

# Stanley Jiang

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## Education

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### Cornell University

August 2021 – May 2024 (Expected)

- Computer Science Major, 4.077/4.00 GPA
- Courses: Object-Oriented Design and Data Structures - Honors, Data Structures and Functional Programming, Discrete Structures, Intro to Analysis of Algorithms, Intro to Machine Learning, Computer System Organization and Programming, Intro to Compilers, Operating Systems, Intro to Computer Vision, Data-Driven Web Applications, Intro to Database Systems

## Experience

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### Google, STEP Intern

May 2023 - August 2023

- Developed and integrated the UI for promotional offers on the browser-based Google Play store using Typescript, BoqWeb, Wiz, and Soy

### Frutto Research Group, Summer Intern

June 2022 – August 2022

- Built a decentralized exchange (DEX) operating on the Avalanche Fuji Testnet using Solidity and ReactJS with verified token swapping under various price fluctuations.
- Presented an adapted version of the Proactive Market Making (PMM) algorithm at the 2022 IC3 Blockchain Camp by researching capital inefficiencies in decentralized markets.

### Cornell University, Undergraduate Consultant

August 2022 – May 2023

- Held office hours, assisted in grading exams/assignments, and answered questions for CS 2112: Object-Oriented Design and Data Structures - Honors, Fall 2022, and CS 2800: Discrete Structures, Spring 2023

## Projects

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### The Whether Bee – Instant Messaging Web Application, [github.com.stanleyjiang25/Webchat](https://github.com/stanleyjiang25/Webchat)

- Created a fully-functioning instant-messaging web application with chatbots for users to talk to.
- Used OCaml (including Opium and Caqti third-party libraries) to create endpoints on our back-end system and support other back-end functionality.
- Efficiently stored and queried user data in a database with PostgreSQL.
- Built a graphical front end in a web browser using Javascript and VueJS.

### Trainstris – Tetris Training Platform, [github.com/stanleyjiang25/Trainstris](https://github.com/stanleyjiang25/Trainstris)

- Developed the first Tetris training platform of its kind using ReactJS.
- Produced revolutionary scoring methodology to evaluate Tetris board states and end mindless practice.

### Eta Compiler

- Created an optimizing compiler targeting x86 for Eta and Rho (C-like, imperative, procedural languages).
- Implemented compiler optimizations including register allocation, move coalescing, copy propagation, dead code elimination, and function inlining.
- Utilized JFlex for lexer generation, CUP for parser construction, and Java for type checking and intermediate code/assembly generation under our self-designed stack frame layout.

## Activities

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### Math Talk on Bézier Curves, [stanleyjiang25.github.io/BezierCurves.pdf](https://stanleyjiang25.github.io/BezierCurves.pdf)

May 2021 – August 2021

- Explored the mathematical modeling capabilities of Bézier curves on polynomial functions to assess the possibilities and limitations of Bézier curves in computer graphics.

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**Programming Languages and Frameworks:** Java, OCaml, JavaScript, TypeScript, HTML/CSS, C++, Solidity, ReactJS, PostgreSQL, VueJS,  $\text{\LaTeX}$ , JavaFX

**Clubs:** Cornell ICPC, Cornell Science Olympiad, Cornell Undergraduate Math Club

**Awards:** 2x Princeton University Mathematics Competition Individual Finalist, Harvard-MIT Math Tournament 3rd place team, 6x AIME Qualifier

**Interests:** Tetris, piano, drawing, clarinet, and overused jokes