

## Kao Chung Yi

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### CAREER OBJECTIVE

*Experienced Software Engineer specializing in Golang, with a strong passion for optimizing microservices for performance and resource efficiency. Skilled in developing observability and debugging tools using eBPF.*

#### Shopee

**Senior Software Engineer, Tech Lead**, Singapore, Feb. 2021 - Current

- **Design and Lead Dynamic Instrument Solution**

The solution reduces **Mean time to recovery**(MTTR) by 60% during troubleshooting without the need for service redeployment and enabled function-level tracing.

- **Design and Lead Profiling Solution for Performance Optimization**

Enable product-line services to achieve a 10-20% reduction in resource costs by successfully launching an ad-hoc/continuous profiling platform for a microservice environment.

- **Lead an Service Level Objective platform to foster the SRE Culture**

The SLO system helps product-line services objectively assess system performance and balance the prioritization of business and technical tasks.

- **Assist in the transition of Marketplace services from Monolithic Architecture to a Microservices Architecture**

Manage the core-server and analyze code splitting to facilitate microservices creation. Partner with the SRE team to implement a traffic observation solution, effectively distributing traffic across multiple sub-services. Contribute to cross-functional projects, including shadow traffic and market-based traffic splitting.

#### Rakuten Inc

**Senior Software Engineer (Rakuten Books)**, Tokyo, Aug. 2018 - Jan. 2021

- **Develop Order Process (After Checkout Flow) System Integration**

Design and integrate the order processing service with third-party merchants to support the business unit in launching a drop shipping business.

- **Warehouse Expansion Project**

Analyze existing warehouse microservices and design a common architecture template to reduce design complexity. Successfully launched and migrated regional warehouse microservices, improving local inventory and logistics management.

- **Enhance System Performance and Development Efficiency**

Optimize legacy database query execution time by 20% and improve index usage through SQL explain plans and slow query logs. Develop a PHP cache extension that cut front-end product loading time from 4 seconds to 200 milliseconds (95% reduction) by monitoring source files and utilizing browser cache (ETag) mechanisms.

#### Military Service

**Serve in the Military**, Taiwan, Dec. 2016 - Feb. 2018

#### Mstar Semiconductor (MediaTek)

**Senior Embedded Software Engineer**, Taiwan, Nov. 2015 - Nov. 2016

- **Android TV Stack Development**

Design and provide Android TV Framework for Amazon Smart TV project.

- **Development Android TV Service**

Design android service with the driver team and maintain the android TV ecosystem.

### AWARDS

- **Published at the IEEE VLSI-DAT Conference**, *EcoSim:Sensor-Node Simulator*
- **Qualcomm Award, MobileHeros**, *Book Finder*
- **Excellent Price in ICT Innovative Contest**, *Touch Projector*

### EDUCATION

**National Tsing Hua University(NTHU)**, Taiwan

*Master of Science in Computer Science and Engineering*

Sept. 2013 - Sept. 2015