

Isaiah Guenther

izguenther6@gmail.com ♦ Michigan, USA ♦ More Info: <https://github.com/izguenther6>

- Biological Engineer with a focus on agriculture and conservation
- Capable of both physically demanding hands-on work and software-driven tasks
- Diverse professional experiences working outdoors, in labs, and office environments

SKILLS, CERTIFICATIONS, & MISC

- **Hands-On:** wet lab procedures, water & waste sampling/testing, soil testing, working with animals, invasive plant removal, native plant seed collection, freediving
- **Software:** biological modeling, machine learning & statistics – Python, R, MATLAB, Java, COMSOL, Excel
- **Languages:** English (native), Spanish (proficient)
- **Certifications:** FII Level 1 Freediver (June 2023)
- **Volunteer:** Pierce Cedar Creek Institute for Environmental Education

WORK EXPERIENCE

Soil & Water Lab – Cornell University

Research Assistant

2022 – Present

Ithaca, NY-USA / Remote

- In progress: Monitoring pesticides with NYS Department of Environmental Conservation (DEC)
 - Sampling surface/groundwater across New York State to test for pesticide contamination
 - Developing machine learning models in Python that predict pesticide leaching events
 - Co-authoring reports and scientific journal articles based on findings
- Researched how water infiltrates soil through lab experiments and MATLAB image analysis
 - Resulting published paper – *Measuring pore water velocities and dynamic contact angles at unstable wetting fronts*, <https://doi.org/10.1016/j.advwatres.2024.104661>
- Built lab website in WordPress – <http://soilandwaterlab.cornell.edu/>

PRO-DAIRY: Environmental Systems – Cornell University

Research Assistant

2024

Ithaca, NY-USA

- Contributed to the NYS Department of Ag. & Markets' database on dairy farm manure management
 - Measured methane emissions and collected manure samples at various treatment stages
- Co-authored case study on anaerobic digester at 400-cow dairy farm – <https://hdl.handle.net/1813/116079>
- Calculated economic savings from covered manure storages in Python

Costa Farms – Worldwide Supplier of House/Garden Plants

Grower Department Intern

2023

Miami, FL-USA

- Investigated the efficacy of four different controlled-release fertilizers in various outdoor plant species
 - Oversaw experimental operations – setup, monitoring, data collection
 - Used R software to find key statistical insights from the fertilizer performance data
- Collaborated with intern team to identify potential plant shipping cost cuts up to \$70,000 annually

Wastewater Treatment Plant – City of Hastings

Intern

2022

Hastings, MI-USA

- Ran daily lab tests on influent/effluent water – CBOD, coliforms, T/VSS, etc.
- Assisted team with equipment management and on-call sewer maintenance

EDUCATION

Cornell University

Biological Engineering, B.S – 3.30/4.0 GPA

Class of 2024

Ithaca, NY-USA

- Study abroad – Fall 2023, Universidad de Cantabria in Santander, Spain
- Extracurricular – Club Basketball Team; Outing Club