

Zach Gillis

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EDUCATION

University of Chicago

Bachelor's of Arts in Physics, Bachelor's of Science in Mathematics

- GPA: 3.810
- Dean's List 2021-2022

Chicago, IL
Sep. 2021 – June 2025

Walter Payton College Preparatory High School

High School Diploma

- GPA: 5.4 (weighted), 4.0 (unweighted)
- SAT: 1580

Chicago, IL
Sep. 2017 – June 2021

EXPERIENCE

Research Assistant

Zhong Lab – University of Chicago, Pritzker School of Molecular Engineering

- Working in lab focused on quantum engineering, specifically quantum networks and optics
- Assisting project focused on microwave to optical transduction to transmit quantum states through fiber-optic cables

Oct. 2022 – Present
Chicago, IL

Research Assistant

National Radio Astronomy Observatory (NSF REU Site)

- Selected to competitive internship focused on radio astronomy, astrophysics, and programming for data science applications, and attended seminars on radio interferometry, new findings in astrophysics and astrochemistry, and data visualization
- Completed project examining baseline-dependent averaging (BDA) to reduce the computational requirements of the Next Generation Very Large Array (ngVLA)
- Helped create Python package for BDA and author the ngVLA computation whitepaper

June 2022 – Aug. 2022
Charlottesville, VA

Research Intern

Northwestern University, Lurie Cancer Center (through ResearchHStart)

- Selected to competitive research internship program focused on cancer research and bioinformatics
- Completed a project using R on exercise-induced gene expression and the pathways perturbed by those changes
- Presented project at research symposium and awarded best poster among 27 ResearchHStart participants

June 2021 – Aug. 2021
Chicago, IL

ACTIVITIES

MAPSCorps | Math Teacher

- Responsible for guiding classes teaching underprivileged students important skills in math and statistics

Feb. 2022 – Present

UChicago Robotics | Team Member

- Member of selective team competing in national robotics competitions

Oct. 2022 – Present

UChicago Science Olympiad | Community Outreach Director, formerly Technology Coordinator

- Organizes community outreach workshops, coordinates with local public schools, plans events for visiting teams

Sep. 2021 – Present

Dougan-Niklason House Council | Wellness Coordinator

- Works with UChicago Student Wellness to promote wellbeing initiatives in campus housing to 140 housemates

Sep. 2021 – Present

Walter Payton Math Team | Contestant

- Competing member of a leading high school math team; qualified for AIME and received meritorious award for HiMCM

Sep. 2017 – June 2021

Walter Payton AI Lab | Co-Founder, Co-Leader

- Directed academic club focused on AI research, projects, and applications

Feb. 2019 – June 2021

Argonne National Laboratory Autonomous Vehicle Competition | Team Leader

- Leader of team building and programming an autonomous vehicle to compete in contest at Argonne National Laboratory

Nov. 2019 – April 2020

AWARDS

2nd Place Individual | *Illinois Math League (2021)*

Qualifier | *American Invitational Mathematics Exam (2019-2020)*

Highly Distinguished Award | *QED Chicago Mathematics Symposium (2019)*

Meritorious Award | *High School Mathematical Contest in Modeling (2019)*

Designee | *National Merit Scholarship Program (2021)*

TECHNICAL SKILLS

Languages: Python, R, Java, JavaScript, Swift, HTML/CSS

Libraries: pandas, NumPy, Xarray, Dask, Matplotlib, DESeq2, Tensorflow, Keras