

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 | 4.7 Overall GPA

Graduating 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, Assembly

Technologies: Next.js, React, AWS, Node.js, 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 backend **Python** parser 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.

Schoolhouse.world

May – June 2022

June SAT Bootcamp Tutor

Egg Harbor Township, NJ

- 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.

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.

Projects

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

June – September 2023

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

- Retrieved commit history from Github **API** to create updates log page for developers.
- 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.

Rick and Morty App | Python, Flask, Javascript, CSS, HTML, API

March 2023

github.com/brianzheng205/Rick-and-Morty-App

- Retrieved and refactored data using **HTTP requests** to the Rick & Morty **API**.
- Created custom notes that users can edit and submit to **API** endpoints.

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.