

Margaret (Maggie) Gonzalez

Chicago, IL

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EDUCATION

Northwestern University, Evanston, IL
Ph.D. Earth, Environmental, and Planetary Sciences
Research Advisor: Dr. Daniel Horton

September 2026 — 2031

Loyola University Chicago, Chicago, IL, *summa cum laude*
Environmental Studies (B.A.), Mathematics (B.S.), Statistics (B.S.), Spanish (B.A.)
Research Advisors: Dr. Ray Dybzinski, Dr. Mena Whalen, Dr. Ping Jing, Dr. Tuyen Tran

August, 2022 — May, 2026
GPA: 4.00

PUBLICATIONS

Gonzalez, M., Dove, L.A., Freilich, M.A. (2025). Distribution and Transport of Antarctic Winter Water Biogeochemical Properties. *Geophysical Research Letters*. <https://doi.org/10.1029/2025GL114950>.

RESEARCH EXPERIENCE

CLEAR Lab: Loyola University Chicago Mathematics and Statistics Department

Chicago, IL

Environmental Science Assistant

September, 2025 — May, 2026

- Member of CLEAR (Community and Local Engaged Air Research) Lab Group advised by Dr. Mena Whalen, Dr. Ping Jing, and Dr. Tuyen Tran researching air quality in Chicago
- Use environmental science knowledge to analyze air quality data results, develop a dashboard presenting these findings and relevant environmental science information, and share findings with community members

Loyola University Chicago & Northwestern University Senior Capstone Project

Chicago, IL

Undergraduate Student Researcher

August, 2025 — May, 2026

- Senior capstone research project co-advised by Dr. Ray Dybzinski (Loyola) and Dr. Daniel Horton (Northwestern)
- Analyze EMS call data to understand the spatial and temporal distribution of EMS calls as it varies with heat index in Chicago

Brown University and Leadership Alliance Summer Research - Early Identification Program

Providence, RI

Undergraduate Student Researcher

June, 2024 — August, 2024

- Collaborated with faculty (Dr. Mara Freilich) and postdoc (Dr. Lilian Dove) mentors to study how Southern Ocean water masses relate to the carbon cycle
- Used Python to analyze, visualize, and characterize Southern Ocean biogeochemical-Argo float data

FELLOWSHIPS

National Science Foundation Graduate Research Fellowships Program (NSF GRFP)

April, 2026

School of Environmental Sustainability Wintrust Research Fellowship

January, 2026

PRESENTATIONS

Oral Presentations

- **Gonzalez, M.**, Dybzinski, R., Horton, D.E. (2026, April). Extreme Heat in Chicago: An Analysis of EMS Calls. Undergraduate Research and Engagement Symposium, Chicago, IL.
- **Gonzalez, M.**, Dove, L.A., Freilich, M.A. (2024, December). The importance of Antarctic Winter Water in the global carbon cycle. American Geophysical Union National Meeting, Washington, D.C.
- **Gonzalez, M.**, Dove, L.A., Freilich, M.A. (2024, September). Ocean robots reveal the importance of Antarctic Winter Water to the global carbon cycle. Loyola University Mathematics and Statistics Department Undergraduate Research Colloquium, Chicago, IL.
- **Gonzalez, M.**, Dove, L.A., Freilich, M.A. (2024, July). Ocean robots reveal the importance of Antarctic Winter Water to the global carbon cycle. Leadership Alliance National Symposium, Hartford, CT.

Poster Presentations

- **Gonzalez, M.**, Dybzinski, R., Horton, D.E. (2026, April). Extreme Heat in Chicago: An Analysis of EMS Calls. Chicago Area Undergraduate Research Symposium, Chicago, IL.

- Whalen, M., **Gonzalez, M.**, Mitta, P., Reinhardt, N. L., Jing, P. (2025, November). Community and Local Engaged Air Research (CLEAR): PurpleAir Network Expansion Through Community and Academic Partnerships. NASA HAQAST Meeting, St. Louis, MO.
- **Gonzalez, M.**, Dove, L.A., Freilich, M.A. (2024, August). Ocean robots reveal the importance of Antarctic Winter Water to the global carbon cycle. Brown University Summer Research Symposium, Providence, RI.

AWARDS

School of Environmental Sustainability Dean's List	All Semesters
College of Arts and Sciences Dean's List	All Semesters
Rachel Carson Award for Academic Excellence	2026
Aldo Leopold Award for Outstanding Achievement	2026
Fr. Rust, S.J. Memorial Award	2026
Phi Beta Kappa	2026
Hispanic Scholarship Fund Leaders in Education Awards 2026 Finalist	2026
Cervantes Key	2026
Sigma Delta Pi, La Sociedad Nacional Honoraria Hispánica	2026
College of Arts and Sciences President's Medallion	2026
American Geophysical Union Outstanding Student Presentation (Ocean Sciences Division)	2025
Father VandeVelde, S.J. Memorial Award	2025
DataFest Best Use of External Data	2024

SKILLS

- **Technology:** Python, R, ArcGIS, SAS
- **Languages:** English (Native), Spanish (Bilingual)

MENTORSHIP

SES Mentor/Mentee Program	Chicago, IL January, 2025 — May, 2026
• Paired with two freshmen students in the School of Environmental Sustainability to provide guidance regarding courses, extracurricular activities, opportunities, and more	

PROJECTS

Data Science Consulting (STAT 370) Sub-Orbital Order Tool (SOOT) Project	Chicago, IL January, 2025 — May, 2026
• Consulting project with client Dr. Ping Jing (School of Environmental Sustainability) focusing on NASA's Sub-Orbital Order Tool (SOOT) • Developed a user interface so Dr. Jing's introductory Environmental Science students could analyze NASA ozone data and generate relevant graphs for coursework • Final URL link: https://finalsootconversiongraphing-jkwbdcb4k3ebzi9lpqrwd.streamlit.app/	
American Statistical Association (ASA) DataFest	Chicago, IL April, 2024, March, 2026
• 3-day data analysis event where teams were tasked with analyzing complex data provided by a company or organization to perform relevant analysis and create deliverables for the company • Awarded "Best Use of External Data" by judging panel in 2024	
GIS Course (ENVS 380) Final Project	Chicago, IL December, 2024
• "Understanding how demographic variables influence public transportation access in Marion County, Indiana" • Final submission included academic poster with background, methods, results, relevant maps, discussion, and references	