

2024 Biological Engineering B.Sc. graduate

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

Hands-On Skills

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

Analysis & Software

Bio-process modeling • Water quality • Hydrogeology • 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)

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

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

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>

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

REFERENCES

Tammo Steenhuis

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

- Email: tss1@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