

Isaiah Guenther

Biological Engineer ♦ he/him ♦ izguenther6@gmail.com ♦ Portfolio: <https://github.com/izguenther6>

- Passion for environmentalism and local community organization
- Capable of hands-on work and software-driven tasks
- Diverse professional experiences working outdoors, in labs, and offices

SKILLS & CERTIFICATIONS

- **Hands-On:** Wet lab | Water, waste, & soil sampling/testing | Water navigation (boat, paddling, freedive, snorkel, swim) | Wild/cultivated plant ID & handling | Working with animals | All-weather field operations | Basic construction/garden
- **Analysis:** Bio-process modeling | Water quality | Hydrogeological site assessment | Machine learning | Statistics
- **Software:** Python | R | MATLAB | Java | COMSOL | Excel
- **Communication:** Posters | Presentations | Website | Reports | Publications
- **Languages:** English (native) | Spanish (proficient)
- **Certifications:** FII Level 1 Freediver (obtained June 2023)

WORK EXPERIENCE

Soil & Water Lab – Cornell University

Research Technician

2022 – 2025

Ithaca, NY-USA / Remote

- Monitored pesticide leaching with NYS Department of Environmental Conservation
 - Sampled surface/groundwater to test for pesticide contamination
 - Developed machine learning models and theoretical index to predict future leaching
 - Co-authored reports, presentations, and journal publications based on findings
- Built lab website – <http://soilandwaterlab.cornell.edu/>

Oxley Equestrian & Polo Center – Cornell University

Stable Assistant

2024

Ithaca, NY-USA

- Maintained stalls for 30+ horses
- Implemented horse dietary/medicinal plans
- Guided horses to necessary stalls/pastures

PRO-DAIRY: Environmental Systems – Cornell University

Student Research Assistant

2024

Ithaca, NY-USA

- Contributed to manure management database with NYS Department of Ag. & Markets
 - Measured methane emissions and collected manure samples at dairy farms
- Co-authored case study on anaerobic digester at 400-cow dairy farm

Costa Farms – Worldwide Supplier of House/Garden Plants

Grower Department Intern

2023

Miami, FL-USA

- Investigated the efficacy of controlled-release fertilizers in outdoor plants
 - Oversaw experimental operations – setup, monitoring, data collection
 - Found key statistical insights on fertilizer performance
- Collaborated with intern team to identify plant shipping savings 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 – 3.3/4.0 GPA

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

Class of 2024

Ithaca, NY-USA

PUBLICATIONS & REPORTS

Water Quality Monitoring for Pesticides in Upstate NY – 2023 Annual Report

2024

Submitted to New York State Department of Environmental Conservation

Ithaca, NY-USA / Remote

- Primary section author on machine learning use for pesticide leaching prediction
- *public release pending, including associated journal publications

Anaerobic Digestion at Wagner Farms: Case Study

2024

Submitted to Cornell PRO-DAIRY: Environmental Systems

Ithaca, NY-USA

- Publicly available – <https://ecommons.cornell.edu/items/64b63166-2f89-4e38-83e5-30d5e8076435>

VOLUNTEER

Pierce Cedar Creek Institute – Nature Education Center

2019 - 2025

Stewardship Department Volunteer

Hastings, MI-USA

- Collected native prairie plant seeds for redistribution
- Removed woody invasive plant species in local forests
- Catered banquet event

Workaway

2025

Volunteer Workawayer

Various Locations

- Permaculture and home construction in France
- Dive Academy on Inis Mór, Ireland
 - Maintained diving gear and helped guide snorkeling/freediving trips

REFERENCES

Tammo Steenhuis

Former Supervisor, Professor of Biological & Environmental Engineering – Cornell University

- Email: tssl@cornell.edu

Isabelle Carbonel

Former Workaway Host in France

- Email: icarbonel@gmx.fr

Verne Robins

Former Supervisor, Utilities Superintendent – City of Hastings

- Email: vrobins@hastingsmi.org