

Brandon Gong

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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), Linear Algebra (MATH0540), 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.