

# TYLER WISNIEWSKI

Portfolio: [tylerwisniewski.github.io/](https://tylerwisniewski.github.io/) | [linkedin.com/in/tylerwisniewski712](https://linkedin.com/in/tylerwisniewski712)

Ithaca, NY | New York, NY

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**OBJECTIVE:** Seeking Mechanical Engineering Roles starting January/February, 2026

## EDUCATION

**Cornell University | M.Eng. Mechanical Engineering**

Dec 2025 | GPA: 3.84

**Cornell University | B.S. Mechanical Engineering, *Dean's List, Cum Laude***

May 2025 | GPA: 3.42

## WORK EXPERIENCE

**SpaceX | Graduate Propulsion Manufacturing Engineer**

**Summer 2025** | Hawthorne, CA

Designed and manufactured hardware and tooling for the production of Investment Cast Raptor Rocket Engine parts

- Designed and Manufactured Electro-Mechanical Pattern Transfer Cart, reducing weight by 40% and cost 45% over previous solution
- Introduced new Cart with versatile capability, deleting 4 existing specialized carts, and integrating into production with 0 downtime and increased Foundry Print Lab pattern throughput speed by over 50% and saving over \$30,000/year in technician labor.
- Screened all Raptor V2 Engines using Polyworks and Ansys to validate part thicknesses and cleared 92 engines for Flight 10 and 11.

**Cornell Electric Vehicles | Advisor; Technical Full-Team Lead; Chassis Lead**

**9/2022 - Present** | Ithaca, NY

Directed 65-person self-driving electric car team; designing, analysing, and manufacturing vehicle systems and components

- Spearheading cross-disciplinary technical roadmap for hyper-efficiency and level 2 autonomy, competition and research outcomes.
- Achieved the team's highest-ever competitive performance, placing 5th out of 27 international teams at the Shell Eco-Marathon, earning awards (1st in Communication, 2nd in Data Analysis), and securing \$4,500 in prize funds.
- Design and Manufacture the chassis Master Model to optimize aerodynamics, reduce weight, and create stiff vehicle structure.
- Utilize Ansys Fluent (Computational Fluid Dynamics) to iterate aerodynamic design, reducing drag by 6% over previous car design.
- Optimize Structural Components using Ansys (ACP, Mechanical) and Generative Design to reduce weight by 12% and cost by \$500+.
- Led a record-breaking fundraising campaign, raising \$12,000+ from 173 donors in just 24 hours, setting a project team record.

**General Motors | GMD Hardware Integration & Test Intern**

**Summer 2024** | Milford, MI

Designed, optimized, and manufactured chassis, ventilation, and electrical components in a dynamic engineering environment.

- Designed, Manufactured, and Integrated Electric Light Reconnaissance Vehicle eMotor Housing for the United States Army.
- Utilized Design for Additive Manufacture techniques to reduce eMotor Housing part count by 87% over previous year's design.
- Ran Articulation and Tramp studies in NX to validate clearance of Rear Axle assemblies, motivating design changes in 3 components.
- Validated Hood design change as a means to increase heat rejection of under-hood system at rest using Ansys Thermal Analysis.

**Cornell MAE Emerson Machine Shop | Shop Supervisor**

**11/2023 - 5/2025** | Ithaca, NY

- Provide comprehensive safety guidance and technical support to student machinists during 3 to 4-hour machining shifts in the shop.
- Ensure strict adherence to safety protocols, imparting detailed instructions on utilizing mills, lathes, and CNC machines in the shop.

**Cornell University MAE 2250 Mechanical Design | Teaching Assistant**

**1/2024 - 5/2025** | Ithaca, NY

- Taught a weekly laboratory class of 25-35 undergraduate students on the topics of Computer-Aided Design, Machining, 3D Printing, Laser Cutting, Design for Manufacturing, Rapid Prototyping, plastic and metal part design, and other mechanical synthesis skills.

**ZT Group, Nano Heat Energy Lab | UG Researcher**

**5/2023 - 9/2023** | Ithaca, NY

- Discover and analyze the thermal properties of Hexagonal Boron Nitride (h-BN) using a Frequency-Domain Thermoreflectance pulsed-laser to gauge efficacy to limit the phonon-induced decoherence of superconducting qubits in quantum computing applications.
- Synthesize h-BN using Molecular Beam Epitaxy in association with The Platform for the Accelerated Realization, Analysis, and Discovery of Interface Materials (PARADIM), aiming to grow crystals of the highest quality.
- Design, Machine, and Assemble Dry Transfer Station for the  $\pm 10 \mu\text{m}$  transport of h-BN samples to a silicon wafer for testing utilizing CAD skills, Ansys Thermal Analysis and manual machining practices achieve a design over \$300 under the anticipated budget.

## SKILLS

**Design:** CAD (Inventor, Fusion 360, Siemens NX, Alias), Master Modeling, CAM, Altium, DFM, GD&T, Modular Design

**Manufacturing:** Machining(Mill, Lathe,CNC), 3D Printing, Carbon Fiber(Vacuum Infusion, Wet Layup, Forged)

**Analysis:** Ansys FEA(Mechanical, ACP, Fluent CFD, Thermal, Granta), Simcenter NASTRAN, Tolerance Stackup

**Computer Literacy:** MATLAB, C, Arduino, C++, Python, HTML/CSS, G-Code, LaTeX, Microsoft Office, Confluence

**Additional Involvements:** Der Hexenkreis, Orientation Leader, CU EMpower, ΦΣΚ, ΘΤ, Rock Climbing, Snowboarding, Surfing