Sewen **Thy**

Backend Engineer · Concurrent and Distributed Systems · Programming Languages

☎ +65 8892 2551 | ✉ me@sewenthy.dev | 🏠 sewenthy.dev | 🐙 sewenthy | 💼 sthy

WORK EXPERIENCE

Ahrefs
Singapore

Backend Engineer
Jul. 2023 - Present

- Build and maintain reliable backend features for our SERPs services that need to run continuously and provide low-latency data retrieval allowing thousands of positions metrics to be queried in seconds.
- Enhanced internal tooling for seamless Slack workspace integration, improving usability across desktop and mobile.
- Actively contributed to the OCaml opensource community, enhancing developer experience through projects like Slack API wrapper library.

Backend Intern
Oct. 2022 - Apr. 2023

- Maintained and implemented new features for monorobot which allows for richer control over notifications from monorepos to Slack.
- Rewritten internal orchestration tool from Javascript and bash into OCaml improving its concurrency guarantees, maintainability, and reliability.
- Consolidate uses of Slack APIs into an opensource library, which removes thousands of lines in duplicated code, significantly increasing maintainability.

Credit Suisse
Singapore

APAC Technology and Change Summer Analyst (Developer Experience Team)
May. 2022 - Jul. 2022

- Built long-running compliance checking services in Golang Gin that can recover easily to give peace of mind and help to prevent legal actions.
- Heavily practiced test-driven development (TDD) to significantly increase maintainability and development speed by incorporating at least 95% coverage for each Go package in the services using unit tests.
- Designed and maintained a full suite of integrated tests for a variety of scenarios ensuring all critical failures in our GitLab ecosystem are caught early and built many utilities for faster future tests development.

ByteDance
Singapore

Backend Engineer Intern, Technical Architecture (Message Queue Team)
Jan. 2022 - May. 2022

- Enriched company wiki to ensure newcomers take less time getting up to speed on the system.
- Designed and built low-level long-running test services in Java that can recover easily so integration test cases are always up to ensure critical system bugs are caught in early stages and prevent catastrophic failures.

BeLive Technology
Singapore

Full-Stack Developer
Jan. 2021 - Dec. 2021

- Full-stack development for analytics dashboard of streaming solutions that provide concrete feedback and drive business strategies for their live-streaming solutions.
- Developed multi-threaded backends in different lightweight frameworks (Python Flask, C++ Crow) to provide highly available service.
- Facilitated seamless DevOps using Docker with Nginx that improved team backend reliability and portability to AWS and Google Cloud.

Yale-NUS College
Singapore

Computational Biology Research Assistant
Aug. 2019 - Dec. 2021

- Developed new functions to optimize linear programming processes and for better user experience through control over such processes. Migrated the software from Python 2.7 to Python 3.4 with detailed commits using GitHub.
- Maintained and managed intranet VMs for running models and helped with IDM for new students. Train new student developers in best practices and help build and project-manage for new feature developments for the scobra library.

PUBLICATION

Adventure of a Lifetime: Extract Method Refactoring for Rust
OOPSLA 2023

Sewen Thy, Andreea Costea, Kiran Gopinathan, and Ilya Sergey
Oct. 2023

- We decompose the extract method refactoring into smaller steps and provide a novel repair as refactoring pipeline to gradually extract Rust code that is accepted by the compiler and supports lifetime annotations. [PDF] [DOI]

EDUCATION

Yale-NUS College
Singapore

B.S. (Hons) in Mathematical, Computational, and Statistical Science focusing on Computer Sciences
Aug. 2019 - May. 2023

- Advance coursework in distributed systems and program language design and implementations. My capstone, *Borrowing without Sorrowing: Implementing Extract Method Refactoring for Rust*, won the Yale-NUS College's **Outstanding Capstone Prize for 2023**. [PDF] (CAP:4.62/5.00)