Elizabeth Smith, PhD

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Skills Summary: Dynamic and driven young professional with expertise in academic research, data analysis, science policy, and community outreach. Skilled in synthesizing complex information and presenting findings effectively to diverse audiences. Proficient in literature reviews, data analysis using R, QGIS, Power BI, Google Workspace, and Microsoft Suite, as well as high-performance computing and large dataset management. Experienced in campaign strategy, social media content creation, and leveraging digital platforms for advocacy. Passionate about using science and data-driven insights to drive meaningful change in environmental policy and community initiatives.

WORK EXPERIENCES

Postdoctoral Researcher April 2025-June 2025
Georgia Institute of Technology
Hybrid
Supervisor: Chris Reinhard, PhD May contact

Grassroots Science Policy Intern March 2025-June 2025
American Geophysical Union
Remote
Supervisor: Caitlin Bergstrom May contact

- Aided in AGU's grassroots campaigns, helping connect members with their legislators.
- Assisted in campaign building, strategy, marketing, tracking, and follow-up.
- Produced content and maintained the Science Policy social media presence.
- Utilized data visualization software to analyze and track program outcomes.
- Helped coordinate and execute major initiatives like science policy workshops and Congressional visits.

Field Trip Instructor October 2024-December 2024
Club SciKidz
Atlanta Metropolitan Area
Supervisor: Marcy Turner

- Conducted activities for a balanced program of instruction, demonstration, and work time that provided students with opportunities to observe, question, and investigate.
- Effectively communicated with students, teachers, school staff, and team members via verbal and written communication and excellent customer service.
- Ensured all school rules, policies, and guidelines were adhered to in the classroom.

Graduate Research Assistant August 2018-August 2024
Vargas Lab, University of Delaware
531 S College Ave Newark, DE 19716
Supervisor: Rodrigo Vargas, PhD May contact

- Utilized artificial intelligence technologies for independent research to develop machine learning models in R (random forest, quantile regression forest) for spatiotemporal exploration of soil nitrogen, soil respiration and temperature sensitivity of soil respiration at fine spatial scales on regional to global basis.
- Collaborated with project team members from universities and federal agencies to achieve proposal goals through data collection, analysis and disseminating findings in a peer-reviewed publication.
- Presented analytical insights, findings and recommendations to both technical and nontechnical audiences.
- Organized lab social events to promote community and relationship building.

STEAM Instructor September 2022-June 2024
Four Youth Productions
1900 Superfine Lane Wilmington, DE 19802
Supervisor: Theresa Emmett May contact

- Designed and taught daily lessons for students at an age-appropriate level in a clear and concise manner by incorporating various learning styles.
- Created program supply lists for lessons that were within budget expectations.
- Maintained an engaging, fun, safe, and secure environment for students.
- Responded to partner school and organizations needs by offering excellent support and individualized accommodations.

Partnership Education Program Intern June 2017-August 2017
United States Geological Survey
384 Woods Hole Rd, Woods Hole, MA 02543

Supervisor: John Pohlman, PhD

- Automated analysis of dissolved inorganic carbon in aqueous samples using LabVIEW.
- Interpreted dissolved inorganic carbon concentration results from coulometer and discrete sample analyses.
- Presented findings to diverse audiences at research symposiums.

EDUCATION

Spelman College, Atlanta, GA Completion Date: May 2018
Environmental Science, BS
University of Delaware, Newark DE Completion Date: August 2024
Plant and Soil Sciences, PhD

ADDITIONAL TRAINING

- Hubbard Brook Research Foundation Young Voices of Science (2024)
- Write Winning Grant Proposals Workshop (2023)
- Terrestrial Environmental Observatories and National Ecological Observatory Network Carbon Workshop (2019)

HONORS AND AWARDS

- University of Delaware Graduate College Graduate Student Travel Award (2023)
- College of Agriculture and Natural Resources Unique Strengths Ph.D. Fellowship (2020)
- National Science Foundation Graduate Research Fellowship (2020)
- University of Delaware Graduate Scholar Award (2018, 2019)
- Emerging Researchers National Conference in STEM Travel Award (2018)
- American Geophysical Union Student Travel Grant (2017)

PROFESSIONAL ASSOCIATIONS

- American Geophysical Union
- College of Agriculture and Natural Resources Diversity, Equity, and Inclusion Committee (Graduate Student Representative, 2020-2021)
- Ecological Society of America
- National Alumnae Association of Spelman College
- Plant and Soil Science Department Justice, Equity, Diversity, and Inclusion Committee (Social Co-Chair, 2021-2022)

PAPERS AND PRESENTATIONS

- Spatiotemporal Variability and Uncertainty of Soil Respiration in the Conterminous United States, *NASA Joint Science Workshop (2023), College Park, MD*
- **Smith, Elizabeth M.** Vargas, Rodrigo, Guevara, Mario, Tarin, Tonantizin, and Pouyat, Richard V. 2022. "Spatial Variability and Uncertainty of Soil Nitrogen across the Conterminous United States at Different Depths." Ecosphere 13 (7): e4170. https://doi.org/10.1002/ecs2.4170
- Spatial Variability of Soil Nitrogen, Nitrogen Deposition and Biomass Relationships in the Conterminous United States, *University of Delaware Data Science Symposium (2021), Newark, DE*
- Assessment of Environmental Justice in an Urban Area: A Case Study of Transition in Land Use, and Flood Risk in Metropolitan Atlanta, *Spelman College Research Day (2018), Atlanta, GA*
- Automated Analysis of Dissolved Inorganic Carbon Concentration and Stable Isotopes by Cavity Ring Down Spectroscopy, *American Geophysical Union Fall Meeting (2017), New Orleans, LA*