

# Isaiah Guenther

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- Biological Engineer focusing on food systems and conservation
- Capable of both physically demanding hands-on work and software-driven tasks
- Diverse professional experiences in labs, outdoors, and office environments

## SKILLS & CERTIFICATIONS

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- **Hands-On:** Wet lab procedures | Water & waste sampling/testing | Water navigation (boat, paddle vessels, freedive, swim) | Soil testing | Native/invasive plant management | Working with animals | Cold climate operations
- **Analysis:** Bio-process modeling | Heat & mass transfer | Control volume | Machine learning | Statistics
- **Software:** Python | R | MATLAB | Java | COMSOL | Excel
- **Languages:** English (native) | Spanish (proficient)
- **Certifications:** FII Level 1 Freediver (June 2023)

## WORK EXPERIENCE

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### Soil & Water Lab – Cornell University

*Research Technician*

**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
- Built lab website in WordPress – <http://soilandwaterlab.cornell.edu/>

### Oxley Equestrian & Polo Center – Cornell University

*Stable Assistant*

**2024**

*Ithaca, NY-USA*

- Cleaned and maintained stalls for 30+ horses
- Implemented horse dietary/medicinal plans
- Haltered and guided horses to necessary stalls/pastures

### 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 farms
- 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

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### **Cornell University**

*Biological Engineering, B.S – 3.30/4.0 GPA*

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

**Class of 2024**

*Ithaca, NY-USA*

## VOLUNTEER & AFFILIATIONS

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### **Pierce Cedar Creek Institute – Nature Education Center**

*Stewardship Department Volunteer*

- Collected and cleaned native prairie plant seeds for redistribution
- Identified and removed woody invasive plant species in local forests
- Catered banquet dinner events

**2019 - Present**

*Hastings, MI-USA*

## REFERENCES

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### **Tammo Steenhuis**

*Current Supervisor, Professor of Biological & Environmental Engineering – Cornell University*

- Email: [tss1@cornell.edu](mailto:tss1@cornell.edu)

### **Mia Cabrera**

*Former Co-Worker, EHS Intern – Costa Farms*

*Current Master's Student in Environmental Horticulture – University of Florida*

- Email: [mia.cabrera@ufl.edu](mailto:mia.cabrera@ufl.edu)

### **Verne Robins**

*Former Supervisor, Utilities Superintendent – City of Hastings*

- Email: [vrobins@hastingsmi.org](mailto:vrobins@hastingsmi.org)