

# Claire McKechnie

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## EDUCATION

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**Cornell University, College of Engineering, Ithaca, NY**

**Expected May 2026**

Bachelor of Science, Mechanical Engineering

Dean's list for Fall 2023, Spring 2024, Fall 2024, Spring 2025

### 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

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**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

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**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

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- 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