Jordan Vogel

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY **Expected Dec 2026**
Bachelor of Science, Mechanical Engineering
GPA: 4.041

PROFESSIONAL EXPERIENCE

Cornell Electric Vehicles Project Team, Cornell University, *Mechanical Lead* **Sep 2023 - Present**

- Lead a 25+ member mechanical subteam within a 75+ member organization developing hyper-efficient autonomous electric vehicles for the annual Shell Eco-marathon
- Owning steering system layout for 2026 vehicle. Currently designing a threaded aluminum mounting plate that defines the interface for the rack and pinion, pedal box, and autonomy hardware, engineered for maximum rigidity and minimal weight.
- Designed, built, and tested a gearbox enabling autonomous steering via stepper motor and seamless transition to manual control through an electromagnetic clutch; selected gear ratio and motor to achieve 5 N*m torque required to actuate steering column
- 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

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)