

Zhaoyi Yuan

Tech Lead / Small-Team Leader | Backend Architecture · Distributed Systems · AI Engineering
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Professional Summary

- 10+ years of backend engineering experience across Huawei, Tencent, and AfterShip, with long-term focus on infrastructure, distributed systems, and core backend platform development.
- Positioned for Tech Lead / small-team leadership roles, capable of requirement breakdown, architecture design, technical problem-solving, execution management, cross-functional collaboration, and delivery of key projects.
- Strong multi-language engineering capabilities in Go, C++, and Python, combining infrastructure abstraction with complex business delivery; currently focused on AI engineering.
- Industry experience spans logistics tech, content platforms, fintech, and telecom software, with hands-on experience in large-scale internet systems and international project delivery.

Core Skills

Tech Stack: Go, Python, C++, Redis, Kafka, Elasticsearch, MySQL, MongoDB, HBase, Docker, GCP, and TKE.

Architecture: Microservices, distributed systems, DDD, stateless service design, service boundary definition, protocol design, scheduling system design, and reliability engineering.

Engineering: Experienced in rate limiting, retries, idempotency, consistency guarantees, high-concurrency processing, and complex business abstraction, with solid experience in critical-path reliability.

Leadership: Capable of goal alignment for small teams, task breakdown, solution reviews, execution management, cross-team coordination, and issue closure, with accountability for delivery outcomes.

AI Engineering: Focused on AI agents, tool calling, workflow orchestration, engineering productivity, and real business applications, with hands-on engineering awareness and practice.

English: Able to use English as a working language for technical document reading, cross-border client communication, and project collaboration, with on-site support experience in overseas projects.

Highlighted Projects

AfterShip Global Tracking System Re-architecture | Architecture Design / Core Development | 2022.08 - Present

Technical Keywords: Microservices / DDD / Scheduling System / Rule Engine / Disaster Recovery Design / AI Agent

- Reorganized core domain models and service boundaries based on DDD, led the re-architecture of the global Tracking scheduling system, and drove implementation with a small team.
- Designed layered protocols and standardized integration pipelines for complex carrier data onboarding, improving integration quality, maintainability, and future extensibility.
- Drove the implementation of browser reverse-engineering solutions for special carrier websites to fill critical data acquisition gaps.
- Results: After the re-architecture, domain boundaries became much clearer, carrier integrations became configurable, and maintenance efficiency doubled; the scheduler now processes 8K+ tasks per second with horizontal scalability; a multi-level message queue architecture enables disaster recovery and automatic restoration after component failures.

Bounty Detective App Backend System from 0 to 1 | Independent Design / Core Development | 2020.04 - 2022.07

Technical Keywords: Microservices / Redis / MySQL / Comment System

- For a content-interaction app, independently completed the core backend architecture design and 0-to-1 implementation, covering content, campaigns, comments, and other critical business domains.

- Abstracted foundational services around high-frequency scenarios such as campaigns, content, comments, retries, and scheduling, balancing iteration speed and long-term extensibility under limited resources.
- Key challenges: used eventual consistency to guarantee strict correctness of reward distribution, and multi-level caching strategies to ensure user-service performance.
- Results: supported 8K+ peak concurrent online users, user-service QPS exceeded 10K, and campaigns distributed over RMB 1 million in cash rewards.

QQ Kandian Content Processing System | Core Module Development / Foundation Component Development | 2018.07 - 2020.04

Technical Keywords: Go RPC Framework / Scheduling System / Content Processing / Rule Engine / High Concurrency

- Participated in the construction of core backend pipelines and development of key modules for large-scale content processing scenarios.
- Designed and implemented foundational modules including scheduling, rules, retries, and event reporting, and also contributed to Tencent PCG's Go RPC framework, trpc-go.
- Built engineering experience in high-concurrency content processing and reusable infrastructure abstraction.
- Results: processed tens of millions of content items daily, supported Kandian with over 100 million DAU, and maintained a legacy Mobile QQ user service with QPS exceeding 1 million.

Lawyer Recommendation System | Independent Development / Data Mining | 2017.01 - 2018.07

Technical Keywords: Python / Data Collection / TF-IDF / Retrieval / Recommendation

- Independently designed and developed case-detail input, intelligent lawyer recommendation, and multi-criteria search capabilities.
- Used Python for multi-source data collection, cleansing, tokenization, and multi-level index construction, and implemented and tuned the recommendation algorithm based on TF-IDF.
- Results: collected tens of millions of judgment documents, completed an MVP version, and delivered a usable search and recommendation experience.

Professional Experience

AfterShip | Senior Backend Engineer (with small-team leadership responsibilities) | Shenzhen | 2022.08 - Present

- Responsible for the architecture evolution and capability building of core backend systems related to global Tracking, covering logistics tracking, browser capabilities, and AI engineering exploration.
- Led task breakdown, solution design, execution, and delivery for a 3-person small team, driving key system iterations to go live on schedule.
- Key achievements: led the re-architecture of the logistics scheduling system, completed domain boundary redesign and rule engine introduction, enabled configurable carrier integrations, and delivered browser reverse-engineering solutions.

Tencent IEG | Backend Engineer | Shenzhen | 2020.04 - 2022.07

- Responsible for the overall backend architecture design and core feature development of the Bounty Detective app, owning end-to-end delivery from requirement analysis and system design to launch.
- Split services and built foundational capabilities around content, campaigns, comments, scheduling, and monetization scenarios to support rapid business iteration.
- **Maintained core backend modules of the 1001 App.**
- Key achievements: delivered the Bounty Detective app from 0 to 1, led backend architecture and core development, and kept the system stable for more than a year with peak concurrent users reaching 8K+.

Tencent PCG | Backend Engineer | Shenzhen | 2018.07 - 2020.04

- Participated in building the backend content-processing system for QQ Kandian, focusing on core modules in the content production pipeline and reusable foundational components.

- Contributed to backend framework and shared capability development for large-scale content processing and high-concurrency business scenarios.
- **Key achievements: processed tens of millions of content items daily, supported Kandian with over 100 million DAU, and maintained a Mobile QQ user service with QPS exceeding 1 million.**

Shenzhen Qianhai Rongshutong Technology Co., Ltd. (later acquired by Beijing Bitmain Technologies Co., Ltd.) | Backend Engineer | Shenzhen | 2016.11 - 2018.07

- Participated in backend development for a cash-loan platform, covering risk-control modules, data modules, and third-party data source integrations.
- Developed core modules of an MVP quantitative trading system, including account, strategy, configuration, and scheduling modules.
- **Key achievements: delivered a private deployment for Shanghai Tailong Bank and supported multiple cash-loan apps.**

Shenzhen Deepnet Vision Technology Co., Ltd. | Technical Support Engineer | Shenzhen / Nationwide | 2016.04 - 2016.11

- Responsible for product presentations, bidding, deployment, maintenance, and customer requirement follow-up for machine-vision products in the security domain, while also supporting face and crowd model training.
- **Key achievements: delivered projects for the Xinjiang Special Investigation Corps and the Chengdu Chunxi Road Public Security Bureau.**

Huawei Technologies Co., Ltd. | Cutover Engineer / Automation Testing | Shenzhen / Overseas | 2012.08 - 2015.10

- Participated in overseas delivery of Huawei's telecom software Convergent Billing System (CBS), including on-site delivery, customization, data migration, and testing.
- Assisted customers on site with service-plan configuration, technical maintenance capability building, and go-live support.
- **Key achievements: completed cutover for Bakcell with a combined 4 million postpaid and prepaid users; the system went live stably and passed third-party acceptance.**

Education

Xidian University | B.S. in Computer Science and Technology | 2008.09 - 2012.06

Major coursework included programming, data structures, computer networks, and database principles, providing a solid computer science foundation.