Tianyi (Sam) Zhou

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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
facebook/flow
facebook/react
facebook/jest
facebook/pyre-check
yarnpkg/berry

Experience

Meta | Software Engineer
Feburary 2022 – Now | Menlo Park, CA

- Designed and implemented the local type inference algorithm based on an improved extension of the Pierce paper for Flow.
- Deployed the new implementation of the new algorithm to all internal repositories.

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.

CoursePlan | TypeScript, Vue
March 2020 - Present

- A web app built for Cornell students to automatically compute their satisfied requirements given their courses.
- Designed and implemented the core algorithm that can handle user strategy choices and detect double-counted courses.

mini-react | TypeScript
April 2020

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