

한국어

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Lee Cha Hun

Software Developer

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🐙 GitHub

👤 LinkedIn

🌐 Website

📖 Medium Blog

Introduction

I have accumulated diverse experiences as a web service and infrastructure engineer. I have designed, developed, and operated production services using various technologies such as Python, AWS, Next.js, Docker, FastAPI, and Kubernetes, and I am always considering architectures and patterns that offer high scalability and maintainability.

I am highly interested in open-source projects and strive to apply and contribute to them in various ways. I enjoy gaining diverse development experiences through personal projects and involvement in development communities. I like to share or document useful aspects of my development experiences and have written over 70 technical posts on Medium.

I always aspire to be the best software developer, and with the goal of becoming the best software leader in the future, I am learning, using, and gaining experience in various technologies.

I believe that communication between development and business is most important in service development. I strive for problem-solving and business advancement through proactive and active communication. Based on these principles, I continuously learn, experience, and make efforts to grow into a better developer.

SKILL

Languages

- Python
- TypeScript
- HTML/CSS
- GO
- JavaScript

Frameworks & Libraries

- FastAPI
- Next.js
- Express.js



Infrastructure & Databases

- Node.js

- React.js

- AWS

- Nginx

- Redis

- GCP

- Celery

- MongoDB

- Kubernetes

- RabbitMQ

- Linux

- Docker

- MySQL

- Prometheus & Grafana

Tools & IDEs

- Vim

- Git

- Jira

- VS Code

- Github

- Confluence

- Cursor

- GitLab CI

EXPERIENCE

2024.01 ~ 2024.04

Quantec Investment Advisory (Startup, 53 employees)

Robo-advisor Automation Developer

- Financial Industry / 2.5 trillion KRW scale robo-advisor startup
- Automated stock market rebalancing algorithms using Dagster / Cloud-native orchestration framework
- Refactored and optimized execution speed of stock rebalancing algorithms using Scalene
- Designed and managed AWS infrastructure and MySQL database monitoring using Grafana & Prometheus
- Designed and managed Kubernetes-based container clusters



- Skill Keywords

Python

Dagster

Kubernetes

Docker

MySQL

Grafana

Prometheus

AWS

Scalene

2023.04 ~ 2023.12

Werfen (Foreign company, 57 employees)

Middleware Infrastructure Engineer for University Hospital Medical Data

- University Hospital Medical Equipment / Blood coagulation, autoimmune disease, testing equipment IT middleware software infrastructure maintenance and management
- Improved usability according to university hospital needs and close communication with overseas partners
- Maintained and managed Kubernetes-based data management system clusters
- Linux server troubleshooting, updates, and monitoring
- Skill Keywords

Python

Kubernetes

Oracle

MS SQL

ASTM

HL7

Linux

VMware

C++

2023.1 ~ 2023.4

mobileapp (Startup, 12 employees)

Intern

- Collected image training data and model training
- Image analysis and inference using Hugging Face environment
- Configured and managed AWS GPU server with CUDA environment
- Skill Keywords



Python

Yolov7

Pytorch

CUDA

AWS

Projects

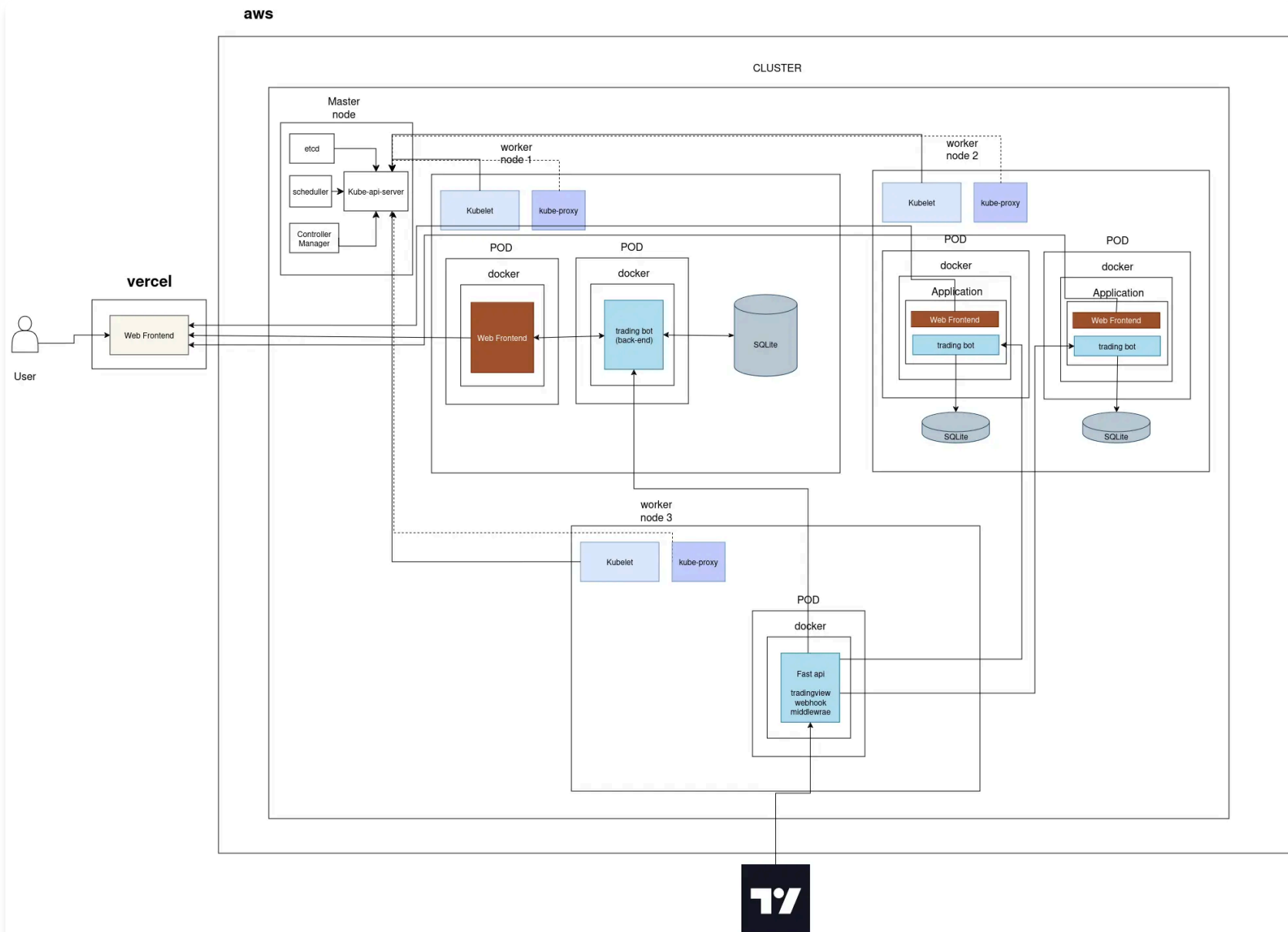
Development and Operation of Quantitative Investment Algorithm

2024.05 ~

crypto-build (Solo project)

- Launched Quant investment fund products based on Binance copy trading
- Developed logic that receives trading signals via RESTful API and performs automatic trading according to user accounts
- Applied Ansible parallel execution on 250 AWS servers for algorithm performance comparison experiments, reducing deployment time by N times
- Integrated LemonSqueezy payment system, designed and developed subscription system's access token management DB as a full-stack developer





Robo-advisor Rebalancing Automation

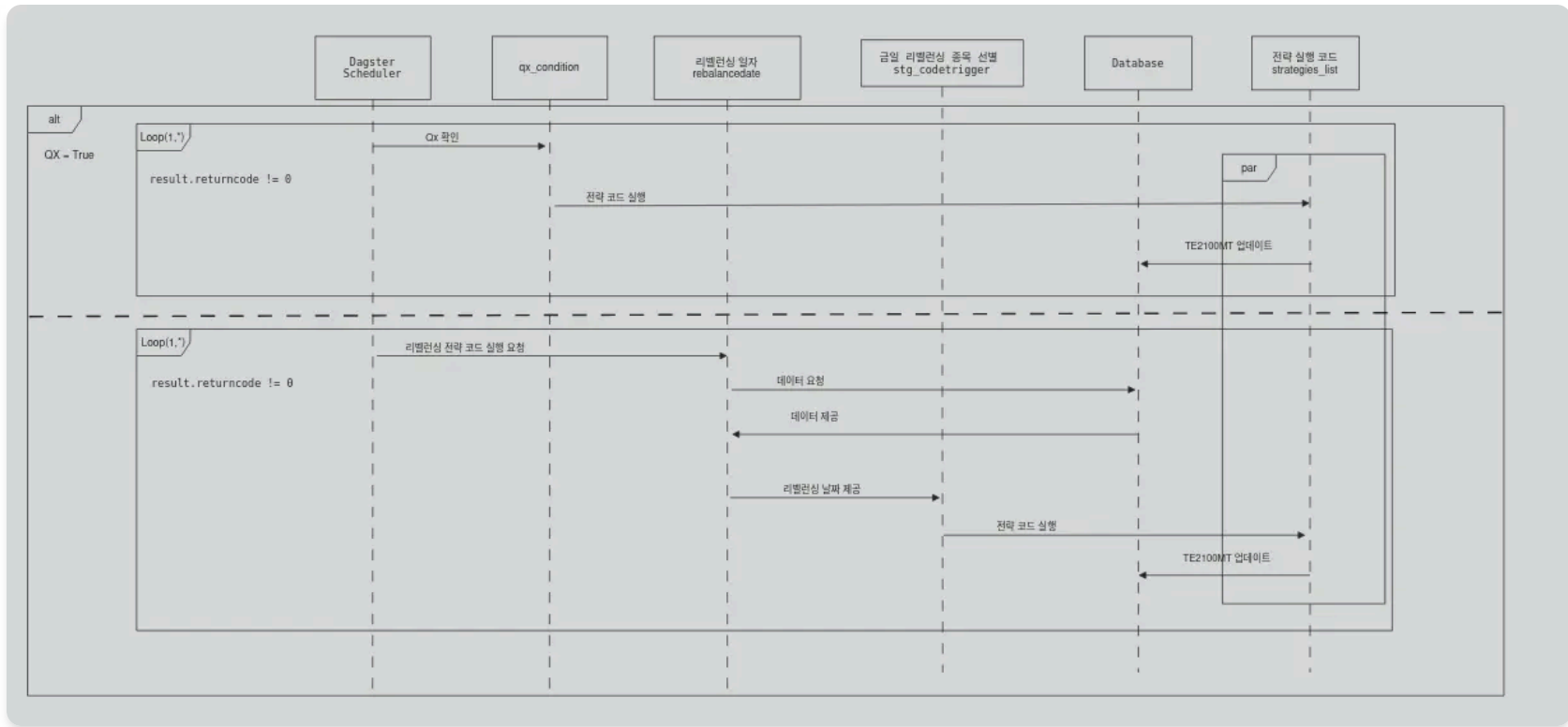


2024.1 ~ 2024.4

Quantec (Automation team of 3 members)

- Built an orchestration workflow that performs N times monthly rebalancing of U.S. and Korean stocks using Dagster
- Designed ETL tasks for collecting and analyzing stock market data, set up for periodic execution at specified times
- Used Scalene profiler to analyze code execution time and memory usage patterns to optimize the performance of stock rebalancing algorithms
- Identified bottlenecks and optimized inefficient computations, improving data processing speed by N%
- Created monitoring dashboards including metrics such as CPU, memory, network traffic, MySQL query response times, and set up alerts for immediate response in case of issues
- Designed and built a hybrid/high-availability Kubernetes architecture





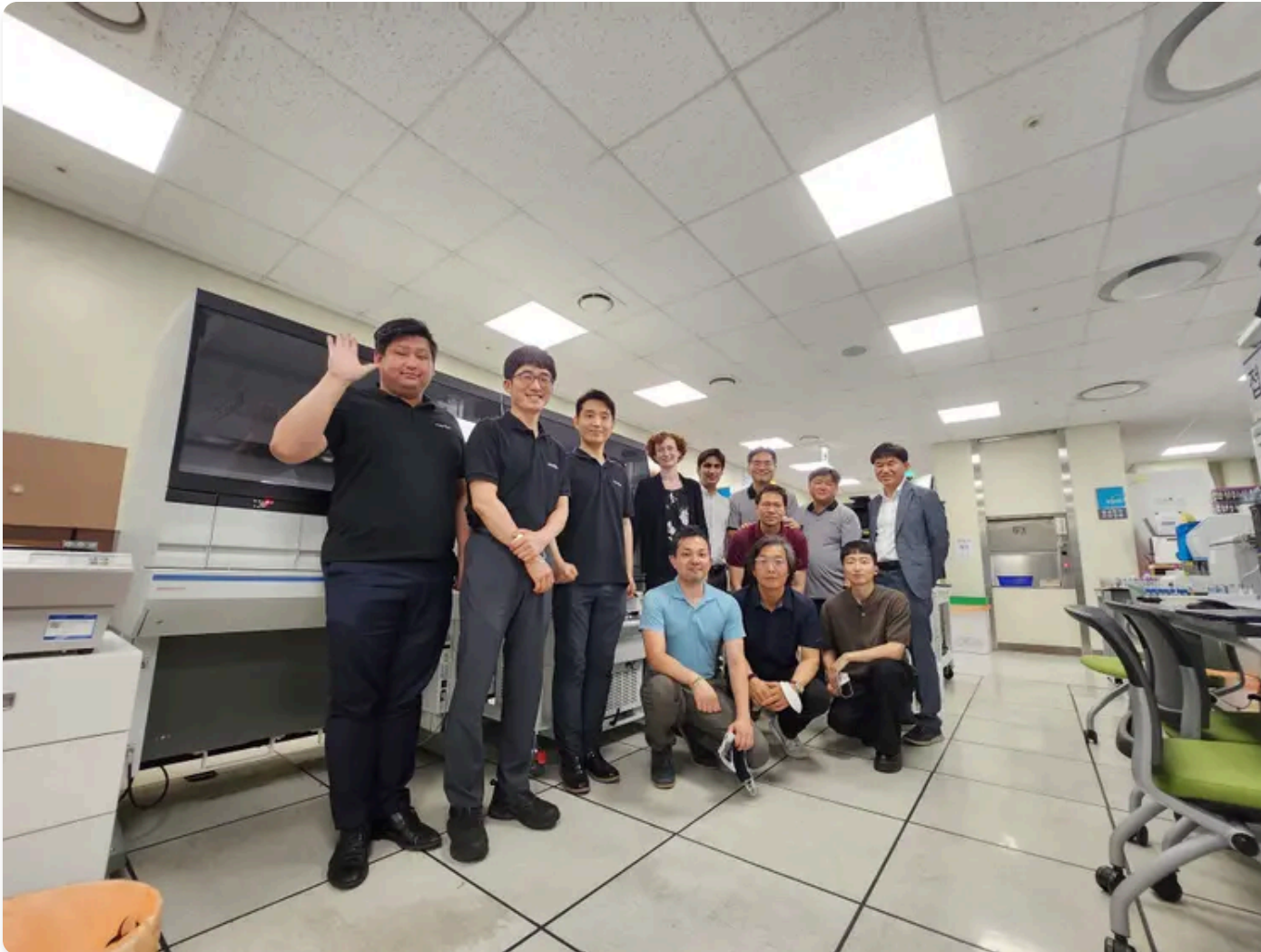
Built Middleware Infrastructure for Samsung Hospital Medical Data

2023.4 ~ 2023.12

Werfen (Team of 3 members)

- Implemented high availability by distributing middleware traffic of Kubernetes clusters with NSX-T in VMware environment, and automatically switching traffic upon failure through health checks
- Activated SSH service on ESXi servers using vSphere Client and carried out security settings
- Wrote SQL query commands to activate Oracle DB asynchronous reception and optimized performance
- Fixed format errors in previous queries, prevented performance degradation and timeouts in synchronous mode, improved MultiOnline result reception speed
- Performed regular troubleshooting and software updates to ensure server performance and stability





Developed YOLOv7 Image Analysis Model

2023.01 ~ 2023.4

mobileapp Intern (AI team of 3 members)

- Built GPU-based CUDA environment for YOLOv7 model training
- Collected, processed, and preprocessed data, then split into training/validation/test datasets to perform model training



- Optimized and validated model performance through hyperparameter tuning and testing on test datasets

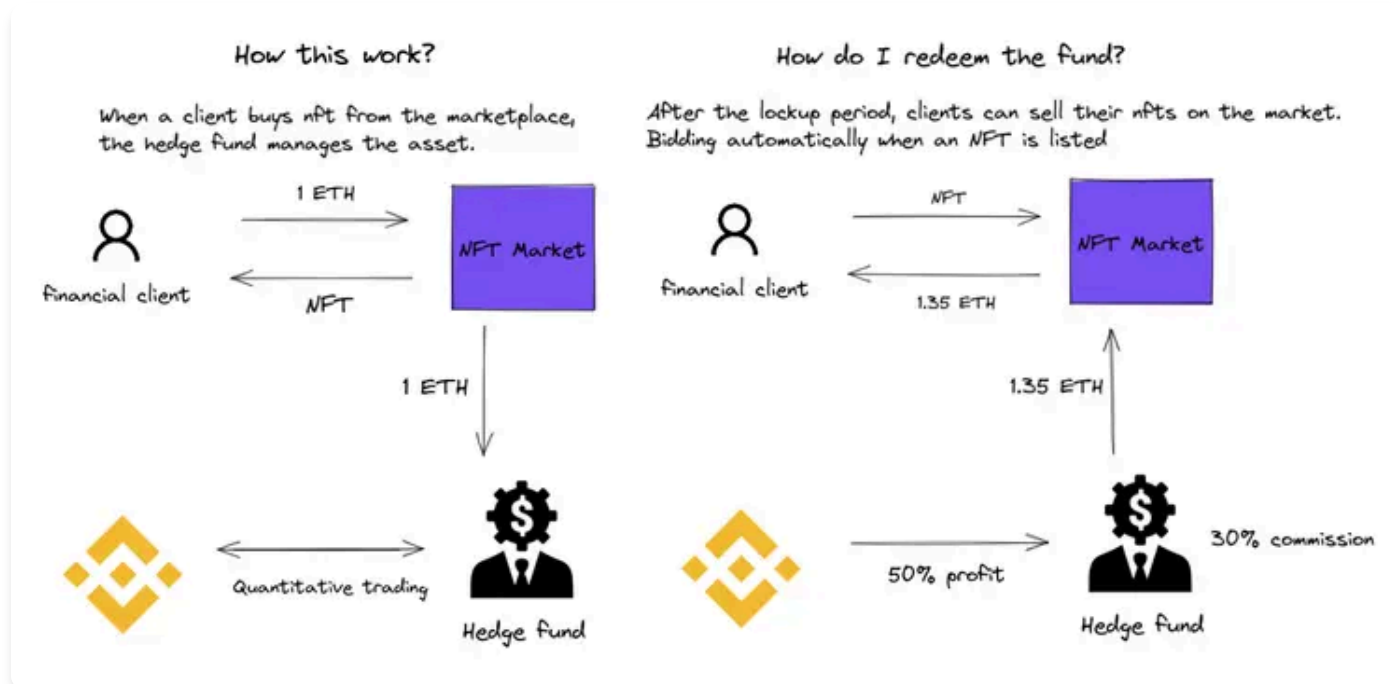
Fund Subscription Project Using ERC-721 NFT



2022.07 ~ 2022.12

Personal Project

- Implemented ERC-721 standard-based NFT issuance logic using Solidity
- Developed user wallet connection and NFT purchase interface by integrating React with MetaMask
- Built backend using Node.js and Express to manage transaction records and user data, established database with MongoDB
- Deployed and tested smart contracts using Truffle and Hardhat, conducted beta testing on Ropsten Network



VGG19 Image Generator AI Image Synthesis Service

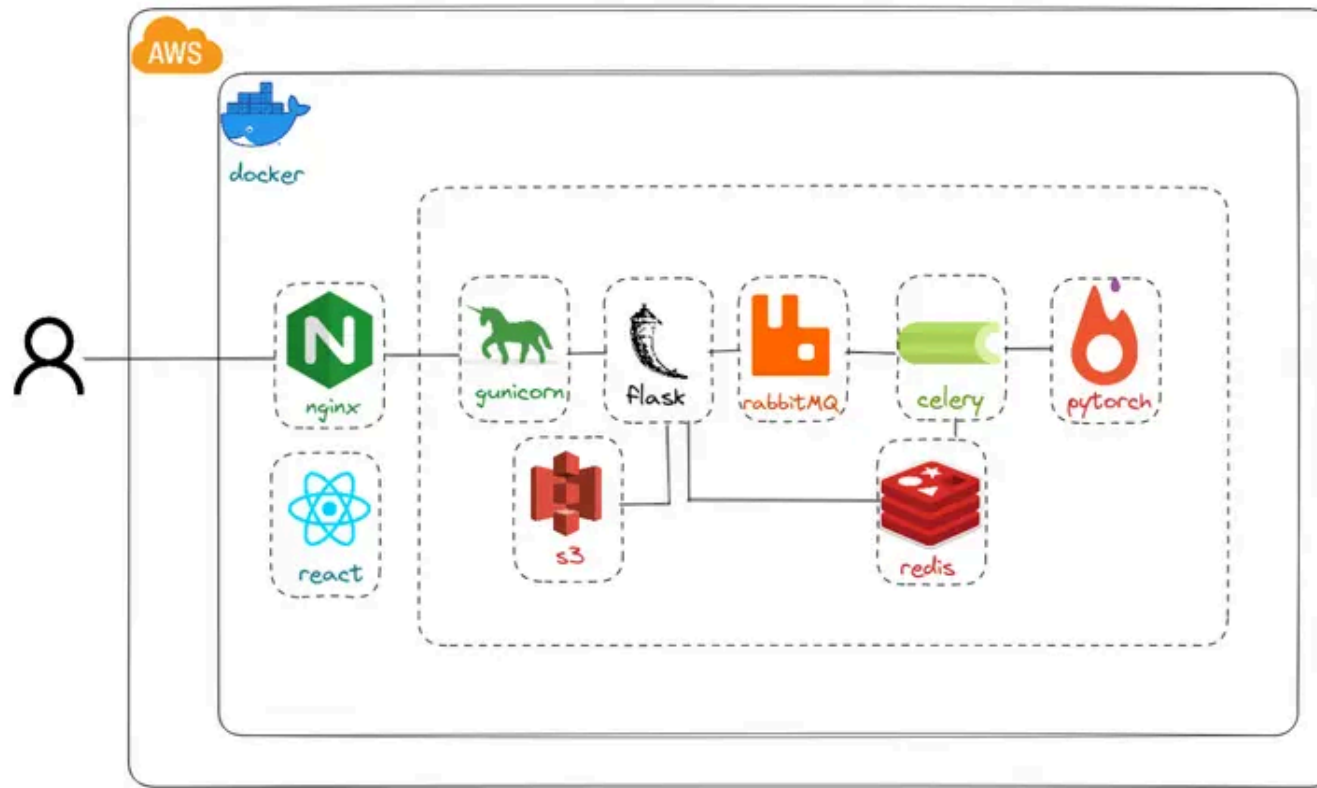


2021.12 ~ 2022.02

AI Silicon Valley Hackathon (Team of 5 members)

- Implemented image synthesis function by tuning VGG19 model, handled asynchronous processing through RabbitMQ and Celery, and processed multiple requests stably using CUDA GPU
- Experienced various server issues such as GPU server overload, increased API request counts, and performance tuning as a backend developer
- Gained experience as a team leader in setting directions and designs with five developers, and collaborating with other professions
- Service discontinued due to decreased demand with the release of DALL·E 2





OPEN SOURCE

freqtrade

Contributed to freqtrade open-source project by implementing futures trading features, improving leverage functions, and integrating with TradingView platform

[GitHub](#) [Website](#)

XMR-mining with Kubernetes

An open-source project automating XMR mining processes in a Kubernetes-based cluster



GitHub

Education

AI Silicon Valley Hackathon / Completed 3rd Training Course

2021.12 ~ 2022.02

Team B Leader

Korea University of Technology and Education / Bachelor's Degree in Computer Engineering

2020.03 ~ 2023.02

Certifications

Certified Asset Manager

Korea Institute of Financial Investment

Obtained on 2018-11-23

Additional Experience

Discharged from Army

2018-04-24 - 2020-02-13



Favorite Books

- "Beat the Dealer" - Edward O. Thorp
- "The Man Who Solved the Market: How Jim Simons Launched the Quant Revolution"
- "Principles for Navigating Big Debt Crises" - Ray Dalio

