Kyla Fallis

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EDUCATION

The Ohio State University, Columbus, OH — Expected Graduation Date: May 2028
Bachelor of Science in Environmental Engineering — GPA: 3.78
Minor in Science and Engineering in the Public Interest
Humanitarian Engineering Scholars Program

Bath High School, Lima, OH — May 2025
High School Diploma, with Honors
Class Rank: 1

OBJECTIVE

Looking for a summer internship that allows me to contribute to sustainable engineering projects while building the technical and professional skills needed to make a lasting impact in the field.

QUALIFICATIONS

- **Programming Languages**: MATLAB, C++, JavaScript, HTML
- **Technologies**: Git, GitHub, Firebase, VS Code, Google API, OnShape, Fusion360, Solidworks, Excel, Access.
- **Relevant Skills**: Public Speaking, Project Leadership, Scientific Research.

RESEARCH/PUBLICATION EXPERIENCE

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.
- Published findings in a peer-reviewed article, demonstrating excellence in sustainable energy research.
- 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

Earth's Magnetic Field Energy Generation | Independent Research
Research — September 2025 – Present

- Began exploratory research on harnessing Earth's magnetic field for renewable energy.
- Reviewing scientific literature and outlining potential experimental approaches.

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.
- Programmed adaptive difficulty levels and interactive storylines to sustain engagement.
- Contributed to debugging and testing to ensure a game that merged education with entertainment.

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.
- Assisted in designing and presenting the prototype as a low-cost solution for environmental monitoring.

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.
- Conducted experiments to optimize energy efficiency and improve light duration for practical applications.
- Presented the prototype as a sustainable, low-cost energy solution for off-grid communities.

4-H AI Challenge 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.
- Focused on solving local waste management challenges by providing immediate user feedback for proper disposal.
- Won 1st place in Ohio, qualified for National competition.

WORK EXPERIENCE

Lima YMCA, RPAC, Johnny Appleseed Metro Park OH

Lifeguard May 2023 – Present

- 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.

Lima Community Church Lima, OH

Children's Ministry Volunteer 2022 – Present

- Led on-stage worship sessions to engage children in faith-based learning.
- Facilitated small group discussions to guide reflection and build community.
- Served as a summer camp counselor, supervising activities and fostering a supportive environment for youth.

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

Society of Women Engineers

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

Engineers for a Sustainable World

- Implementing the devices of today using sustainable engineering principles and practices.