

*2024 Biological Engineering B.Sc. graduate*

*Cumulative 3+ years of field-focused environmental monitoring, research, & conservation*

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### **Hands-On Skills**

Water, waste, & soil sampling/testing • All-weather field operations • Wet lab • Hand & power tools •  
Water navigation (boat, paddling, freedive, snorkel, swim) • Wild/cultivated plant ID & management •  
Working with animals

### **Analysis & Software**

Bio-process modeling • Water quality • Hydrogeological site assessment • Machine learning • Statistics •  
Python • R • MATLAB • Java • COMSOL • Excel

### **Communication & Language**

Poster • Presentation • Website • Report • Publication • English (native) • Spanish (conversational)

### **Certifications**

FII Level 1 Freediver (obtained June 2023)

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## **WORK EXPERIENCE**

### **Soil & Water Lab – Cornell University**

**2022 – 2025**

*Research Technician*

*Ithaca, NY-USA*

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

### **PRO-DAIRY: Environmental Systems – Cornell University**

**2024**

*Student Research Assistant*

*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 – Decorative Horticulture Grower**

**2023**

*Grower Department Intern*

*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**

**2022**

*Intern*

*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

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## 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*

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## PUBLICATIONS & REPORTS

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

*Submitted to New York State Department of Environmental Conservation*

**2024**  
*Ithaca, NY-USA*

- 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

*Submitted to Cornell PRO-DAIRY: Environmental Systems*

**2024**  
*Ithaca, NY-USA*

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

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## VOLUNTEER

### Pierce Cedar Creek Institute – Nature Education Center

*Stewardship Department Volunteer*

**2019 - 2025**  
*Hastings, MI-USA*

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

### Workaway

*Volunteer Workaway Laborer*

**2025**  
*Various Locations*

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

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## REFERENCES

### Tammo Steenhuis

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

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

### Isabelle Carbonel

*Former Workaway Host in France*

- Email: [icarbonel@gmx.fr](mailto:icarbonel@gmx.fr)

### Verne Robins

*Former Supervisor, Utilities Superintendent – City of Hastings*

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