

RAYER TUNG

Staff Backend & Platform Engineer

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SUMMARY

Staff-level backend and platform engineer experienced in building distributed systems, developer platforms, and cloud services across ad-tech, fintech, semiconductor, networking, and enterprise software. Specialized in Go, Java, Rust, platform modernization, and production reliability on AWS and GCP. Delivered an estimated 65% infrastructure and observability cost reduction at Appier and reduced P90 response time by 62% at Binance. Former TSMC Section Manager with hands-on experience in architecture, implementation, code review, and production ownership.

TECHNICAL EXPERTISE

Backend & Distributed Systems: Go, Java, Rust, Python, C++, SQL, Spring Boot, Actix Web, REST APIs, event-driven architecture

Cloud & Platform: AWS, GCP, GKE, Kubernetes, Docker, Helm, Argo CD, Argo Workflows, Jenkins, CloudFormation, Lambda

Data & Observability: Kafka, MySQL, Oracle, DynamoDB, Cassandra, BigQuery, ELK, Grafana, Prometheus, data pipelines

AI Platform & MLOps: Model training and serving, LLM integration, RAG, knowledge-ingestion pipelines

PROFESSIONAL EXPERIENCE

TSMC — Section Manager, Fab Production Platform

Taipei & Hsinchu, Taiwan | Aug 2024 – May 2026

- Led an eight-person platform engineering team responsible for business-critical fab production systems deployed from a shared codebase across 60+ fab phases; remained hands-on in Java/Go development, architecture, PR review, and production incident response.
- Designed data architecture for terabyte-scale manufacturing workloads, separating runtime and analytical processing and introducing data marts and hot/cold tiering to reduce dependence on high-cost Oracle storage.
- Architected and implemented a Java modernization layer that generated HTTP mappings and Go/Java SDKs from CORBA IDLs, substantially reducing the effort required for modern applications to integrate with legacy services.
- Co-designed and implemented an urgent migration pipeline for 1,400+ VMs, automating data migration, configuration mapping, and validation and reducing manual operation time by more than 80%.
- Advanced AI-assisted development by converting fragmented domain documentation into an AI-readable source of truth using Markdown and an ingest - compile - lint knowledge workflow.

Fusang — Technical Consultant, Fixed-Term Engagement

Remote, Taipei | Feb 2024 – Jul 2024

- Developed a Go-based digital-asset clearing engine covering trade matching, balance calculation, settlement instructions, on-chain settlement, and reconciliation; delivered it through UAT before its subsequent production launch.
- Built a separate Rust/WebAssembly integration for tokenizing traditional financial assets on Tezos, constructing transactions, validating payloads, and sharing business rules across browser and backend environments; advanced the browser integration through POC into UAT.

Binance — Staff Software Engineer

Remote, Taipei | Jul 2022 – Jan 2024

- Owned the RFC, specification, and implementation of the Themis A/B testing platform's first internal platform API and Go/Java/Rust SDKs, transforming a Go web-only tool into a programmable experimentation platform.
- Automated the experiment lifecycle—including assignment, mutual-exclusion rules, and progressive rollout—replacing manual PM configuration and fragile Selenium automation; added fallback behavior, cache-aware policies, and pluggable metrics integration.
- Supported a latency-sensitive decision path at approximately 40,000 QPS and gathered requirements directly from business-unit engineers to drive API and SDK usability.
- Built a schema-compatible Rust/Actix service for high-volume decision paths, reducing P90 response time by 62% and P99 by 95% versus Go in identical stress tests, with comparable results validated through same-traffic canary deployment.

Appier — Senior Software Engineer — MLOps

Taipei, Taiwan | Feb 2021 – Jul 2022

- Owned the Dynamic Native Advertisement platform, an online recommendation, creative-assembly, and tracking system operating at 20,000–60,000 QPS with P90 response time around 100 ms across US and Asia deployments.
- Led its migration from AWS Lambda to GKE through canary validation and gradual Route 53 traffic shifting; replaced CloudWatch with self-hosted ELK and custom analytics, reducing estimated infrastructure and observability costs by 65%.
- Designed a cost-aware cross-cloud boundary that retained AWS-hosted image delivery while passing CDN URLs rather than image payloads, avoiding unnecessary image egress.
- Partnered with five data scientists to run four to five daily model-training workflows using Python, Kubernetes, and parameterized Argo DAGs; automated serving-service generation and model routing, reducing model time-to-production from weeks to days.

Innova Solutions USA — Senior Software Engineer / Technical Lead, MCDS

Taipei, Taiwan | Jul 2017 – Feb 2021

- Served as technical lead for a six-person Taipei team within a 12-person onsite/offshore delivery organization, owning architecture and code review, hiring, performance management, and coordination with the US team across a 14-hour time difference.
- Built a Java HIPAA de-identification pipeline using masking and synthetic-data generation to create representative end-to-end test data, resolving a plugin-integration quality bottleneck; established the project's first Jenkins CI pipeline and enabled an autonomous Taipei Scrum cadence.
- Designed AWS services for 50+ customers using CloudFormation, Lambda, DynamoDB, and ElastiCache, improving feature-delivery speed by an estimated 30%; coordinated consistency through a transaction proxy, idempotency keys, distributed locks, and state machines.

Ruckus Wireless — Senior Software Engineer

Taipei, Taiwan | Oct 2012 – Jun 2017

- Served as technical team lead for the three-person RESTful Public API team for SCG/SmartZone, owning API specifications, backward compatibility, code review, and releases for customer and internal-service integrations.
- Migrated controller capabilities from the C/C++-based ZoneDirector product to the Java-based SCG/SmartZone platform, using JNI where native integration remained necessary.
- Designed scaling and topology tests that validated support for up to 30,000 managed access points in a four-node cluster, including failover behavior and horizontal scaling.

Earlier Experience

Wozai Info Tech / Spring House (CHT Subsidiary) / Gamania | Taipei | Jul 2007 – Sep 2012

Android and OpenID development; technical leadership for the HamiBook e-book platform and DRM pipeline; MMORPG client and server engineering.

SELECTED PROJECTS

LLM Wiki Cloud — AI Knowledge Workspace: Transforms Markdown files and web sources into a structured, searchable, source-linked wiki, helping users retrieve and reuse fragmented knowledge as grounded context for AI-assisted work. Designed and shipped the multi-tenant BYOK product end to end, including automated ingest, compile, and publish workflows, tenant isolation, retrieval, and source traceability. [Demo: wiki.rayer.idv.tw](https://wiki.rayer.idv.tw)

MapSwitch — macOS Safari Extension: Published a 2.6 MB privacy-focused extension that lets users open a location in Google Maps, OpenStreetMap, or Apple Maps; the App Store reports no data collection. [App Store](#)

EDUCATION & LANGUAGES

National Chung Hsing University — Food Science Studies | Chinese — Native | English — Professional Working Proficiency