

Lauren McKechnie

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EDUCATION

Cornell University, College of Engineering, Ithaca, New York

Bachelor of Science in Mechanical Engineering

Expected May 2026

Relevant Coursework: Statics and Mechanics of Solids, Thermodynamics, Fluid Mechanics, Mechanics of Engineering Materials, System Dynamics, Electromagnetism, Introduction to MATLAB, Dynamics, Oscillations Waves and Quantum Mechanics, Propulsion Aircraft & Rockets, Heat Transfer

ENGINEERING EXPERIENCE

Formula SAE Racing Team, Cornell University

October 2022 - Present

- Collaborate with a team of nearly 60 members in designing, manufacturing and testing parts for the development of an official FSAE electric race car for competition
- Responsible for the full redesign, development, manufacturing and validation of the motor and inverter cooling system to support the team's transition to a new powertrain architecture; currently optimizing the fluid system for 2025-2026 car
- Previously designed, tested and manufactured electrical enclosures for high voltage and low voltage components

Tesla Austin, TX, Manufacturing Engineering Intern

May 2025 - August 2025

- Designed optimized process flows and assembly instructions for Tesla Charging and Energy Storage team
- Validated tools and manufacturing processes for the thermal bay of the Megapack assembly line
- Designed an installment and shipment tool for thermal bay assembly line

Rivian Automotive, Carson, CA, Mechanical Design Intern

May 2024 - August 2024

- Worked on the Mechanical Team under Electrical Power Conversion to support the design, release and integration of mechanical components for power-electronics in the vehicle environment
- Designed fixtures for the assembly and testing of inverters
- Validated all critical fasteners in both Electricity Management Module and Inverter by conducting an in-depth tolerance analysis on thread engagements and bottoming gaps
- Collaborated and consulted with test engineers and technicians in order to draft and finalize assembly and testing instructions for inverters

SLAC National Accelerator Laboratory, Stanford University, Research Intern

June 2023 - August 2023

- Collaborated with a quantum physicist at the time-resolved atomic, molecular-resolved atomic and optical science instrument (TMO) end-station of the Linac Coherent Light Source II (LCLS II)
- Simulated electron trajectories within a single time-of-flight spectrometer and helped develop a surrogate machine learning model that allows scientists to make on the fly voltage calculations during beam time
- Studied the effects of applied retardation voltages on electron trajectories to help validate the Multi-Resolution Electron Spectrometer (MRCO) machine

ADDITIONAL EXPERIENCE

Society of Women Engineers Outreach Cornell University

September 2022 - May 2023

- Outreach committee member that helped accelerate girls' interest in STEM in the Ithaca community
- Helped plan and host events where we teach Girl Scouts various STEM topics

Link Crew Leadership Redwood High School

August 2019 - June 2022

- Lead a group of 20 freshmen at Redwood High School Orientation and support them throughout their high school experience each year

SKILLS AND INTERESTS

- **Software:** MATLAB, Python, Autodesk Inventor & Vault, CATIA, Autodesk Fusion 360, Solidworks, ANSYS
- **Fabrication:** Soldering, harnessing, composite layups, 3D Printing, operation of mills and lathes, fluid system fittings
- Member of Cornell Women's Club Lacrosse Team
- Classically trained pianist and tenor saxophonist