Taelim Hwang

Software Engineer - Domain, Platform, Web Service

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Profile

Software Engineer focused on Back-end for 6 years. Interested in designing software architecture to increase efficiency. Knowledgeable in user interface, testing, and debugging processes. Proficient in various platforms, and languages especially on Python. Able to effectively self-manage during independent projects, as well as collaborate in a team setting.

Employment History

Lemonbase
October 2022 — Present

- Developed new features for the HR SaaS service platform
- Organized a development convention for Back-end chapter
- Solved security concerns for medium to large customers with SSO SAML integration
- Built a keyword-based search service w/ OpenSearch
- Designed and built a microservice with LLM(Bedrock)
- Improved deployment experiences with CI/CD optimization

Chai Corporation.
June 2021 — September 2022

- Developed a Legacy Payment Platform and programmed new features for connecting PG Providers
- Maintained New and Legacy Payment Platform
- Designed New Microservices for a New Version of Payment Platform with gRPC
- Pre-developed a New Simple Pay

LG Electronics. Inc.
January 2019 — June 2021

- Developed Information Display Management Web Solution(ConnectedCare)
- Researched and developed New IoT Platform Web Service
- Operated Data Management and analyzed IoT Data to create new businesses
- Pre-developed Mobile version of ConnectedCare(PoC)

ES Planit
June 2019 — September 2019

- Designed a core logic architecture for market price analysis platform using Koscom Open API
- Developed web platform for Stock market
- Migrated infrastructure AWS to Private Cloud Platform
- Operated infrastructure resource

Samsung Medical Center (Internship)
January 2018 — March 2018

- Shared tasks such as bioinformatics data preprocessing, and data analysis with R, Python, and Perl
- Developed Python automation tools for data collection

Project

LLM Microservice Platform - Lemonbase
January 2024 — Present

Designed and built **a first microservices AI platform for LLM-based services**

- **Leading projects** and delivering successful results
- **Organized a hackathon** where everyone is free to develop services using the LLM
- Utilized **OpenSearch's Vector DB for RAG usage, LangChain and FastAPI**
- Advanced the service to work with both API call-based services provided by AWS such as **Bedrock and SageMaker** or by bringing up your own open source model
- Interacting with AWS Solutions Architects and earning credits toward LLM development and using those **credits ($8,000)** toward the cost of running production infrastructure.

1:1 Service Improvement - Lemonbase · September 2023 — January 2024

Improving 1:1 service to increase the usage rate of customer members.

- Significantly improved usability with the addition of **Google Calendar recurring events.**

- Refactored codes to improve the internal API**(Django)**.

- Built **the service's first keyword-based search system using OpenSearch** and **contributed to fix an issue in an open source library** (link)

OpenAPI Improvement TF - Lemonbase · March 2023 — August 2023

Enable customers to integrate Lemonbase OpenAPIs**(Django) to quickly and conveniently integrate information** from external HRIS systems.

- Reduced logic that took over 30 seconds to add 1000 members to around **7 seconds for 3000 members (around 2 seconds for 1000 members)**.

- Systematized **error codes to minimize additional inquiries by engineers** in charge of integration with customers, and advanced the flow of OpenAPI request -> response check -> modification.

- Added **API Playbook** to provide guidance and **Dev Server** to provide a development environment for customers to use before integrating with production.

SSO SAML integration - Lemonbase · December 2022 — February 2023

Using SAML to connect customer's member information with the Lemonbase service**(Django)** for **easy login, high security, and higher service integration** rates.

- The client's administrators can **easily manage employees** by connecting to their existing SAML service accounts.

- Eliminated the adoption hurdle from a security perspective by enabling customers' security administrators to use the more secure security features offered by SAML services, such as **2-FA authentication**.

CI/CD Improvement TF - Lemonbase · November 2022 — January 2023

Improving **Github Actions CI/CD pipelines** to enable faster deployment and testing, and optimize pipelines for reliable deployments.

- Reduced deployment time from up to 20 minutes or more to **10 minutes or less**

- Optimized testing experience by skipping tests based on backend fixes, frontend fixes, etc.

- Speed up by organizing backend and frontend tests and builds **in parallel**

- Minimized cross-network costs by changing build image caching to AWS S3 storage, **saving up to $5,000/month in costs**

Unified Payment System, Custom Pay - Chai Corporation · June 2022 — September 2022

Programming a simple server with socket**(Kotlin)** to communicate PGs and Card companies with dedicated lines.

- Became possible for the company to introduce a new payment method through the establishment of a dedicated line

Micro-service for New Payment Platform - Chai Corporation · September 2021 — June 2022

Refactored from legacy PHP-based services to new services based on microservice architecture, which fully designed a new **Transaction Gateway Service** and **Credential Management Service** for PG Provider. The time to link a new PG provider has been reduced from **3 months to 1 month.** Parallel work is possible through microservices, increasing productivity.

- Created an interface and architecture from scratch for interconnecting **microservices using gRPC** to reduce latency between other internal services

- Programmed a server with **Springboot based on Kotlin** from legacy PHP based services to make programming much easier and to be supported by various modules

Core System for Payment Platform(legacy) - Chai Corporation · July 2021 — November 2022

Added and maintained new features of the **CakePHP-based legacy server**. These features are currently used among the **top 3 major franchisees** in the company, with transaction volume occurring and operating stably.

- Acquired domain knowledge about payment services, able to stably proceed with design for new microservices

Extra-curricular Activities

Code In Design
September 2023 — July 2024

Freelance developer at Code In Design, working on backend and infrastructure development. Participated in **5 projects** and successfully delivered (link)

hacktoberfest seoul 2023
October 2023

Participated in Hacktoberfest and **contribute to Rust-based open source**

Wanted OpenAPI Project Interview
September 2023

Participated in a developer interview for the **OpenAPI Project** (link)

Depromeet(8th) at
June 2019 — December 2019

Participated in club activities purposed on creating side-projects with designers and developers

- Developed and planned a Space recommendation service for work **(Back-end, Django)**, which is released in Google Play Store and App Store

- Built a infrastructure with **AWS CDK** for a second side-project, Meditation Service based on incenses and videos released in Google Play Store

- Studied Kubernetes and Clean Codes with books with group members

KUCC(Korea University Computer Club)
September 2017 — February 2019

Participated in club activities at the university for studying Computer Science in a group

- A machine learning exercise for NLP

- Data structures

- Supported as a mentor for mentoring activities for juniors

IoT Platform Service - LG Electronics. Inc.   June 2020 — April 2021

Developed an IoT Platform Service designed with **Serverless Framework** for inter-connecting with IoT Devices, controlling via Web Service, and targeting structures similar to IFTTT(to make chains of IoT devices). A lightweight server was quickly produced and configured for easy distribution, and the demonstration was conducted in a short time, which allowed it to proceed to **the commercialization stage.**

- Designed Service Core Engine through researching IPaaS service architecture. The team was able to create fastly whole services based on that

- Developed an app for External Service Inter-connection**(Node.ts)**, deployed to Azure Function and AWS Lambda with Serverless Framework

Mobile Version for ConnectedCare Solution - LG Electronics. Inc.   January 2021 — March 2021

Developed a New Mobile Website for LG ConnectedCare targeted on CS Teams to control remote devices with remote controller UI**.** When actual workers used it, it received good reviews for a much more comfortable UX and features necessary only for control.

- Developed and re-designed UI with **React.ts**

Data Pipeline for LG ConnectedCare - LG Electronics. Inc.   January 2020 — June 2020

Designed ETL Process of Raw Data generated by LG ConnectedCare solution including IoT device and network pattern. Developers can more easily access data and quickly analyze the imported data to derive meaningful insights with this platform. A task that previously took **more than 5 days has been reduced to 1 day.** Through the analysis of the internal thermal data of the device, it was possible to add a temperature management function through fan control.

- Built an analysis environment using **Jupyter notebook Server, MongoDB** for using raw data pre-processing **with Batch Scheduler(Python)** to Improve developer convenience through library abstraction

- Conducted data analysis through the environment built on the On-premise server

LG ConnectedCare Solution - LG Electronics. Inc.   March 2019 — June 2021

Developed New features for LG ConnectedCare Solution. User convenience is increased by adding new functions, by detecting defects and controlling LED remotely. Preemptive after service for the devices is enabled through the solution without directly seeing the defects that are difficult to check with the naked eye(at least **1 pixel error** can be detected).

Developed a device replacement history page, which is to track the history of device position changes, allowing users to increase the convenience of overall management.

- Front-end (Added feature UIs, pages with **Vue.js**)

- Back-end (Added API to control devices via web services with **Python(Flask)**, modified **Stored Procedure for SQL Server**)

Maintained Service on Cloud environment with Azure Cloud, Azure Function, Azure PaaS Solutions and Blob Storage Service.

Pantis, Financial Information Service Platform - ES Planit   June 2019 — December 2019

Designed a core logic and infra for **Market Price Analysis Platform** using Koscom Open API. It reliably collects and pre-processes **40 million stock data every day**, creating an environment that can be used directly for data analysis logic.

- Migrated from AWS to Koscom Cloud to improve security and maintained service features

- Building CI/CD has made deployment much easier to ensure scalable design

- Developed Stock Data Collector with Koscom Open API **(Python)**, Built pipelines with **SQL Server**

- Developed web platform(PoC) with Front-end**(Vue.js)** and Back-end**(Django)**