

# Brian Lai

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## EDUCATION

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**University of Virginia — B.S. in Computer Science & Mathematics, GPA: 3.98** Aug. 2023 - May 2026

- *Relevant Coursework:* Data Structures & Algorithms 1+2, Software Development Essentials, Computer Systems and Organization 1, Discrete Mathematics, Survey of Algebra, Differential Equations, Probability, Statistics

**Thomas Jefferson High School for Science and Technology, Alexandria, VA, GPA: 4.59** Aug. 2019 - Jun. 2023

- *Relevant Coursework:* Machine Learning, Artificial Intelligence, Web and Mobile App Development, Multivariable Calculus, Matrix/Linear Algebra, Concrete Mathematics, AP Micro & Macroeconomics

## TECHNICAL SKILLS

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- *Languages:* Python, Java, JavaScript, Bash scripting, HTML/CSS, SQL, C++
- *Tools:* Linux/Ubuntu, Git, Jupyter, Keras, Tensorflow, scikit-learn, Android Studio, Firebase, Express.js

## WORK/VOLUNTEERING EXPERIENCE

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**University of Virginia, Teaching Assistant, Charlottesville, VA** Aug. 2024 - Dec. 2024

- Conduct problem-working sessions twice a week and grade homework assignments for APMA 3120 (Statistics)

**Sunshine Academy, Teacher, Falls Church, VA** Jun. 2023 - Jul. 2023

- Taught a class in AP Computer Science A (Java) and a class in Introductory Computer Science and Web Design (Python, Java, HTML, CSS, JavaScript) to 20 students

**NOVA SYSTEMic Fabrication Camp, Teaching Assistant, Annandale/Manassas, VA** Jun. 2022 - Jul. 2022

- Trained 25 4th-9th grade campers to design board games in Inkscape and Adobe Illustrator
- Brought game models to life using a 3D printer, laser cutter, and large format printer

## PROJECTS

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**Computer Systems Research Lab** Sep. 2022 - May 2023

- Conducted a year-long independent research project at Thomas Jefferson High School for Science and Technology
- Developed a 3D convolutional neural network using Keras to classify videos of chain wheelies in Mario Kart Wii with 99% accuracy
- Presented research to 50 audience members at the tjStar symposium

**NCS: BOAT, Project Lead** Feb. 2022 -

- Developed and maintained a Discord bot using JavaScript to conduct daily polls on community opinions for ~2000 songs released by electronic music label NoCopyrightSounds (NCS)
- Automated poll data collection, analysis, and publication to a Google Sheet (bit.ly/NCSBOAT)
- Informed label management's signing decisions by delivering quantitative feedback on song reception

**BranchOut! Innovator, Developer** Jun. 2021 - Aug. 2021

- Worked with a team of ~20 to develop an Android app for students preparing for Virginia SOL exams
- Restructured Firebase realtime database to categorize, label, and retrieve questions efficiently
- Earned the President's Bronze Volunteer Service Award

## EXTRACURRICULAR ACTIVITIES

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**Quiz Bowl, Vice President** Sep. 2019 -

- Competed at college quiz bowl nationals (top ~200 players) and moderated for high school nationals
- Upgraded front-end functionality on qbreader.org, a Quiz Bowl practice website with over 2500 weekly users
- Taught Quiz Bowl classes for aspiring middle school players for two years, presenting lectures on an assortment of academic topics, including science, history, literature, mythology, geography, fine arts, and current events