

# Isaiah Guenther

ijg25@cornell.edu ♦ +1 (269) 945-7848 ♦ Hastings, MI 49058, USA ♦ [GitHub Portfolio](#) ♦ [LinkedIn](#)

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*Class of 2024 Biological Engineering major from Cornell University with the ability to model phenomena, analyze data, design process flow, and conduct effective hands-on work in agricultural and environmental contexts*

## WORK EXPERIENCE

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### Pro-Dairy: Environmental Systems – Cornell University

Jan. 2024 – Present

*Research Assistant*

*Ithaca, NY*

- Conducting case study on anaerobic co-digester of manure and food waste at 400-cow dairy farm
- Collecting manure samples at different treatment stages to evaluate management practices
- Calculating economic savings from covered manure storages

### Soil and Water Lab – Cornell University

Oct. 2022 – Present

*Research Assistant*

*Ithaca, NY*

- Evaluating groundwater pesticide contamination with NYS Department of Environmental Conservation
  - Completing field work at target sites – well installation, water sampling/data collection
  - Testing hypotheses on contamination levels using Python
- Aided with experiments and image analysis in MATLAB to study unstable finger flow
- Built lab website in WordPress – <http://soilandwaterlab.cornell.edu/>

### Costa Farms – Worldwide Supplier of House/Garden Plants

Summer 2023

*Grower Department Intern*

*Miami, FL*

- Investigated the efficacy of four different controlled-release fertilizers in various outdoor plant species
  - Goal was to determine viable alternatives to the company's fertilizer standard
  - Oversaw experimental operations – setup, monitoring, data collection
  - Analyzed fertilizer performance data using R-software
  - Presented to team and company executives on key statistical insights
- Collaborated with other interns to identify plant shipping process improvements
  - Presented opportunities for up to \$70,000.00 in annual savings

### Wastewater Treatment Plant – City of Hastings

Summer 2022

*Intern*

*Hastings, MI*

- 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

May 2024

*BS, Biological Engineering – 3.30/4.0 GPA*

*Ithaca, NY*

- Studied abroad Fall of 2023 in Santander, Spain at the Universidad de Cantabria
- Club Basketball Team, Outing Club, Stable Assistant for Equestrian/Polo Team Horses
- Notable coursework: *Fluid Mechanics* | *Heat & Mass Transfer* | *Molecular Bio & Genetic Engineering of Plants* | *Fish Ecology* | *Sustainable Water System Design* | *Digital Food Engineering* | *Machine Learning with Big Data* | *Object-Oriented Programming*

## CERTIFICATIONS & SKILLS

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- **Certifications:** FII Level 1 Freediver
- **Languages:** English (native), Spanish (working proficiency)
- **Software:** biological modeling, data analysis, basic machine learning – Python, R, MATLAB, Java, COMSOL, Excel
- **Hands-On:** general wet lab skills, water sampling/testing techniques, handling hazardous materials, working with animals