

Brendan Lo

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EDUCATION

University of Chicago

Freshman | Major: Computer Science & Math

Chicago, IL

Expected, May 2030

Great Neck South High School

GPA (unweighted): 96.7/100 | SAT: 1540/1600

Great Neck, NY

June 2026

- Relevant Coursework: AP Physics C: Mechanics and Electricity & Magnetism (calculus-based), AP Calculus BC, AP Computer Science, Honors Biology and Chemistry, AP English Literature, AP Spanish, AP Economics, Senior Seminar Research Honors

RESEARCH & COMPUTATIONAL SKILLS

Programming Skills: Java, React.js, JavaScript, Typescript, Express.js, Gemini API, Supabase, MongoDB, HTML/CSS, C#, Python, R, AI/ML, Fiji/Imagej, VBA, RNA-seq Analysis, Molecular Docking, Molecular Dynamics Simulations, SQL, Swift

PUBLICATIONS & PRESENTATIONS

Liu, H., Ammanamanchi, N., Mich-Basso, J., Panama, B., Li, Y., Huang, W., Almeida, D., Lewarchik, C., **Lo, B.**, Wu, Y., Gotthardt, M., Kotlikoff, M., Baehr, W., Rasmusson, R., Salama, G., & Kuhn, B. (2026). Sequential changes in calcium transients during M phase regulate cardiomyocyte proliferation. *Journal of Cell Biology*. <https://doi.org/10.1083/jcb.202505134>.

Cheng, B., Jin, A., Zhang, J., Pemmaraju, A., **Lo, B.**, & Chang, J. (2026). *A horizon-dependent intrinsic-dimension theory of scaling for biological forecasting*. High-Dimensional Learning Dynamics (HiLD), International Conference of Machine Learning Workshop (Poster).

Cheng, B., Jin, A., Zhang, J., **Lo, B.**, Pemmaraju, A., & Chang, J. (2026). *ERVNet: A Three-Module Framework for Predicting Endogenous Retrovirus Reactivation, Gene Propagation, and Immunogenicity*. Foundation Models for Life Sciences (FM4LS), International Conference for Machine Learning Workshop (Poster).

Cheng, B., Jin, A., Zhang, J., Pemmaraju, A., Chang, J., & **Lo, B.** (2026). *PROTEUS: Predicting how post-translational modifications alter drug binding affinity*. Foundation Models for Life Sciences (FM4LS), International Conference for Machine Learning Workshop (Poster).

HONORS & AWARDS

Eagle Scout, Science Olympiad National Qualifier, 2nd Place New York State Science Olympiad, FIRST Robotics Competition World Championship Engineering Inspiration Award, AP Scholar with Distinction, 4th Place Long Island Science & Engineering Fair

PROFESSIONAL EXPERIENCE & PROJECTS

Columbia University

New York, NY

Summer Research Intern – Blumberg Lab

Summer 2026

- Topological Data Analysis for RNA-Seq Annotation, ongoing project.

New York University

New York, NY

Summer Research Intern – Shasha Lab

Summer 2026

- Agentic AI workflow for Calorie Tracking App, ongoing project.

Weill Cornell Medical College

New York, NY

Pediatrics Summer Research Intern – Heart Regeneration (Bernhard Kühn and Honghai Liu Lab)

Summer 2025

- Ran data analyses with Python, Fiji/Imagej, & VBA to discover calcium's role in heart cells, publishing in the Journal of Cell Biology

Weill Cornell Medical College

New York, NY

Summer Research Intern – Epigenetics of Congenital Heart Disease (Yicheng Long Lab)

Summer 2024

- Used PCR, Western Blot, Cloning, and RNA-seq analyses using R & Python to discover which genes the protein JARID2 affected, investigating the genetic mechanisms of the protein PRC2 in heart development & congenital heart disease.

Web Development Club

Great Neck, NY

Co-President / Co-Founder

October 2024 - Present

- Recruited & led full-stack dev projects with 70+ members using Javascript, Typescript, HTML/CSS, React.js, Supabase, and SQL.
- Built & maintained 20+ websites for nonprofits, churches, businesses, and school clubs in my community.

Kudos Connect

Great Neck, NY

Head of Newsletter / Chief Technology Officer

January 2024 - Present

- Led 15+ people to create newsletters and website, building a following of 7000+ high school students for volunteer opportunities.

Programming Club

Great Neck, NY

Board Member / App Leader

January 2024 - Present

- Taught 20+ students to code in AI/ML, Python & Java, leading 10+ students to build a school app for 1300+ students using Swift.

SATsaurus*Co-Founder / Software and Project Lead***Great Neck, NY***June 2025 – Jan 2026*

- Led a team of 5+ people to create a gamified SAT prep web app using Next.js, Supabase, and SQL for 1000+ students.

Force Network*Co-Founder / Software and Project Lead***New York, NY***Jan 2022 - Present*

- Created a hosting hub for 100+ Minecraft servers and general deployment solutions, offering nodes and bandwidth for 800+ users.

PRC2 Drug Discovery Project*Independent Researcher***New York, NY***Sep 2024 – Sep 2025*

- Machine Learning-based (Random Forest using Python and Schrödinger Maestro) virtual screening and molecular dynamics simulations (GROMACS) to repurpose drugs for the inhibition of PRC2 protein, to treat cancer and congenital heart disease

UVA Sustainability: ReSource*Software and Project Lead***Charlottesville, VA***March 2026*

- AI-powered web app for a marketplace, helping users donate, or recycle items using Next.js, PostgreSQL, Gemini API and Mapbox.

FIRST Robotics Team 2638*Head Webmaster / Lead Programmer***Great Neck, NY***September 2024 - Present*

- Coded trajectory generation algorithms & robot, competing in the FIRST Robotics Competition World Championship (2025).