

Claire McKechnie

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY
Bachelor of Science, Mechanical Engineering
Dean's list for Fall 2023, Spring 2024, Fall 2024, Spring 2025

Expected May 2026

Relevant Coursework

Dynamics, Thermodynamics, Statics, Differential Equations, Mechanics and Heat, Introduction to MATLAB, Waves, Fluid Mechanics, System Dynamics, Mechanics of Engineering Materials, Heat Transfer, Mechatronics

Redwood High School, Larkspur, California

GPA: 4.32 (weighted) 4.0 (unweighted); California Scholarship Federation, Redwood Honor Society

June 2022

ENGINEERING EXPERIENCE

Rivian Automotive, Inc. & Rivian and Volkswagen Group Technologies Palo Alto CA, *Mechanical Design Intern*

May 2024 - August 2024, May 2025 - August 2025

- Member of Electrical Hardware team with mechanical, electrical, thermal, and test engineers working to support designs for next-generation electrical control unit modules
- Developed a system pressure drop curve for a liquid cooling cold plate with hands-on testing to verify flow rate design choices and pump selection
- Designed vibration plate test fixtures for ECU modules utilizing modal analysis to verify geometries and designed cable clamping fixtures to secure cables during testing
- Performed thermal stress testing on liquid-cooled electronic modules and analyzed results to guide manufacturing decisions
- Designed, 3D printed, and assembled enclosures, fixtures, and brackets to support the development of circuit boards used for thermal and RF testing

Cornell Racing FSAE Team, Cornell University, *Ergonomics Subteam Lead*

October 2022 – Present

- Collaborate with a team of 60 students to design, build, test, and race a formula-style electric vehicle for FSAE competitions
- Progressed from dashboard designer (sophomore) to steering system designer & ergonomics lead (junior) to pedal bay designer & ergonomics lead (senior)
- Manage subteam of part designers responsible for the steering wheel, pedals, seat, driver harness, head restraint and firewall
- Led system-level redesign of driver cockpit, using wooden mockup testing to determine optimal ergonomic positioning, introduced double U-joint steering system and adjustable pedals to accommodate driver preferences and improve fit

SLAC National Accelerator Laboratory, Stanford University, *Mechanical Engineering Intern*

June 2023 – August 2023

- Worked closely with a mechanical engineering mentor in the Linac Coherent Light Source (LCLS-II-HE) Directorate
- Solved for ultra-high vacuum parameters by creating simulations with Molflow+ and CAD along with doing hand calculations to validate design and optimize the leak response system for the accelerator in case of a laser burn through
- Created “transmission probability table” and MATLAB script for engineers and scientists to refer to when doing conductance calculations for the accelerator pipes based on results from my extensive simulations

LEADERSHIP EXPERIENCE

Society of Women Engineers Outreach, Cornell University

September 2022 - May 2023

- Plan outreach events to inspire local girl scouts to become enthusiastic about STEM

SAGE Chaperone, Stanford University, *Volunteer*

June 2024

- Chaperone for high school program to accelerate girls' engagement in STEM; led professional growth workshops and engineering project sessions

Senior Class President, Redwood High School

Aug 2021 - June 2022

- Planned school fundraisers and events

SKILLS AND INTERESTS

- Autodesk Inventor & Vault, Solid Edge, CATIA, Fusion 360, Altair Simsolid, Excel, harnessing, soldering, 3D printing,
- Play on Cornell women's club lacrosse team, classically trained pianist, bass clarinet in high school symphonic band, surfer