Ta Quang **Tung**

Software Engineer

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Education

Hanoi University of Science and Technology *Ha Noi, Vietnam*
GIFTED STUDENT TRAINING PROGRAM (KSTN), BACHELOR OF COMPUTER SCIENCE *August. 2015 - 2020*

- GPA: 3.51/4.0

Skills

Programming	Go, Python, C++14
Web	gRPC & RESTful API, React, HTMX
Databases	MySQL, PostgreSQL, Memcached, Elasticsearch, Zookeeper
Languages	Vietnamese (Mother tongue), English (Intermediate)
Other Skills	TLA+, TDD, Docker, Kubernetes, LaTeX

Experience

Singapore-based Hedge Fund *Ha Noi, Vietnam*
FULL-STACK DEVELOPER *Apr. 2024 - Present*

- (Key Member) Developed & maintained Service for Managing Trading Data
- Written in Go (Backend) & HTMX (Frontend)
- Used PostgreSQL Database
- Managed more than 1PB trading & other data, distributed across multiple data-centers
- Used by other developers and researchers for writing and reading
- Helped to simplify permission control, data synchronization, complex data deletion & reading rules
- Scattered data to multiple storage disks to help improve read & write performance
- Applied TLA+ formal model checking to help design & implement multiple parts of the system, to avoid race conditions and data lost
- TLA+ source code: https://github.com/QuangTung97/tla-plus/blob/master/USS/USS.tla

Teko Vietnam *Ha Noi, Vietnam*
BACKEND DEVELOPER *Nov. 2022 - Apr. 2024*

- (Key Member) Developed & maintained User-Facing Product Searching & Listing Service
- Written in Go & gRPC & gRPC Gateway
- Taken ownership since December 2023
- Highest traffic service of Teko ERP
- Used ElasticSearch for complex searching & filtering logics
- Developed a sharding mechanism to distribute data on multiple Elastic clusters without downtime
- Multiple tenants can be stored & read from the same or different Elastic clusters
- Applied Memcached with lease mechanism for consistent caching to reduce x5 P95 latency
- Cache hit rate > 99%
- Used MySQL database

Open Source Projects *Ha Noi, Vietnam*
BACKEND DEVELOPER *Dec. 2022 - Present*

- Developed a caching library with strong consistency & high performance
- Support memcache lease for consistent caching
- Support complex batching to improve performance
- Support cache replication for high availability & easily restarting memcached instances without affecting performance
- GitHub source: https://github.com/QuangTung97/memproxy
- GitHub source: https://github.com/QuangTung97/go-memcache
- Applied for two high-traffic services of Teko & VNPay

Teko Vietnam *Ha Noi, Vietnam*
BACKEND DEVELOPER *May. 2021 - Present*

- (Key Member) Developed & maintained a notification system for OTT messages
- Written in Python with Flask
- Used MySQL database
- Used Google FCM

Teko Vietnam   *Ha Noi, Vietnam*

<small>BACKEND DEVELOPER</small>   *May. 2021 - Present*

- (Key Member) Developed & maintained Voucher Service for VNPAY QR & Bank Cards
- Implemented core promotion logic, listing & searching vouchers
- Written in Go with gRPC & gRPC Gateway
- Used MySQL database
- Used Elasticsearch for searching vouchers & near by shops
- Deployed on Kubernetes with CI/CD
- Taken ownership since July 2022

Hanoi University of Science and Technology   *Ha Noi, Vietnam*

<small>RESEARCHER</small>   *Aug. 2018 - Dec. 2018*

- (One Member) Developed a simple compiler for the Extended PL/0 Language
- Written in C++11
- Used Flex & Bison

Interests

Logic, Mathematics, Distributed Systems, Programming Languages, Functional Programming, Database Technologies