

Caroline Moskal

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY

Bachelor of Science-Mechanical Engineering

Expected May 2027

Falmouth High School, Falmouth, MA

High School Diploma, **Valedictorian**, **GPA: 3.98**

May 2023

Selected Coursework: Statics and Mechanics of Solids, Differential Equations for Engineers, Intro to Computing (Python), Thermodynamics, Linear Algebra for Engineers, Electricity & Magnetism

SPECIALIZED SKILLS

Technical: MATLAB, CATIA CAD, Autodesk Inventor CAD, Fusion CAD, ANSYS, Machining (Lathe and Mill), Excel, TIG Welding

Professional: Polish(fluent), French(basic)

ENGINEERING EXPERIENCE

Cornell Racing FSAE Team, *Cornell University*, Ithaca, NY

Fall 2023-Present

Unsprung Sub-Team Member, Brakes Designer

Fall 2024-Present

- Designed hydraulic, two circuit braking system from the master cylinders to the brake calipers and rotors within the upright/hub system.
- Expected 1.5lb decrease in unsprung mass from rotor design geometry and brake caliper choice. Done through driver contact testing and ANSYS-aided stress calculations.
- Skills in CAD, thermal stress analysis, material analysis, and machining.

Chassis Member

Fall 2023-2024

- Designed and modified a driving simulator from previous monocoque to test and train drivers for the season.
- Designed and built a Dyno enclosure to test AMK in-hub motors for the on-coming season. Done through restoring a water-brake dyno that was previously used on the team for the combustion era.
- Worked with High Voltage team in designing tools to efficiently prepare battery packs for the season.
- Worked with composite sub teams to perform carbon-fiber layups for manufacturing and SES data collection.

Motor Machine Design Intern, *Rivian Motors*, Carson, CA

Summer 2025

- Worked with design and test engineers to create oil flow fixtures to collate data with CFD simulations in stator cooling system for the R2 and R3 motor models
- Supported stator design engineers in calculating and testing structural supports in the motor system
- Motor tear down research and development for new line of motors
- Skills: Machine Design drawings, CATIA, Labview, Thermal Modeling

RELEVANT ACADEMIC PROJECTS

Thermal Modeling, *Cornell FSAE*, Cornell University

Fall 2024-Present

- Used MATLAB scripts to take previous vehicle brake data, and current vehicle parameters to present a thermal prediction of the brake rotors within an endurance-styled driving session.
- Provides feedback for thermal steady-state, rotor material choice, geometry, etc.

TIG Welding, *Cornell FSAE*, Cornell University

Spring 2024-Present

- Working with Suspension sub team in welding links for connections between chassis and unsprung systems.

LEADERSHIP EXPERIENCE

Machine Shop Supervisor and Trainer, *Emerson Machine Shop*, Ithaca, NY

Spring 2025-Present

- Supervises shop hours, train incoming machinist in the manual mill and lathe, and maintains tuning of machinery.

Cornell ELI AEW Facilitator, *Differential Equations*, Ithaca, NY

Fall 2024

- Led a two-hour class each week to guide students in better understanding in Differential Equation.

Member, *Glading and Forest Preservation*, Waterville Valley, MA

March 2018-Present

- Part of a group of 15 people, going up mountains to cut down dead or dying trees to prevent wildfires.

ACTIVITIES/INTERESTS

Tennis-Varsity Team Captain for 3 years (2020-2023); Skiing-Member of club race team for 11 years (2012-2023); Rock Climbing; Hiking; Race Car Driving