

# Tianyi (Sam) Zhou

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## Education

### Cornell University

BS in Computer Science

Expected May 2021 | Ithaca, NY

College of Engineering

Dean's List (All Semesters)

GPA: 4.2 / 4.3

## Links

Personal Website: [developersam.com](https://developersam.com)

Blog: [blog.developersam.com](https://blog.developersam.com)

GitHub: [SamChou19815](https://github.com/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 (Ongoing)

Distributed Systems (Ongoing)

## Skills

### Programming

Over 10000 lines:

Java • Kotlin • TypeScript • JavaScript

Over 5000 lines:

Python • OCaml • PHP • CSS •  $\LaTeX$

Over 1000 lines:

Swift • Go • Coq • Bash

Familiar:

MySQL

### DevOps

GitHub Actions, Circle CI, Travis CI,

Kubernetes

## Open Source Contributions

[facebook/pyre-check](#)

[facebook/docusaurus](#)

[flow-typed/flow-typed](#)

[pac4j/spark-pac4j](#)

## Experience

### 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

### Cornell University | Computer Science Teaching Assistant

Feb 2018 – Current | Ithaca, NY

- Held office hours and graded assignments for students.
- Courses: OO Design Data Structs Honors (80+ students), Intro to Analysis of Algorithms (190+ students), Discrete Structures (350+ students).

### U-Learn Education Group | Software Engineering Intern

Dec 2017 - Jan 2018, May 2018 – June 2018 | Shanghai, China

- As the sole developer, designed and developed a system with a responsive web interface to automate workflow for assisting student college choice and application.
- The centralized system replaces the old way of manual data sharing between consultants and solves the problem of information mismanagement.
- All code was pushed to production and stably serving about 50 students and 10 consultants.

## Projects

### SAMLANG | Kotlin, ANTLR4

December 2018 - Present

- An interpreter and compiler project 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.

### OConquer | OCaml, Java, Angular

March 2018 - May 2018

- A strategy game with military units controlled by programs, developed as the final project for CS 3110 (Functional Programming).
- The game is powered by an OCaml backend and Angular frontend. Programs that control military units communicate with the backend via interactive IO.

### TEN | Kotlin

July 2017 - June 2018

- A board game that extends the tic-tac-toe to  $9 \times 9$  board, with an AI-powered by Monte-Carlo Tree Search algorithm.
- The AI can achieve super-human performance with 1.5 seconds of thinking time for each move.

### Chunk Reader | Java, JavaScript, CSS3, HTML5

September 2017

- A web app built during a Hackathon with over 70 teams and 300 participants.
- The app used NLP to extract crucial information and generate a summary from any given text, with help of Google Cloud Natural Language APIs.
- Prize: Best Use of Google Cloud Platform/Big Data Products.