performance analysis.

## ACHIEVEMENTS AND EXTRACURRICULAR ACTIVITIES

---

<b>Term-based scholarship</b> at IUH - Industrial University of Ho Chi Minh City	2020 - 2024
<b>Certificate</b> Google Data Analytics Specialization at Coursera	7/2023
<b>QuanQuanGCP</b> for learning Google Cloud Skill	3/2024