

Ella Yellin

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EDUCATION

Cornell University, College of Engineering

Bachelor of Science, Mechanical Engineering

Ithaca, NY

Expected May 2026

GPA: 4.03, Engineering Dean's List, Tau Beta Pi Engineering Honors Society

Relevant Coursework: Mechanics of Materials, Heat Transfer, Statics & Mechanics of Solids, System Dynamics, Fluid Mechanics, Polymer Mechanics, Mechatronics, Dynamics, Thermodynamics, Innovative Product Design, Python, Tangible Interaction Design Studio, Propulsion of Aircraft and Rockets, Fluids & Heat Transfer Laboratory

RELEVANT EXPERIENCE

Baja SAE Racing Project Team

Drivetrain Member, Ergonomics Director

Ithaca, NY

Sep. 2023 – Present

- Collaborate on a team of 50 students to design and build an off-road vehicle for a 4-hour endurance race and dynamic events
- Placed 1st out of over 100 global teams in all three competitions of the 2025 SAE Collegiate Baja Design Series
- Designed the rear gearbox casing and assembled the rear gearbox for the 2025 season vehicle, reducing input shaft deflection by 50% compared to legacy design, improving bearing retention to address heritage failure
- Designed the rear spur gears for the 2026 car, utilizing KISSsoft gear analysis software
- Led vehicle ergonomics to accommodate 5th percentile female to 95th percentile male drivers, improving comfort by 12%
- Presented ergonomic design analyses at competition, earning 1st place in the 2025 SAE Vehicle Design event
- Devised & manufactured novel vehicle buck to set ergonomic targets such as steering wheel A-point and ideal pedal layout
- Composed car decals for side body panels, hat, and firewall using Adobe Illustrator and Procreate

Apple Inc.

Product Validation Engineering Intern

Cupertino, CA

May 2025 – Aug. 2025

- Captured critical regulatory specification differences across 18 global regulations for multiple lines of business
- Conducted competitive analysis on a key European regulation by automating data extraction from a public regulatory database and resulting analyses, informing future product claims on energy efficiency, durability, reliability, and repairability
- Crafted and submitted a regulatory proposal seed document to a major European standards committee, laying the groundwork for a two-year standardization effort to improve a European environmental regulation

Energy Efficiency Engineering Intern

May 2024 – Aug. 2024

- Designed and executed energy efficiency testing of Apple products, with a focus on wireless charging
- Collaborated with cross-functional teams to characterize energy profiles, identify power-related issues, and validate fixes
- Conducted comparative analysis of different regulatory test methodologies, proposed alternatives, and helped develop Apple environmental policy positions related to the energy consumption of products
- Tested multiple database platforms and transferred regulatory testing records into a new platform while enhancing features

Engineers in Action

Safety & Operations Manager

Eswatini, Southern Africa

Jun. 2023 – Aug. 2023

- Designed and completed a 50-meter (164-foot) suspended pedestrian footbridge in a team of 12 students, providing a safe river crossing and access to schools and healthcare facilities for over 3,000 people
- Oversaw all construction site safety, led daily safety debriefs, and implemented solutions to eliminate potential hazards

TEACHING ASSISTANT EXPERIENCE

Cornell MAE 3270: Mechanics of Engineering Materials

Teaching Assistant

Ithaca, NY

Aug. 2025 – Present

- Lead weekly office hours and lab sections of 15+ students, reinforcing concepts in mechanics of materials including stress, deflection, fatigue life, fracture resistance, material selection (metals, polymers, ceramics, composites) & design choices

Cornell ENGRI 1165: Climate Change & the Engineer

Teaching Assistant

Ithaca, NY

Jan. 2024 – May 2025

- Led a 15-person discussion section and office hours to provide direct support to students on sustainable engineering concepts

Cornell DEA 1500: Intro to Environmental Psychology

Teaching Assistant

Ithaca, NY

Aug. 2023 – Dec. 2023

- Led weekly discussion sections of 10-15 students to facilitate interaction with lecture material
- Assisted course professor in generating future exam questions focused on human-centered design and psychology

SKILLS

Programs: SolidWorks, Ansys FEA, AutoCAD, Fusion 360, KISSsoft, Adobe Creative Cloud

Programming Languages: MATLAB, Python, C++

Technical Skills: Manual Milling & Lathing, Composite Layups, EMG Testing, 3D Printing, Laser Cutting, GD&T, Arduino