

Brian Zheng

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Education

Massachusetts Institute of Technology | 4.8 Major GPA | 4.7 Overall GPA

September 2022 — May 2025

Bachelor of Science in Computer Science

Cambridge, MA

Coursework: Software Design, Data Visualization, Design and Analysis of Algorithms

Skills

Programming Languages: Python, JavaScript (TypeScript), HTML, CSS, Java, C

Technologies: Next.js, React, Redux, Node.js, XML, JSON, Git, Microsoft VSCode, Tableau, Word, PowerPoint, Excel

Experience

MIT CAVE Lab

May 2024 — Present

Frontend Developer Intern

Cambridge, MA

- Improved website accessibility by implementing on-screen keyboard for inputs using **React**, **Redux**, and **JavaScript**.
- Worked independently to resolve various issues and improvements for the CAVE Lab app.

MIT Computer Science and Artificial Intelligence Laboratory (CSAIL)

May — September 2023

Full Stack Developer Intern

Remote

- Optimized **XML** parser using **Python** by reducing load from 200+ GB to 1 GB and runtime from hours to seconds.
- Improved user experience by implementing helpful features using **React**, **Redux**, and **TypeScript**.
- Coordinated with team members to distribute work efficiently, produce quality code, and prevent bugs.

Volunteer

Schoolhouse.world

May — June 2022

Tutor

Remote

- Trained 5+ hours and completed 3 research tasks to provide data for a research study on tutoring strategies.
- Tutored learners 3 hours/week in algebra, trigonometry, geometry, and testing skills to improve their SAT scores.

Projects

Portfolio | Next.js, React, TypeScript, HTML, CSS

June 2023 — Present

Website: portfolio-brianzheng205.vercel.app | **Code:** github.com/brianzheng205/portfolio

- Implemented many reusable and adaptable **React** components to display project pictures with descriptions.
- Created components for skills buttons that redirect users to projects where I've used the corresponding skill.

Decaf Compiler | Rust

February — May 2024

- Implemented compiler that takes in Decaf code and generates corresponding Assembly code.
- Optimized using dataflow algorithms such as Copy Propagation and Dead Code Elimination.
- Optimized using strength reduction and algebraic simplification to decrease generated code length and complexity.

The LLC Next Door | Svelte, JavaScript, HTML, CSS

April — May 2024

Website: cammyt5.github.io/eviction-depiction

- Created a narrative visualization to show the effects that corporate property ownership has on Boston housing.
- Implemented table with sorting functionality to display home ownership rates and population for various cities.
- Implemented line chart using Observable Plot library to display home ownership rates between different areas.

Pokerbots | Python

January 2024

Code: github.com/brianzheng205/Pokerbots-2024

- Designed a program with adaptable strategies to take advantage of other programs' strategies.
- Iterated on design to improve strategy, ensuring that more recent versions could beat past versions.

Bounce | Next.js, React, TypeScript, HTML, CSS

June — September 2023

Website: main.d2ngor7ea7fphp.amplifyapp.com | **Code:** github.com/emilyy-liew/bounce

- Implemented icon bar and loading screen, enhancing user access to Bounce's diverse pages.
- Improved UI by animating collapsible text boxes with seamless transitions and creating appealing color themes.