Mitchell Manzelli

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Education

University of Oklahoma | Norman, OK **August 2025 – Expected May 2029**

Bachelor of Science in Mechanical Engineering, Minor in Entrepreneurship – GPA: 4.0

- President's Honor Roll | Fall 2025

Skills

CAD & Mechanical Design: SolidWorks (CSWA Certified), Fusion 360, 3D Modeling, Mechanical Design, Engineering Drawings

Programming, Controls, and Automation: C, Python, Arduino, Motor Control

Prototyping & Manufacturing: FDM 3D printing, Rapid Prototyping, Prototype Development, Hand and Power Tools

Electronics: Arduino, Stepper and DC Motors, Servos, Motor Drivers, Sensors, Soldering, Basic Electronics & Circuit Prototyping

Projects

Automated Paper Folding & Stapling Machine **July 2026 – Present**

- Designed and prototyped an electromechanical machine to automate the folding of printed order inserts and attachment of business cards for the Vette Lights packing workflow.
- Modeled custom mechanical components in SolidWorks and fabricated iterative prototypes using FDM 3D printing, including dual-stage roller folding, parallel linkage crimping, and adjustable card-feeding mechanisms.
- Integrated an Arduino Mega, stepper motors and drivers, servos, GT2 timing belts and pulleys, and custom fabricated components to control paper feeding, folding, card dispensing, and machine sequencing.
- Tested, validated, and iteratively redesigned mechanical systems to troubleshoot paper-feeding issues, improve fold quality and motor performance, and increase card-dispensing reliability.

Interactive Magnetic Building Blocks & Air Cannon Demonstration **September 2025 – December 2025**

- Collaborated with an engineering team to design and fabricate magnetic building components in Fusion 360 for an interactive elementary STEM demonstration focused on structural stability.
- Developed an air-cannon system used to expose student-built structures to repeatable wind conditions.

Experience

Warehouse Associate | Vette Lights LLC **May 2020 – Present**

- Manage inventory for hundreds of Corvette lighting products.
- Pack and ship 50+ customer orders per day while maintaining high order accuracy.
- Identified inefficiencies in the order-packing process that motivated the development of an automated folding and business-card attachment system.

Involvement and Leadership

OU Formula SAE | Powertrain Member **January 2026 – Present**

- Created detailed mechanical engineering drawings from existing 3D CAD models to support technical documentation.
- Reverse-engineered metal components from physical measurements and recreated them as SolidWorks models for vehicle assemblies.

Lab Researcher | Stephenson Cancer Center, University of Oklahoma **February 2025 – April 2025**

- Conducted experimental research comparing three DNA extraction methods using the nematode C. elegans.
- Collaborated with a research partner to analyze results and present findings at AISES.
- Earned 2nd Place in the Cellular and Molecular Biology category.

Project Lead | Fostering Student Success, University of Central Oklahoma **April 2024 – March 2025**

- Coordinated fundraising, acquisition, packaging, and distribution of requested resources for foster students.