

Shengyu Zhang

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Work Experience

ByteDance

Library R&D Engineer, 2021 - 2024

Chaitin Tech

System R&D Engineer, 2017 - 2020

Chaitin Tech

R&D Engineering Intern, 2016

Google Summer of Code

GNU Hurd Developer, 2016

Education Experience

XiaoFei Li's Studio

Classical Sketching & Contemporary Art Creation, 2024 - 2025

XiaoFei Li's Studio

Classical Sketching, 2020 - 2021

South China Agricultural University

Software Engineering, 2013 - 2017

Technical Skills

Basic Skills

Programming Languages

Proficient in C, Golang, Python, Rust; Capable of reading and debugging i386/x86_64 assembly

Development Tools

Experienced with Shell, Git, (Neo)Vim, Makefile, SystemD, Docker

DevOps

Proficient in major Linux distributions. Capable of basic maintenance and monitoring

Documentation

Strong documentation skills; Fluent in technical English writing; Experienced with Sphinx and Office suites

Community Building

Experienced in open-source workflows with comprehensive experience in initiating, releasing, promoting, and maintaining small/medium projects

Specialized Domains

Operating Systems

Fundamental OS kernel knowledge with experience in small-scale kernel development

Distributed Stream Processing

Proficient in stream processing fundamentals; Led development of lightweight stream processing framework for production

Performance Optimization

Experienced in Golang performance benchmarking and optimization techniques

Linux Desktop

Proficient in developing native Linux desktop applications using GTK framework

Project Experience

Go Performance Platform - ByteDance / Collaborator / 2022 - 2024

Unified performance optimization platform serving tens of thousands of microservices, extending flame graph functionality based on on-the-fly sampling.

My contributions:

Code Performance Analysis

Owner; Use dynamic flame graphs + static AST/SSA-level analysis to identify optimizable code snippets, estimate cost in prod, and provide refactoring suggestions

Service Stability Monitoring

Owner; Conduct stability testing for each stage of the internal Go Runtime publishing

Offline Computing

Collaborator; Splitting, storage, calculation and reorganization of flame graphs collected on-the-fly from tens of thousands of microservices

github.com/bytedance/gopkg - ByteDance / Collaborator / 2021

A utility library based on Go generics.

Well-designed with comprehensive features, documentation, and testing. Well received internally. Widely adopted (70%+) in internal Go 1.18+ services.

github.com/bytedance/gopkg - ByteDance / Collaborator / 2021

An open-source high-performance Golang library from ByteDance.

My contribution: Developed a Redis zset-compatible data structure which is adopted in some of TikTok services

github.com/sphinx-notes - Open Source / Owner / 2020 - Present

Python-based Sphinx plugins and ecosystem tools.

Features include: GitHub Action integration, CLI fuzzy finder, LilyPond music notation support, build acceleration, Obsidian Dataview-like structured data definitions.

Distributed Stream Processing Framework - Chaitin Tech / Owner / 2018 - 2020

A lightweight distributed real-time stream processing framework in Golang, inspired by Flink and TiDB, optimized for our customer's scenarios.

- Supports cluster deployment, service discovery, and dynamic scaling
- Supports sliding/tumbling windows with large-scale
- Supports streaming SQL with JSON path, JOIN query and subquery capability

github.com/SrainApp/srain - Open Source / Owner / 2016.01 - Present

Modern IRC client developed in C with GTK framework.

Cross-platform support (Linux/BSD/macOS/Windows); Keyboard-driven interface; Enhanced IRC experience with image preview and bridge bot optimizations.

github.com/SilverRainZ/OS67 - Open Source / Owner / 2014.10 - 2015.10

Unix-like toy OS kernel in C, inspired by OSASK, Orange's, and MIT 6.828.

Implements virtual memory management, Minix filesystem, fork/exec-based multithreading, user-level syscalls, shell with basic piping.

Open Source Contributions

Arch Linux

- Maintained 100+ packages for Arch Linux CN Repository since 2016 (Ranked #12 by commit count)
- Authored and maintain 20+ AUR packages including Jekyll and GTK4 before official adoption

The Go Language

Contributed 7+ commits to Golang core

Sphinx Documentation Generator

Submitted 6+ commits to Sphinx project

Some of SphinxNotes projects are adopted by Microsoft, PHP, Haskell, and other notable organizations

IRC

Srain IRC client officially included in 10+ Linux distributions including Debian, Ubuntu, Fedora

Contributed to popular clients like HexChat and Issi

Additional Activities

- Earned 1,300+ stars on GitHub (SilverRainZ 800+, SrainApp 300+, SphinxNotes 100+)
- Designed official logo for USTC Linux User Group of National Taichung University of Science and Technology (USTCLUG)
- Maintained Chinese localization for PNMixer

Patents

CN109889530B

Web Application Firewall System and Computer Storage Medium

CN111158683A

A Method, Apparatus, System, and Electronic Device for Extending Functionality of Web Application Firewalls

CN110334117A

A Real-Time Data Processing Method and Apparatus