RILO OBERG

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EDUCATION

Cornell University (College of Engineering) — Expected Graduation: May 2026, Masters Dec 2026

- Engineering Physics & Mechanical Engineering Double Major, Music Minor — GPA 3.91/4.0
- Masters of Electrical Engineering, Control Systems Concentration, Expected Graduation Dec 2026
- Relevant coursework: Propulsion, Fusion Energy Systems, Quantum Mechanics, Polymer Mechanics
- Will complete coursework in SysML, Machine Learning, and Digital Systems Design in the Spring 2026 semester

Dayton Regional STEM School — Graduated May 2021

- National Merit Scholar Finalist — Class Rank 1, GPA 4.0/4.0

EXPERIENCE

Cornell University Autonomous Drone, Full Team Lead & Mechanical Subteam Lead — Sep 2023 - present

- Leading a team of 40 engineers in designing and constructing high-performance drones
- Designed and constructed a fully autonomous drone with integrated robotics for moving objects
- Designed and constructed a carrier drone with 70kg thrust for deploying smaller drones in midair
- Designed testing setups for drone deployment mechanisms and high-pitch custom propellers
- Trained new team members in computer-automated design and mechanical fabrication
- Designing a drone with Flettner rotors that flies using the Magnus effect
- Doing business outreach, financial management, and advocacy with college administrative staff

Cornell Outdoor Education, Outdoor Odyssey Coordinator — Jan 2025 – present

- Coordinated weeklong pre-orientation outdoor trips for 210 incoming Cornell students
- Managed all logistics involved with transportation, permitting, and financial administration
- Designed and administered a yearlong training program to prepare 90 undergraduate guides with the necessary technical and interpersonal skills to lead outdoor trips

Cornell University College of Engineering, Fluid Mechanics Teaching Assistant — Aug 2025 – present

- Conducting office hours for undergraduate students twice a week
- Revising and grading student assignments and answering student questions

Philmont Scout Ranch, Food Service Management Staff — Jun 2023 – Aug 2023

- Managed two dining halls and served 3000 meals per day with a small team — Eagle Scout (Jan 2021)
- Recommended for future employment in an upper management position

Numismatically Yours, Software Developer — Aug 2021 – Jul 2022

- Developed novel automation tools for the coin collecting industry that employed neural networks and advanced computer imaging techniques to process and categorize images of rare US coins
- Prototyped lighting hardware and electronics for an automated coin photography system

AFA CyberPatriot Competition Team, Computer Networking Simulation Specialist — Aug 2019 – May 2021

- Scored second place nationally in a computer networking simulation competition event

Wright State University, Spectroscopy Laboratory Intern — Jun 2018 – Sep 2020

- Created algorithms to calculate material reflection coefficients from terahertz scattering data
- Developed a novel algorithm for determining the purity of doped silicon samples from spectroscopy data

Personal Project in Music Software Development — Aug 2021 - present

- Developed and coded a drum practice software (loosely inspired by the *Rock Band* videogame) that interfaces with electronic drum kits via MIDI and allows for custom song configuration
- Built a custom Java graphics module for displaying scrolling visualizations synchronized to audio

SKILLS

- Python, MATLAB, Java, HTML/CSS, OpenCV, TensorFlow, Sisotool, ROS
- Ansys, SimScale, OnShape, SolidWorks, Fusion360, Autodesk Inventor & Maya, Unreal Engine, LaTeX