

Brian Lai

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EDUCATION

University of Virginia — B.S. in Computer Science 2023 - 2026

- *Relevant Coursework:* Ordinary Differential Equations, Probability, Data Structures & Algorithms I

Thomas Jefferson High School for Science and Technology, Alexandria, VA 2019 - 2023

- *GPA:* 4.591
- *Relevant Coursework:*
 - *CS:* Machine Learning, Artificial Intelligence, Web and Mobile App Development
 - *Math:* Multivariable Calculus, Matrix/Linear Algebra, Concrete Mathematics, Probability Theory
 - *Physics:* Electrodynamics/Quantum Mechanics, AP Physics C M&EM

WORK/VOLUNTEERING EXPERIENCE

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.

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 that classifies videos of chain wheelies in Mario Kart Wii with 99% accuracy using Keras.
- Presented research to 50 audience members at the tjStar symposium.

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

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

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

- Worked with a team to develop an Android app that students can use to prepare for Virginia SOL exams.
- Restructured the project's Firebase database and contributed to various app features.
- Earned the President's Bronze Volunteer Service Award.

CodeRaven, Cofounder and Teacher Jun. 2020 - Nov. 2020

- Organized and advertised free weekly classes for 50 middle school students at River Bend Middle School.
- Developed coding lessons in Python, Java, and HTML/CSS/JavaScript.
- Taught weekly lessons through Zoom and helped students work through exercises.

TECHNICAL SKILLS

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

EXTRACURRICULAR ACTIVITIES

Quiz Bowl Sep. 2019 -

- Competed twice at the NAQT High School National Championship Tournament and twice at the PACE National Scholastic Championship.
- Volunteered to moderate or scorekeep matches at 9 tournaments.
- Taught Quiz Bowl classes for aspiring middle school players for two years; crafted and presented lectures on an assortment of academic topics, including science, history, literature, mythology, geography, fine arts, social science, and current events.
- Developed and expanded qbreader.org, a Quiz Bowl practice website with over 2500 weekly users.