

**Gao Zhiyuan**

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## Work Experiences

### Trilogy

*Software Engineer*

*Aug. 2022 - Now*

1. AWS Cost Optimization project

- Lowered AWS Service Costs from 25 million USD annually down to 5 million USD in a team of 3.
- Designed non-intrusive, sustainable plans to guarantee resource sharing, user resource awareness, automated anomaly detection and permission rules.

2. Social Platform for Education

A social platform that enables 4 12 grade students to memorize curricular knowledge through making posts with the help of AI and memorization techniques.

The tech stack includes Next.js, Prisma/MySQL, GPT-3, Stable-Diffusion, Docker and AWS Devops.

3. Data Platform based on Azure AD

Construct a graph-based data platform and use it to calculate company employee interaction intensity. Extract data from MS 365 through Azure Graph API, engineer the data into graph relationships and maintain the in the graph database.

### MISE

*Devops Engineer*

*Jun. 2022 - Sep. 2022*

- Solve system performance bottleneck by analysing AWS Lambda, API Gateway and MySQL RDS
- Apply Terraform IaaS for fast deployment
- Enabled development environment vs. production environment split to stabilise our services
- Lead the team to learn to apply Github Best practices (PRs, code reviews)
- Implement the development/staging/release processes of our product

### MetaMUI-SovereignWallet

*Python SDK Developer*

*Dec. 2021 - Mar. 2022*

Migrate Rust SDK to Python SDK for MetaMUI blockchain built with Substrate framework

### Alibaba Cloud

*Intern for Summer of Code*

*Jun. 2021 - Sep. 2021*

Nodejs Dev/QA intern for Serverless Devs. Developed unit tests, integration tests, and APIs and Git workflow automation with Typescript, Jest and Github workflow

### Chinese Academy of Science

*QEMU Researcher*

PLCT Lab

*May. 2020 - Nov. 2020*

One patch to QEMU upstream to emulate Nuclei RISC-V SoCs with customised interrupt controllers and registers,

Delivered an oral presentation at CRVA 2020

### Google

*Java Intern*

Summer of Code

*Jun. 2019 - Sep. 2019*

Engineered Apache Nemo to process single-stage batch data with AWS Lambda Functions

**Seoul National University***Research Intern*

Enable distributed dataflow system to benefit from serverless computing using AWS Lambda Functions, Java and Apache Nemo

Two published domestic papers, and one pending research for international conferences

**SUSE***QA Intern*

Part of the Dev&QA team working on openSUSE and SUSE Linux Enterprise, with git, openQA and perl

Software Platform Lab

*Mar. 2019 - Nov. 2019*

Beijing, China

*Oct. 2018 - Jan. 2019***Research Project****Accomodate Input Spikes with AWS Lambda Functions**

A hybrid system of Dockers and AWS Lambda Functions, where stable workloads are running on docker and input rate spikes are offloaded to AWS Lambda Functions,

Implemented job scheduling/balancing algorithm to coordinate Lambda Functions' life cycle, data relay, and system-level dynamic scaling

**Education****National Cheng Kung University***B.S., Political Science*

Taiwan

*Sep. 2015 - May. 2017***Seoul National University***B.S., Computer Science and Engineering*

Korea

*Sep. 2019 - )*

**Skills:** Languages: Python, Java, Typescript, C/C++ Backend Development: Typescript, Prisma, MySQL Devops: AWS, Redis, K8S, Docker, Azure AD Graph APIs, CI/CD Others: Serverless development, QEMU, React, GPT-3, Stable Diffusion

**Languages:** Chinese, English (TOEFL 100), Japanese (JLPT N1) and Korean