

Madison Dietrich

mjd429@cornell.edu • (240) 620-7282 • Vienna, VA 22181

Relevant Skills: Matlab, Python, CAD, Microsoft Office, Git

EXPERIENCE

Sep 2022 — Present
Cornell University
Ithaca, NY

Symbiotic Engineering and Analysis Lab — Student Researcher

Machined and constructed an ocean wave energy converter (WEC) prototype

Wrote Python code to automate reverse osmosis membrane analysis

Modified a Matlab program that uses Multidisciplinary Design Optimization to improve WECs

Presented at Cornell Engineering Learning Initiatives' 2023 and 2024 poster sessions

Sep 2022 — May 2023
U.S. Department of Energy
Washington, DC

Marine Energy Collegiate Competition — Participant

Tested WEC prototype in a wave tank

Co-authored a final report detailing the design, manufacturing, and testing of the WEC

Gave a technical presentation and community impact presentation for industry professionals

June 2021 — Aug 2021
Vienna, VA

Cold Stone Creamery — Shift Leader

Assigned tasks to coworkers and managed money and the closing process during night shifts

EDUCATION

Aug 2022 — Present
Ithaca, NY

Cornell University — Mechanical Engineering Student, Class of 2026

4.067 GPA

Summer 2024
Turin, Italy

Cornell in Turin — Public Policy Study Abroad Course at the University of Turin

Aug 2018 — June 2022
Vienna, VA

James Madison High School

4.458 weighted GPA, 4.0 unweighted GPA

Acted as News Editor and In-Depth Editor for the school newspaper

Won two state championships as a manager for the girls' varsity basketball team

AWARDS

All semesters so far

Dean's List

Summer 2023

Fund for Undergraduate Research on Solutions to Climate Change

Spring 2023

Bill Nye '77 Award in Undergraduate Research

Spring 2023

Best Report at the U.S. Department of Energy's Marine Energy Collegiate Competition

2022

National Merit Commended Scholar

PUBLICATIONS

2023

"System Level Techno-Economic and Environmental Design Optimization for Ocean Wave Energy"

Accepted to International Design Engineering Technical Conferences (IDETC)

