

Jordan Vogel

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY
Bachelor of Science, Mechanical Engineering
GPA: 4.041

Expected Dec 2026

PROFESSIONAL EXPERIENCE

Cornell Electric Vehicles Project Team, Cornell University, *Mechanical Lead*

Sep 2023 - Present

- Collaborate with a group of 75+ to make hyper-efficient autonomous electric vehicles
- Lead a team of 25+ to design, manufacture, and test a battery electric car for the annual Shell Eco Marathon
- Designed a parking brake that can keep the vehicle stable on a 20% incline
- Increased reliability of the parking brake by introducing a hydraulic line lock into the braking system and reducing the number of overall parts in the assembly
- Used Autodesk Inventor to rapid-prototype and mill a custom aluminum mount for the parking brake
- Designed, built, and tested a gearbox that allows the vehicle to steer itself via stepper motor and seamlessly transition between autonomous and manual steering with an electromagnetic clutch
- Selected gear ratio and motor to achieve 5 N*m torque output necessary to actuate steering column
- Currently designing a threaded aluminum plate to help with assembly by serving as a mounting point for the rack and pinion, pedal box, and autonomy hardware

Lutron Electronics, *Manufacturing Engineering Intern*

May 2025 - Aug 2025

- Researched lasers as a method of marking product information, specifically focusing on reducing costs, operator error, and assembly time
- Acquired and learned how to use two desktop lasers for testing, both completely new to the company
- Developed a framework to find optimal settings for a given material quickly and efficiently, varying settings such as power, speed, and frequency in Lightburn to create markings that are both fast and legible
- Created more than 100 material samples, evaluating their aesthetics and durability with the use of barcode scanners, microscopes, and abrasion testing machines
- Evaluated 20+ lasers using a custom weighted matrix and presented the top candidates to a panel of ~10 senior engineers, along with a cost analysis tool for future engineers to analyze the benefits of implementing a laser in their assembly lines
- Used cost tool to recommend a handful of products that would benefit from this technology, some reducing task time by as much as 85%, and created a recommendation of how to integrate it into an existing assembly line

PROJECTS

MAE 3780 Robot, Team Circuit Breakers

Jan 2025 - May 2025

- Collaborated with two other students to design an autonomous robot to collect cubes in a 60-second match
- Utilized Arduino programming to control 2 H-bridge circuits for our differential drive system
- Designed a gravity deployed arm in Fusion 360 that falls at the start of the match using a calibrated “twitch”

HydroClip

Jan 2025-May 2025

- Created a backpack mounted water bottle holder for easy access while walking
- Designed a “snap in place” buckle mechanism in Fusion 360 to secure the water bottle in place and prevent spills
- Split the buckle into parts, 3D printed, and glued pieces together to maximize strength in the direction of bending

DreamRide

Jan 2023 - May 2023

- Worked with two peers to design and build an Arduino-powered infant sleep system using a repurposed car seat, integrating four vibration motors and a speaker module to simulate the motion and sounds of a moving vehicle.
- Implemented user controls with potentiometers for adjustable vibration intensity and sound selection.

SKILLS

Programs: Autodesk Inventor, Autodesk Fusion, Java, JavaScript, HTML, CSS, Python, Arduino, Excel, POS, MATLAB, Simulink, ROS

Manufacturing: 3D Printing, Manual Machining, Laser Cutting/Engraving

Languages: Hebrew (fluent)