

CHUNG YI KAO

backman@gapp.nthu.edu.tw <https://github.com/backman-git>

SUMMARY

Experienced Software Engineer with expertise in Golang. Passionate about using computer science knowledge to improve work and life quality

SKILL

- Golang(current), Java, Python
- Spring Framework, Apache Camel(EIP), PostgreSQL, E.L.K, Docker, Jenkin
- GDB, JDB, JVM
- Simulator(EcoSim), Interpreter(PHP.js), VM(JVM.py).

EXPERIENCE

	Shopee	Feb. 2021 - Current
Tech Lead		Singapore

- **Performance & SLO Solution**

1. Lead **SLO Platform Project** to establish company SLOs measurement(90% Critical Services)
2. Design and Lead an **Profiling Solution** for live troubleshooting and performance optimization
3. Mentoring engineers

Senior Backend Engineer

- **Maintain and Sunset Monolithic Shopee Core Service (Conn Server, Coreserver)**

1. Introduce multiple solution such as **Proxy Protocol** for traffic monitoring, and coordinate with each domain core service PIC to migrate the traffic smoothly.
2. Company-wide project feature development such as (Shadow Traffic, Split by Market)

- **Maintain TCC middleware**

1. Company-wide project feature development such as (Shadow Traffic, Split by Market)
2. Research Industrial features and development

	Rakuten	Aug. 2018 - Feb. 2021
Senior Java Backend Engineer		Tokyo Japan

- **resolve legacy DB issue:**

1. Use profiler to optimize DB query and index usage. 5s to 500ms(90%)

- **warehouse migration project:**

1. Cross team cooperative project.
2. Propose new design for the future migration.
3. Refactor system source code.

- **Distribute tracing**

1. Introducing spring cloud sleuth to micro-service for system analysis.

- **Development Environment Optimization**

- **PHP dev-cache extension:** Develop a PHP cache extension to monitor source files, and generate hash code leverage to use the browser's cache(Etag) mechanism. 4s to 200ms(95%)
- **Dockerize development environment** increase development efficiency and reduce the on board time.
- **Pipeline enhancement** Parallelize the pipeline build
- **Mock API:** Use Nginx's cache mechanism to cache the upstream server's responses. 3s to 150ms(95%)

- **Enterprise Integration Patterns**

Apache Camel, ActivMQ
Spring framework, GraphQL, ELK, kafka, Spring Batch, message driven design.

- **Domain Driven Design**

Distributed Transaction: Saga, TCC, 2PC

National Rescue Command Center (Military Service)
Service Developer

Nov. 2016 - Nov 2017
Yulin, Taiwan

Mstar Semiconductor
Senior Software Engineer (Research alternative service)

Jan. 2016 - Sept. 2016
Hsinchu, Taiwan

- Cooperate with Amazon software team in smart TV project)
- Developed Android system stack for smart TV (Binder, service)
- Implemented electronic program guide application.
- Implemented an automatic tool for multi-language translation(Improved developing efficiency: 5hs to 1s)
- Implemented the logger.(FileBeat)
- UML code injection.(Runtime sequence diagram for debugging)

HONORS AND AWARDS

- **IEEE Conference Paper** in [VLSI-DAT](#), *EcoSim: Sensor-Node Simulator* 2019
- **Qualcomm Award** in [MobileHeros](#), *Book Finder* 2012
- **Excellent Work** in [ICT Innovative Services](#), *Touch Projector* 2012

EDUCATION

Master of Computer Science, National Tsing Hua University, Taiwan.

Sept. 2015

Thesis: EcoSim: A Smartphone-Based Sensor-Node Simulator with Native Sensor and Protocol-Stack Emulation

PROJECT

- EcoSim: A Smartphone-Based Sensor-Node Simulator with Native Sensor and Protocol-Stack Emulation
- [PHP.js](#)
- [JVM.py](#)
- Using Machine Learning to hack CAPTCHA
- Voice Recognition and Correction (ED algorithm)
- Smart Leave System (Alternative Military Service)(API server, AWS, oAuth2)
- Touch projector
- Book Finder (Indoor location service of library)
- Gesture recognition with IoT platform based on triaxial acceleration