

# Wu Xiaoyun

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## Professional Experience

**Backend Software Engineer - Global LIVE Wallet Intern** [TikTok](#) **Singapore** 12/2024 - 08/2025

- Enhanced on-call efficiency for Wallet services by developing AI-driven analyzers and auto-conclusion features in the Oncall Agent; utilized [Golang](#), LLMs, and vector databases to rank relevant events, correlate error logs with code locations, and suggest root causes, significantly reducing engineers' on-call burden and improving overall development efficiency.
- Optimized core RPC services by rewriting high-QPS handlers (4.4 million peak QPS) from Golang to [Rust](#), achieving 50% compute resource savings and 30% latency reduction; conducted thorough staging/production testing and traffic diversion, projecting \$300K in annual server cost savings and freeing resources for critical adjacent projects.

**Frontend Software Engineer - Global LIVE Money Platform Intern** [TikTok](#) **Singapore** 05/2024 - 08/2024

- Boosted developer productivity by doubling asset bundling speed (JS, HTML, CSS) and cutting CI pipeline and production deployment times from 15 to 10 minutes for the Money Platform, achieved through migration from [Webpack](#) to [Rspack](#). Led cross-functional collaboration with [Rspack](#), [Rsbuild](#), and TikTok LIVE Solutions teams.
- Improved Money Platform quality by creating a white-screen test summary page and upgrading the white-screen alarm Lark bot, enhancing debugging with detailed reports including console logs and network requests viewable in Chrome DevTools—eliminating local bug reproduction and accelerating alarm resolution.
- Developed an alarm Lark bot to streamline workflows by aggregating, filtering, and analysing alarms; designed a standardised API for seamless third-party integration and incorporated white-screen alarms into this framework.

**Software Engineer** [Computing for Voluntary Welfare Organisations](#) **Singapore** 05/2023 - 08/2023

- Reduced backend response time by 5 times by porting a Case Management System backend from Ruby on Rails to Golang. Notable features ported include RBAC, Auth, 2FA and Masquerading.

## Projects

### Expense Tracker

- Developed a cross-platform personal finance management application using Tauri, SolidJS, and SQLite. Implemented comprehensive transaction tracking with recurring payment automation, interactive financial analytics, and data visualization. Built with offline-first architecture featuring local SQLite storage, automated backups, and CSV import/export capabilities. Integrated clipboard-based automation for streamlined transaction entry. Leveraged modern web technologies while maintaining native performance through Rust-powered backend, resulting in a responsive and efficient mobile application.

### RustScript

- Developed a statically typed, compiled programming language combining Rust's syntax with the simplicity of TypeScript and Go with core features including primitive data types, higher-order functions, type checking, and concurrency support. The language to compile code into bytecode, akin to Java, followed by execution on a virtual machine.

## Education

**BSc Computer Science, second major in Statistics** [National University of Singapore](#) **Singapore** 2022 - 2026

Focus areas: Programming Language and Parallel Computing

## CCA

**President** [Computing for Voluntary Welfare Organisations](#) 09/2023 - 08/2024

Oversee the recruitment and application process for CVWO's 2024 Summer Internship program. Manage marketing, outreach, and operations for CVWO.

**Backend Tech Lead** [NUS Students' NUS College Club](#) 12/2023 - 04/2024

Designed and implemented Role Based Access Control for the backend of the NUSC Club website

## Skills

- Programming Languages:** Typescript, Rust, Go, Python, Java
- Technologies:** Reactjs, Solidjs, PostgreSQL, Redis