

# Salvatore T. Ciminello

Harrison, NY 10577 | (914) 268-7025 | [stc92@cornell.edu](mailto:stc92@cornell.edu) | [Portfolio](#) | [linkedin.com/in/sal-ciminello](https://www.linkedin.com/in/sal-ciminello)

## EDUCATION

**Cornell University**, College of Engineering, Ithaca, NY  
Bachelor of Science, Mechanical Engineering, GPA: 3.659

**Expected May 2026**

**Relevant Courses:** Propulsion of Aircraft and Rockets, Heat Transfer, Intermediate Dynamics, Mechatronics, System Dynamics

**Relevant Skills:** Machining with Mill and Lathe, Rapid Prototyping, Additive Manufacturing Techniques, Team Leadership and Building, Arduino, Electronics and Sensor Wiring, Feedback Control Systems

**Computer Programs:** MATLAB, Python, C++, CAD: Solidworks and Fusion 360, ANSYS Mechanical and Maxwell

## TECHNICAL EXPERIENCE

### Active and Passive Pod Control System, Hyperloop Project Team

**August 2024-Present**

- Utilized intermediate dynamics and MATLAB to model and simulate hyperloop pod's movement assuming a functioning levitation system and designed a system utilizing PID controllers to ensure steady levitation height. Still in the testing phase.
- Modelled and simulated pod about the roll direction to understand the dynamics of the pod overtime. Designed a stability system which utilized a caster wheel and shock absorber system to passively dissipate energy overtime, using roll dynamics and calculated necessary damping coefficients.
- Designed and built multiple pod systems including vertical and horizontal guidance systems, and minipod levitation system.

### Mechatronics Robot

**January 2025-May 2025**

- Used Solidworks to design a robot exoskeleton that utilized a chassis with servos for movement and block collection system.
- Coded and Wired Arduino along with multiple sensors to determine location, orientation, and proximity to objective for the robot. Sensors included: QTI, Color Sensor, Proximity Sensor.
- Finished 5th out of 65 teams in the ASML - Cornell Robotics Competition.

### Personal Beverage Tumbler and Carbonator, CO2Go Startup/Internship

**May 2025-Present**

- Prototyped a personal pressure vessel that could actuate an intake valve to dispense carbonated CO2 into the system, while implementing certain pressure release valves to release pressure after a certain pressure is attained.
- Designed tumbler and canister module to show possible investors and to start a manufacturing a higher fidelity prototype

### Magnetic Braking System, Hyperloop Project Team

**October 2022-August 2023**

- Designed and implemented a magnetic braking system using neodymium magnets and eddy current generation.
- Used ANSYS Maxwell to model the magnetic field generated by the team's neodymium magnets.

## LEADERSHIP EXPERIENCE

### Hyperloop Project Team, Ithaca, NY, Mechanical Team Lead

**May 2025-Present**

- Oversaw all mechanical aspects of pod's design and integration for the 2025-26 year. Areas include: Magnetics: Guidance, Levitation, Propulsion; Structures: Aeroshell, electronic enclosures; and Braking: Pneumatic, Magnetic, Regenerative.

### Hyperloop Project Team, Ithaca, NY, Magnetics and Propulsions Subteam Lead

**December 2024-May 2025**

- Designated and assisted in the completion of projects pertaining to the Magnetics Subteam. Such as: Levitation, Levitation Controls, Magnetic Propulsion, Cooling Systems, and Pod Stability.
- Modelled and simulated levitation control system, which used 4 proximity sensors on the 4 corners of the pod, to precisely control the height and rotation about all 3 axes of the pod, using PWM controllers by PID controllers.

### Alpha Sigma Phi, Ithaca, NY, Vice President

**April 2024-April 2025**

- Oversaw all logistical fraternal obligations in absence of acting president
- Managed and organized over \$60,000 in brotherhood dues to plan and execute over 100 fraternity events
- As acting Vice President, the chapter was awarded the Silver Cup Medal for outstanding philanthropy donations

### Hyperloop Project Team, Ithaca, NY, Rapid Prototyping Lead

**October 2023-Present**

- Feted all parts that were machined, laser cut, or printed, that were crucial for testing subteams or for the pod's operation.
- Optimized printer setting and materials to achieve design goals dependent upon part functionality.
- Attended twice a week meetings to optimize and validate the design of over 50 designed parts to be manufactured.

### Undergraduate Lab Assistant MAE 3260: System Dynamics

**August 2025-Present**

### Undergraduate Teaching Assistant MAE 2030: Dynamics

**January 2025-May 2025**