

Brian Zheng

brianzheng205@gmail.com | linkedin.com/in/brian205 | github.com/brianzheng205 | portfolio-brianzheng205.vercel.app

Education

Massachusetts Institute of Technology | 5.00 CS GPA | 4.9 Overall GPA

September 2022 — May 2025

Bachelor of Science in Computer Science and Engineering

Coursework: Design and Analysis Algorithms, Computation Structures, Intro to Probability

Skills

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

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

Experience

MIT Kellis Lab | **Web App:** seascapes.ai | **Lab:** compbio.mit.edu

May — September 2023

Full Stack Web Developer for Idea Navigator

Cambridge, MA

- Optimized **XML** parser using **Python** by reducing load from 200+ GB to 1 GB and runtime from hours to seconds.
- Leveraged **AWS** for efficient frontend data access, reducing loading times from seconds to milliseconds.
- Created cluster labels using OpenAI API and implemented functionality using React, TypeScript, HTML, and CSS.
- Coordinated with team members to distribute work efficiently, produce quality code, and prevent bugs.

NJ Governor's School of Engineering and Technology

June — July 2021

AI Researcher, Game Developer

New Brunswick, NJ

- Trained and tested 50+ AI models with waveform signals using MATLAB Classification Learner.
- Published an IEEE paper and presented findings at Rutgers University and **IEEE MIT URTC**.
- Developed a 2D game using GameMaker Studio 2 to help people improve their cognition and puzzle-solving skills.

Volunteer

Schoolhouse.world

May — June 2022

Full Stack Web Developer for Idea Navigator

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

Pokerbots | Python

January 2024

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, AWS

June — September 2023

Web App: main.d2ngor7ea7fphp.amplifyapp.com/ | **Github:** github.com/emilyy-liew/bounce/tree/main

- 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.

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

June — September 2023

Web App: portfolio-brianzheng205.vercel.app | **Github:** 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.

Awards

Certificate of Distinction, AIME Qualifier

January 2022

Mathematical Association of America, American Mathematics Competition 12

Publications

Robustness Testing of Artificial Intelligence-Driven Hand Biometric-Based User Authentication in Mobile Devices

June 2021 — February 2022

ieeexplore.ieee.org/document/9701620

- Found hand biometric-based phone authentication to be unreliable and impractical based on personal AI models.