Henry Tenecela

Ithaca, New York

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Masters of Engineering student in Mechanical Engineering with a strong interest in product design and automation.

Education

Cornell University — *Ithaca, NY*

M.Eng. Mechanical Engineering | GPA: **4.06** — *August 2022 - May 2023*

B.S. Civil Engineering, Minor in Mechanical Engineering | GPA: **3.5** — *August 2020 - December 2022*

Monroe Community College — *Rochester, NY*

A.S. Engineering Science | GPA: **3.78** — *August 2018 - May 2020*

Skills

Technical Fusion 360, SolidWorks, AutoCAD, SketchUp, ANSYS, LabView, MATLAB, C/C++, Python, Java, HTML, CSS

Professional English (fluent), Spanish (fluent), Communication, Leadership, Lesson Management, Time Management, Mentoring

Work Experience

Mechanical Engineering Intern — *Durham, NC*

Wolfspeed — *May 2022 - August 2022*

- Designed a Graphical User Interface using **Java** to optimize Ampacity and Thermal Resistance values in MOSFETs.
- Redesigned packages for MOSFETs in **SolidWorks** and conducted a thermal analysis simulation for these CAD models in **ANSYS**.
- Directed a dimensional analysis test on MOSFETs using a Keyence microscope to compare to those conducted by a third party vendor.

Undergraduate Researcher — *Ithaca, NY*

Bewley Applied Turbulence Lab - Sibley School of MAE - Cornell University — *August 2020 - Present*

- Constructed an experimental setup in a wind tunnel to analyze flow in the wake of a cylinder.
- Manufactured hot-wires and handled pressure transducers and voltmeters.
- Redesigned existing **Arduino** program to analyze collected wind speed and voltage data from the wind tunnel for future drone applications.
- Analyzed results by applying a Fast Fourier Transform algorithm programmed in **MATLAB** to visualize vortex shedding frequencies.
- Communicated progress via weekly meetings with PhD candidate and submitted summary reports to the laboratory director.

Manufacturing and Design Engineer Intern — *Rochester, NY*

Steiner Technologies — *May 2021 - August 2021*

- Designed and machined tools utilizing **SolidWorks** improving customer's cycle time per project by 60 percent.
- Led completion of 10+ aluminum tool parts operating CNC Mills with rotary 4th axis and B-axis.
- Scheduled and delivered job travelers to the manufacturing floor to maximize efficiency and ensure on time delivery to customers.

CAD Student Aide, Engineering and Technology Center — *Rochester, NY*

Monroe Community College — *February 2020 - June 2020*

- Assisted 20+ students by troubleshooting design issues when completing assignments in **SolidWorks**.
- Provided assistance in English and Spanish depending on student's needs.
- Managed the computer lab by ensuring all electronic devices were safely handled and shut down when not in use.

Engineering Projects

Unmanned Air Vehicle Project Manager — *Rochester, NY*

Monroe Community College — *January 2020 - May 2020*

- Managed a team of four undergraduate students by determining and distributing technical roles, and scheduling weekly meetings.
- Manufactured and wired an Unmanned Air Vehicle (UAV) capable of carrying an Unmanned Ground Vehicle (UGV) through an obstacle course.
- Utilized existing **Arduino** program for the UGV to trigger light sensors, which would allow detaching itself from the UAV and follow a marked path.
- Used **Betaflight** and **Cleanflight** for PID tuning and to command the drone.

Autonomous Vehicle Team Project — *Ithaca, NY*

Monroe Community College — *September 2018 - December 2018*

- Constructed an autonomous vehicle capable of navigating around an oval track and pulling 1200g of weight without slipping.
- Designed chassis, axles, brackets, wheel mounts, and steering arms for an autonomous car in **SolidWorks**.
- Manufactured all components in a machine shop using aluminum material and CNC machinery.
- Assembled all components and added servo motors, gears, and line sensors to the vehicle.