

# Brandon Gong

[brandon\\_gong@brown.edu](mailto:brandon_gong@brown.edu) • <https://github.com/brandon-gong> • <https://www.brandongong.org/>  
(901) 414-6057 • Houston, TX

## EDUCATION

**Brown University**, Providence, RI

Expected Graduation: May 2025

Computer Science Sc.B., Mathematics A.B.

Cumulative GPA: 4/4.00

**Relevant Coursework:** Software Engineering (CSCI0320), Computer Systems (CSCI0330), Accelerated Introduction to Computer Science (CSCI0190), Statistical Inference I (APMA1655), Operations Research (APMA 1210), Linear Algebra (MATH0540), Ordinary Differential Equations (APMA 0350), Calculus (MATH0350), Abstract Algebra (MATH1530), Intermediate Microeconomics (Mathematical) (ECON1130), Principles of Immunology (BIOL0530).

## PROFESSIONAL EXPERIENCE

**Axle Informatics (Contractor for National Institutes of Health)**, Bethesda, MD

*Software Developer*

August 2022 – Present

- Achieved a ~68% speed increase by independently optimizing deduplication algorithm (developed as an intern).
- Oversaw development of new Neo4j database tracking NIH funding on rare disease research.

*Summer Intern*

June 2022 – August 2022

- Designed and developed complex data deduplication algorithm in Python solo.
- Reduced duplicate nodes (-43.5%) and relationships (-45.8%) in production database.
- Led and documented setup and configuration of two new Amazon EC2 instances for testing and development.

**Full Stack at Brown (club)**, Providence, RI

October 2021 – May 2022

*Fullstack Engineer*

- Worked on <https://thecriticalreview.org/> (Brown's version of Rate My Professor) with a team of 9 using agile/scrum methodology.
- Overhauled new account creation, email verification, password encryption flow.
- Developed new REST API endpoints to generate PDFs from survey data.
- Secured sensitive credentials by introducing dotenv to improve the preexisting hardcoded system.

**Code Ninjas**, Collierville, TN

May 2020 – January 2021

*Instructor*

- Developed curriculum for two new summer camps to teach young kids (ages 5-13) block programming and JavaScript.
- Served as lead instructor for those two summer camps, leading a team of 4 other instructors.
- Tutored students one-on-one in coding and debugging skills.

## PORTFOLIO

**ptree.ml**, OCaml

July 2022 – August 2022

<https://github.com/brandon-gong/ptree.ml>

- Multipurpose data serialization / deserialization library for OCaml.
- Parse INI, JSON, or XML to unified data structure that allows efficient, persistent edits.

**neche**, Rust

December 2021 – January 2022

<https://github.com/brandon-gong/neche>

- Neuroevolution-based checkers engine.
- Implements move generation, minimax tree search, and evolution.

**chs-math-bowl**, JavaScript / HTML / CSS

October 2019 – January 2020

<https://github.com/brandon-gong/chs-math-bowl>

- Full stack tournament manager system for high school math competition.
- Live scoreboard, automated rank calculation, match queuing, UI for teams/audience/admin.

**Personal Blog**

June 2022 – Present

<https://www.brandongong.org/blog/>

- Documenting recent learning and toy programs.
- Streamlined post creation, site updates with Jekyll; automatic RSS feed, sitemap generation.

## SKILLS

**Languages:** Java, JavaScript, HTML/CSS, Python, Typescript, C++, Rust, OCaml, Scheme, SQL.

**Technologies:** React, Express.js, Node.js, OpenCV, Firebase, Bootstrap, Neo4j, SQLite, Linux, Git.