

Tianyi (Sam) Zhou

<https://developersam.com> | tz66@cornell.edu | (607)-279-3876

Education

Cornell University

M.Eng in Computer Science
Dec 2021 | Ithaca, NY
College of Engineering
Dean's List

Links

Personal Website: developersam.com
Blog: blog.developersam.com
GitHub: SamChou19815

CS Courses

OO Design Data Structs Honors
Discrete Structures
Data Structs & Functional Programming
Intro to Analysis of Algorithms
Systems Programming
Programming Languages & Logics
Machine Learning Intelligent Systems
Intro to Compilers
Operating Systems
Intro to Database Systems
Distributed Systems
Formal Verification

Skills

Programming

Over 50000 lines:
Rust • Kotlin • Java • OCaml

Over 10000 lines:
JavaScript • Hacklang • \LaTeX

Over 5000 lines:
Python • PHP • CSS

Familiar:
Swift • Go • Coq • Bash • MySQL

DevOps

GitHub Actions, Circle CI, Kubernetes

Open Source Contributions

[facebook/docusaurus](https://github.com/facebook/docusaurus)
[facebook/flow](https://github.com/facebook/flow)
[facebook/react](https://github.com/facebook/react)
[facebook/jest](https://github.com/facebook/jest)
[facebook/pyre-check](https://github.com/facebook/pyre-check)
[yarnpkg/berry](https://github.com/yarnpkg/berry)

Experience

Facebook Canada, Ltd | Software Engineer

January 2025 – Now | Toronto

- Implemented various IDE features for Pyrefly from scratch, including autocomplete, find references, and workspace symbol search.
- Continuously optimized the type checker and language server performance.

Meta | Software Engineer

February 2022 – January 2025 | Menlo Park, CA

- Designed, implemented and deployed the local type inference algorithm based on an improved extension of the Pierce paper for Flow.
- Continuously optimized the type checker and language server performance.

Facebook | Software Engineer Intern

June 2021 – Aug 2021 | Menlo Park, CA (Remote)

- Designed and implemented extract to functions/methods/constants/class fields/type aliases refactor code action for Flow's language server.
- Released the feature to 100% of Facebook engineers and open source users.
- Implemented type checking support for JavaScript private class methods.

Facebook | Software Engineer Intern

June 2020 – Aug 2020 | Ithaca, NY (Remote)

- Migrated legacy Java code for Facebook Lite into a new internal framework.
- Implemented news feed related internal tools to help engineers debug production issues.
- Ported election integrity modules to Facebook Lite, increasing the global coverage by 20%.

Facebook | Software Engineer Intern

May 2019 – Aug 2019 | Menlo Park, CA

- Designed and implemented an alternative build system that speeds up Python dependency building by 10x
- Implemented Python auto-completion for Pyre language service
- Fixed several parsing and type checking bugs in Pyre

Projects

samlang | Rust

December 2018 - Present

- An optimizing source-to-WASM compiler for my own functional programming language samlang.
- The statically type-checked language supports generics, first-class functions, and type inference, with a Kotlin-like syntax and OCaml-like semantics.
- The CLI includes a language server that powers various VSCode extension features, including type query, auto-completion and auto-formatting.

mini-react | TypeScript

April 2020

- A simplified React runtime with support for useState and useEffect hooks.