

Kyla Fallis

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EDUCATION

The Ohio State University, Columbus, OH

Expected Graduation Date: December 2028

Bachelor of Science in Environmental Engineering

GPA: 3.29

Minor in Science and Engineering in the Public Interest | Pre-Law

Humanitarian Engineering Scholars Program

QUALIFICATIONS

- **Programming Languages:** MATLAB, C++, JavaScript, HTML
- **Technologies:** Git, GitHub, Firebase, VS Code, Google API, OnShape, Fusion360, Solidworks, Excel, Access, PlotTool Pro, GSIS.
- **Relevant Skills:** Public Speaking, Project Leadership, Scientific Research, ML/DL framework.
- **Certifications:** Babysitting, Lifeguarding, First Aid/CPR | Red Cross

RESEARCH/PUBLICATION EXPERIENCE

A Novel Physics-Informed Deep Learning Framework for Tidal Energy Site Selection Springer Spring 2026

- Developed a Machine Learning Algorithm to determine optimal site location to tidal energy production.

A Novel Hybrid ML/DL Framework for Assessing Dark Oxygen Flux Production IEEE Summer 2026

- Created a ML/DL framework for calculating the amount of DOP flux within the clarion clipperton zone and the potential catastrophic affects of deep-sea mining in the region.

Electrogenic Biotransformation of Organic Substrates | Publication Sustentabilis Terra Volume 3 Issue 2 Research November 2023 – April 2025

- Conducted independent research on compost-powered microbial fuel cells to explore low-cost renewable energy.
- Designed and built prototypes, ran controlled experiments, and analyzed electrochemical performance data.
- International Science and Engineering Fair (ISEF), EPA Award, OAS President's award, COSI Big science day panelist, IFoRE Finalist, and multiple first-place regional science fair honors

Solar Panels Effect on Soil Nutrients November 2023 – April 2025

- Conducted independent research on interconnections between soil quality, mineral compositions, and solar panel use.
- Collected soil samples from various sites and determined nutritional effect due to solar panel impact
- OAS State Superior

PROJECT EXPERIENCE

Pythagorus Plains Game

November 2024 – December 2024

Matlab Educational RPG - 1181

- Collaborated with a team to create an RPG in MATLAB where players solved math problems to defeat enemies.

Aquatracker Design Project

October 2024

Autonomous Water Monitoring Device - 1182

- Worked with teammates to engineer a device that measured salinity, pH, and temperature in real time.
- Integrated sensors with a microcontroller and developed code for automated data collection.

LYKA Lamp Project

May 2024

Compost-Powered Microbial Fuel Cell Lighting System

- Engineered a renewable energy lamp powered by microbial fuel cells using compost as the electron source.
- Designed the circuit with capacitors, voltage boost converters, and rechargeable batteries to store and regulate power output.

HACK OHIO Project – WasteWise AI

April 2024

Image-Based Waste Sorting System

- Designed an AI-powered system that scans and sorts items into organic waste, recyclables, or landfill trash to reduce contamination and methane emissions.

- Applied machine learning and computer vision techniques to develop an accessible, real-time waste identification tool.
- Won 1st place in Ohio 4-H AI competition, qualified for National competition.

WORK EXPERIENCE

FairGame Foundation | Founder & Executive Director | fairgameinitiative.org

November 2025-Present

- Manages 5-person team, nonprofit finances and legal aspects.
- Directed outreach and led team meetings, managing over 10 school science fairs and bridging the gap for students

Lima YMCA, RPAC, Johnny Appleseed Metro Park OH Lifeguard May 2023 – December 2025

- Supervised swimmers and enforced safety rules to prevent accidents and maintain a secure environment.
- Responded to emergencies with first aid and rescue procedures when necessary.
- Assisted with swim lessons and promoted water safety awareness among youth participants.

INVOLVEMENT

Sustainability Issues Team, Undergraduate Student Government

- Advanced student-driven policy recommendations to integrate sustainability into university operations.

OSU Collegiate Council on World Affairs (CCWA)

- Compete on the Model UN team and engage in discussions as a part of the United Nations Association, advocating for diplomacy and human rights
- Attended UNA-USA Leadership summit on behalf of OSU.

Society of Women Engineers

- Focused on creating a community and doing outreach for women's equality in the engineering workforce.