

Shannay Rawal

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EDUCATION

West Virginia University

Doctor of Philosophy in Civil Engineering

Morgantown, WV

January 2025- present

- Awards and mentions:

- Gary & Lisa Christopher Fellow for academic year 2025-26
- Honorable mention at WVU AI Symposium 2025 Poster Presentation
- Doctoral Travel Grant for an oral presentation at QUAD-AI ENGAGE Workshop 2025 on AI and Digital Agriculture

The Ohio State University

Master of Science in Environmental Engineering

Columbus, OH

August 2022- December 2024

- NSF EmPOWERment Research Traineeship Program fellow
- Graduate Project title: Underground Hydrogen Storage in Saline Aquifers: A comprehensive Techno-Economic Assessment framework
- International Student Grant recipient for AY 2024-25
- Poster presentations:
 - “Techno-Economic Assessment of Underground Hydrogen Storage in Saline Aquifers” at Environmental Professional Network Signature Earth Day Poster Presentation Event, Apr 22, 2024
 - “The Challenges of Solar Grazing Development in Ohio Floodplains” at Environmental Professional Network Signature Earth Day Poster Presentation Event, Apr 22, 2024

NSF Research Traineeship program

RISE Summer Program

Columbus, OH

May- July 2022

- Assisted in the development of a Carbon Capture and Storage module for the US version of the Global Change Analysis Model

NMIMS University

B. Tech Mechanical Engineering

Shirpur, India

2020

- Co-authored four peer-reviewed research publications over junior and senior years.
- Led a team of 58 conference volunteers as Head Student Representative in ICEMEM 2019: 2nd International Conference on Emerging trends in Manufacturing, Engines, and Modelling hosted at NMIMS Shirpur.
- Won Best Paper Presentation at International Conference on Recent Trends in Science and Engineering, June 2018. (CRSE 2018)

WORK EXPERIENCE

Orner Lab, West Virginia University

Graduate Research Assistant, Graduate Teaching Assistant

Morgantown, WV

2025-present

- Spring 2025 Lab instructor for Introduction to Environmental Engineering (CE 347L/ENVE 347L)
- Module designer and guest lecturer for Introduction to Environmental Engineering (CE 347/ENVE 347)
- Mentored three civil and environmental engineering undergraduate students and one professional exchange student over Fall 2025

Ohio State University

Graduate Research Associate

Columbus, OH

2022-2024

- Research topics:
 - Techno-Economic Assessment and Life-Cycle Analysis of Underground Hydrogen Storage in saline aquifers for seasonal energy storage.
 - Marginal Abatement Cost projection integration for mid-western US in the [DRFEWS project](#), a regional Food-Energy-Water Systems model
 - Scoping study for integrating Carbon Capture and Storage in [GCAM](#), an Integrated Assessment Model

Global Centre for Environment and Energy

Jr. Research Assistant

Ahmedabad, India

July 2020- May 2022

- Research activities undertaken at the Centre:
 - Led a funded research project on the Carbon Capture, Utilization, and Storage (CCUS) potential in Gujarat, India.
 - Report on assessing the urban climate actions of 110 smart cities in India with IPCC TSU scientists.
 - Working paper on assessing decarbonization pathways for India using the GACMO model with scientists from UNEP-DTU.
- Outreach activities undertaken at the Centre:
 - Cohosting “Climactic Conversations,” a climate change podcast with Stepwell Radio at Ahmedabad University.
 - Organized “COVID-19, Climate Change, and Cities: Learnings from the Pandemic”, a regional workshop.
 - Sole Indian partner for “[Global Climate Dialogs 2021: Solve Climate by 2030](#)”, an outreach program hosted at Bard College.

Oust Labs

Business Development intern

Bengaluru, India

May 2020- June 2020

- Worked on automating the in-house business development framework for data analysis and report generation. Single-handedly created a system tailored to MS Excel and PowerPoint client reporting requirements to eliminate staff retraining.

PROFESSIONAL SERVICE

Journal peer review

2025

- Discover Sustainability (Springer Nature)
- Clean Technologies and Environmental Policy (Springer Nature)
- Brazilian Journal of Chemical Engineering (Springer Nature)

Report review

2025

- First Order Draft (FOD) of the IPCC Special Report on Climate Change and Cities (SRCITIES)

PRESENTATIONS

QUAD-AI ENGAGE Workshop 2025 on AI and Digital Agriculture

June 2025

Georgia Institute of Technology

- Enhancing Circularity and Resource Recovery through Data-Driven Nutrient Management Planning in Rural West Virginia

POSTERS

Mountain State Cyber Summit

November 2025

Undergraduate Research Mentorship Pathways to Promote Collaborative Environmental-AI models (*West Virginia University*)

All Voices As One Conference

October 2025

Undergraduate Research Mentorship Pathways to Promote Collaborative Environmental-AI models (*West Virginia University*)

AAEES Autumn Summit

August 2025

- Poultry waste nutrient management challenges in data-scarce rural watersheds

Artificial Intelligence Symposium

May 2025

- Adaptive AI-Driven Approaches for Advancing Poultry Waste Nutrient Management in West Virginia (*West Virginia University*)

Environmental Professionals Network Signature Earth Day

April 2024

- Techno-Economic Assessment of Underground Hydrogen Storage in Saline Aquifers (*The Ohio State University*)

Environmental Professionals Network Signature Earth Day

April 2024

- The Challenges of Solar Grazing Development in Ohio Floodplains (*The Ohio State University*)