

Xie Yuchen

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EXPERIENCE

Shopee

Senior Software Engineer, Marketplace Technical Service

Singapore

Aug. 2022 – Present

Project: GAS Expert, AI Developer Agent

- Lead to build an AI developer agent integrated with the internal IM system for e2e task delivery, serving ~100 QAs/week on internal backend problems by augmenting LLMs with a modular knowledge harness for private infrastructure.
- Built a reference-based G-Eval benchmark on real engineering tickets to evaluate agent quality on internal knowledge tasks; established an automated feedback loop that detects and evaluates quality issues from served queries using process signals as proxies for answer correctness, minimizing the need for expert review.

Project: Dynamic Go GC Tuner

- Architected adaptive GC tuning framework for 239 services (154k instances, 929K CPU cores, 1.56PB memory), saving 30K CPU cores (\$1.05M) with zero incidents during peak campaigns.
- Engineered a dynamic memory-CPU tradeoff mechanism, slashing GC CPU cost by 82% while preserving P99 latency SLOs. Intelligently adjusted GOGC to tolerate larger target heaps (trading memory for CPU cycles), safeguarded by an 85% hard memory ceiling and live-heap auto-reset to systematically eliminate OOM risks.
- Drove the cross-team execution for production rollout across all 239 services. Secured buy-in from service owners by proactively aligning memory shift expectations (65-75%) and establishing transparent risk boundaries through gradual phased rollouts.

Project: Combined Compile and Deployment (CD)

- Engineered a solution to compile and deploy multiple microservices into a single binary, converting cross-service RPCs into in-process calls. Successfully onboarded 6 high-frequency microservice pairs to eliminate network overhead.
- Enforced dependency isolation by manipulating all callee service code and transitive dependencies, allowing independent versions of 3rd-party modules and standard packages to coexist within a shared memory space without namespace conflicts.
- Achieved resource isolation by patching the Go standard `os` package. Virtualized `os.Getenv` and rerouted `os.Stdout` via service-specific prefixes to prevent cross-service resource pollution and ensure runtime security.
- Integrated with internal platforms to support consolidated deployment. Implemented logical partitioning for logging, tracing, and monitoring to maintain isolated observability domains for co-located services.

PROJECTS

Go GitHub Member & Language Contributor | Go, gopls

May 2025 – Present

- Contributor to `golang/tools` and `golang/go`. Enhanced the official Go language server (`gopls`), directly improving the development experience for millions of engineers across diverse IDEs.

EDUCATION

Huazhong University of Science and Technology (HUST)

Bachelor of Engineering in Information Security

Wuhan, China

Sep. 2018 – June 2022

TECHNICAL SKILLS

Languages: Go, SQL, Bash

AI & Developer Tools: Toolchain, LSP/gopls, AI Code Agent workflow

Infrastructure: Git, CI/CD, tracing/monitoring/logging, RPC, Protobuf