

GRANT MILLER

Westmont, IL

☎ 331-625-2096 ✉ grantemiller2004@gmail.com [in linkedin.com/in/grant-illinois](https://www.linkedin.com/in/grant-illinois) Seeking a Summer 2026 Internship

Education

University of Illinois Urbana-Champaign

Expected: May 2027

Bachelor of Science in Mechanical Engineering, Minor in Mathematics

GPA: 3.71/4.0

- James Scholar, Engineering Visionary Scholar, Dean's List: Spring 2024 & 2025

Software & Skills

Software: Fusion 360, SolidWorks, Creo, Inventor, Autocad, Revit, Moldflow, Ansys, Excel, Arduino, Python, MATLAB

Skills: GD&T, FEA, DFM, Engineering Drawings, 3D Printing, CNC Machining, Project Management

Coursework: Mechanical Design, Fluid Dynamics, Automotive Design, Electric Circuits, Solid Mechanics, CAD

Experience

William A. Randolph Inc.

May 2025 – August 2025

Project Engineer Intern

Gurnee, IL

- Verified on-site work adhered to quality standards through regular job site inspections and progress documentation
- Worked directly with the Senior Project Manager on climate-control distribution center projects with 1M+ square feet
- Managed project schedules, budgets, and change orders for \$50M+ mechanical, electrical, and plumbing projects
- Served as an on-site problem solver for technical installation issues, supporting subcontractors and project teams
- Spearheaded an office remodeling project that optimized office workflow with zero operational downtime

University of Illinois Physics Mechanics

January 2025 – May 2025

Lab Assistant

Champaign, IL

- Instructed weekly 2-hour physics mechanics labs, guiding students through various engineering experiments
- Explained mechanical concepts in an intuitive manner, introducing real-world engineering applications
- Assisted students in troubleshooting experimental setups and analyzing data to reinforce key physics principles

Off-Road Illini Baja SAE

August 2024 – Present

Mechanical Design Engineer

Champaign, IL

- Engineered a new dog clutch in Creo to improve shift engagement and eliminate historical shear failures
- Optimized spline geometry and material selection to significantly increase the component's torsional strength
- Reduced clutch weight by 5% and cut machining time by applying Design for Manufacturability (DFM) principles

Projects

Mechanical Dispenser | Fusion 360, Prototyping, DFM, 3D Printing, Laser Cutting

September 2025

- Engineered a single-cycle, hand-cranked dispenser utilizing a crank-slider linkage to precisely deliver payloads
- Iteratively advanced the design from low-fidelity cardboard prototypes to a comprehensive CAD assembly
- Fabricated the high-fidelity prototype by integrating FDM 3D-printed PLA components with a laser-cut acrylic chassis
- Presented comprehensive kinematic validation and performance data to faculty during two formal design reviews

Scramjet Propulsion Analysis | Excel, MATLAB

February 2025

- Analyzed Brayton cycle efficiency for turbojet engines at varying pressure ratios using MATLAB and Excel simulations
- Evaluated material limits of turbine components to assess thermal performance at 1500 K operating temperatures
- Simulated real vs. ideal cycle performance, identifying combustion, material, and flow inefficiencies

Ergonomic Screwdriver Handle | Fusion 360, aPriori, 3D Printing

September 2024

- Designed and modeled in Fusion 360, reduced required grip strength by 150% through optimized geometry
- Utilized aPriori software to evaluate manufacturing expenses, ABS 3D printing and aluminum CNC machining
- Conducted stress and usability analyses to validate design improvements, ensuring durability and user comfort

Activities & Interests

Organizations: Engineering Council, ASME, Baja SAE, Student Alumni Ambassadors, Phi Kappa Psi, iRobotics

Interests: Chicago Cubs, Running, Rock Music, Movies, Rollercoasters

Languages: English (fluent), German (intermediate)