

Ethan Kolano

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(630) 398-1499

Education

Bachelor's Degree in Mechanical Engineering

University of Illinois at Urbana-Champaign | GPA: 3.54 | Graduated May 2026

Technical Skills

CAD (Fusion 360), Python, Arduino, CNC Machining, Prototyping and Design, 3D Printing, Laser Cutting, Signal Processing, Finite Element Analysis

Technical Projects

Ultrasonic Lens Cleaning System

January 2026 - May 2026

Senior Design Project | University of Illinois Urbana-Champaign

- Designed and fabricated a prototype integrating a PZT-8 annular piezo with a fused silica lens that successfully demonstrated ultrasonic water atomization
- Selected bonding materials and structural components based on flexural strength, hardness, and elastic modulus requirements to meet acoustic and mechanical performance targets

RC Car with Custom Transmission

August 2025 - November 2025

Mechanical Design Course Project | University of Illinois Urbana-Champaign

- Designed and built a 3-gear sliding-mesh transmission with a servo-driven rack-and-pinion shifting mechanism, optimized for speed, strength, impact resistance, and manufacturability
- Performed structural and dynamic FEA on chassis and drivetrain to determine loads and optimize final design
- Fabricated components using 3D printing and laser cutting while integrating electrical subsystems

Robotic Apple Harvesting End-Effector

June 2025 - August 2025

Intelligent Machines & Materials Lab | Oregon State University

- Designed and prototyped a robotic end-effector for automated apple harvesting, integrating a suction-based gripper and flex sensors for apple detection
- Developed an airtight housing with custom electrical feedthroughs and O-ring sealing to ensure reliable suction and signal integrity

Walking Linkage Machine

November 2024 - April 2025

ASME Engineering Open House Project | University of Illinois Urbana-Champaign

- Led a 9-member team to design and build an award-winning, rideable walking linkage machine
- Utilized Fusion 360 to model mechanical components and simulate walker movement

Work Experience

Lighting Technician

Foellinger Auditorium | Urbana, IL | August 2023 - May 2026

- Designed and operated lighting for performances, lectures, and special events
- Collaborated with event coordinators and directors to develop customized lighting designs tailored to unique performances