

Nicholas Lopez

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EDUCATION

University of Michigan, College of Engineering
Bachelor of Science in Engineering in Mechanical Engineering

Ann Arbor, MI
May 2029

- GPA: 3.82 / 4.0
- Coursework: Differential Equations, Calculus II & III, Physics I & II, Computers and Programming, Discrete Math

ENGINEERING EXPERIENCE

MRacing Formula SAE

Gearbox Lead

Ann Arbor, MI
June 2026 – Present

- Designing 1.5 stage planetary gearbox for Formula-style racecar using Siemens NX, Ansys Mechanical, and Romax gear modeling
- Coordinating with 10+ sponsors to source materials and services such as heat treating, tooth hobbing, and surface grinding
- Leading team of 5+ engineers over semester to develop gearbox dynamometer project used for reliability and performance testing

Drivetrain Engineer

August 2025 – June 2026

- Optimized brake pedal bracket system capable of withstanding 3000 N of force while maintaining a mass of under 36 g
- Designed 10+ components for drivetrain systems using Siemens NX and FEA within strength and competition constraints
- Assembled 4 corner assemblies consisting of planetary gearbox, spindle, and cooling system in collaboration with team leads

Toyota Motor North America

Research and Development Co-Op

Ann Arbor, MI
May 2026 – August 2026

- Optimizing manufacturing process of fasteners used in 8 powertrain systems, lowering projected cost by over \$2 million per year
- Analyzed material properties (hardness, compression set) of 3 supplier-modified gaskets and presented findings in design review
- Facilitating removal of engine block hole to reduce mass by 18 g, lower annual cost by \$400,000+, and reduce turbulent oil flow
- Leading benchmarking of 10+ competitor spark plugs and comparing to Toyota spark plugs to support 50% increase in lifespan

Bioastronautics and Life Support Systems (BLISS)

Prototype Engineer

Ann Arbor, MI
January 2026 – Present

- Designed 10+ components for NASA-funded surface habitation tunnel within \$21,600 budget and multidisciplinary team
- Manufactured mobile attachment system capable of adjustment in 4-axes and horizontal mobility to meet project deliverables
- Conducted 30+ hours of CAD design and research on motorized tread concepts to enable tunnel mobility on Martian terrain

LEADERSHIP EXPERIENCE

Kappa Theta Pi – Professional Technology Fraternity

Director of Philanthropy

Ann Arbor, MI
August 2025 – Present

- Organized and conducted philanthropy auction with 100+ contributors resulting in over \$600 raised for families in need
- Managed 10+ service and fundraising events for 80+ members, including volunteering, card-making events, and fundraisers
- Communicated with 5+ external service organizations and philanthropy leads to coordinate events and expand partnerships

Sociedad Honoraria Hispánica

Selected Executive Board Member

Chicago, IL
September 2023 – May 2025

- Coordinated 20+ community events for 250+ members, including Latin dance lessons, soccer tournaments, and trivia nights
- Facilitated biweekly meetings with a team of 15+ executive board members, resulting in 40% increase in club activities
- Planned and executed annual induction ceremony for 100+ new members, improving program efficiency by 33%

PROJECTS

Line-Following Robot

Mechanical Lead

Ann Arbor, MI
September 2025 – December 2025

- Led mechanical design of line-following robot using CAD and IR sensor array to enable high-speed autonomous navigation
- Researched 15+ hardware components (motor drivers, IR sensors, STM32 dev board) through 30+ hours of analysis
- Gained 10+ hours of experience with Siemens NX to design mechanical components such as baseplates and motor mounts
- Prepared and delivered presentation to 80+ individuals showcasing final product and walkthrough of design process

Fireside Cafe Process Improvement

Data Analysis Lead

Ann Arbor, MI
January 2026 – April 2026

- Increased mobile orders by 13% through 5+ digitalization improvement strategies supported by data analysis and research
- Delivered presentation and report to Michigan Dining Facilities using DMAIC format to make improvement recommendations
- Provided 15+ data visualization plots using Minitab to pinpoint areas of improvement and create long-term sustainment plan
- Interviewed 5+ employees to identify potential growth opportunities and process inefficiencies within mobile ordering system

SKILLS AND INTERESTS

Skills: Siemens NX, ANSYS Mechanical, GD&T, MATLAB, Machining, C++, Minitab, 3D Printing, Project Management

Interests: Rock Climbing, Milkshakes, Formula One, Christopher Nolan Movies, Stickers, Yellowstone National Park