

Daniel Ormsbee

SUMMARY

Mechanical engineering & molecular biology student with a record of exceptional achievement, a reputation for innovative thought, analytical/critical thinking, and a passion for hard work. Additional skills include:

- Immunology
- Organic Chemistry
- Biochemistry
- Nanotechnology in Medicine
- Genetics
- MechEng Labs I & II
- Fluid Mechanics
- Thermodynamics
- Heat Transfer
- Kinematics
- SolidWorks
- AutoCAD
- MATLAB
- Python
- Microsoft Excel

EDUCATION

Cedarville University - an ABET-accredited comprehensive university in southwestern Ohio serving more than 5,000 undergraduate and graduate students

BS Mechanical Engineering; GPA: 3.50

Anticipated 05/2026

BS Molecular Biology; GPA: 3.60

Honors: Dean's List (all semesters); President's Scholarship

EXPERIENCE

Work Experience:

Campus Experience: Student Government Association (SGA)

Cedarville, OH

SGA Vice President (10-20hrs/week)

08/2023–05/2024

- Co-led an organization of 36 people with a yearly budget of over \$100,000.
- Responsible for more than 60 projects and events under SGA's purview.
- Met weekly with the Student Life Programs VP to address and communicate issues and areas of concern on behalf of the student body.
- Spoke to 4,000 undergraduate students on a weekly to bi-weekly basis as a part of the campus chapel programming.

Valent Biosciences

Osage, IA

Process Engineering Intern (40hrs/week)

05/2023–08/2023

- Designed and executed a \$1-2 million value-add (up to 10 million with capital investment), process-improvement parametric study to determine parameters influencing separation resolution in proprietary, production ion-exchange columns that involved over: 40 elutions, 1000 elution samples, and 500 HPLC samples.

Barbaricum

Dayton, OH

Intelligence Recruiting Intern (30hrs/week)

05/2022–08/2022

- Created, managed, and analyzed over 1000 resumes utilizing Boolean search strings, project management software, Excel, and databases for DOD contracting.
- Developed new Excel spreadsheets and dashboards to better track recruiting metrics

Structural CAD Drawings (Freelance)

Cedarville, OH

Contracted by building owner to create structural drawings for Amish contractor

06/2022–06/2022

- Modeled wall, fasteners, joints, and beams using SolidWorks for permit approval

OPG LLC

Cedarville, OH

Project Specialist

05/2017–Present

- Served on a team that maintained over 15 rental properties
- Learned the inner workings of the real estate and rental business (i.e., mortgages, percentage returns, cost/benefit analysis, project management, etc.)
- Led carpentry projects involving the use of traditional woodworking tools (band saw, table saw, lathe, various jigs, and various joining techniques)

Projects and Publications:

Cedarville, OH

Complete Projects and/or Publications:

08/2021–Present

NASA Student Launch Team

- Volunteered with the NASA student launch team by: modeling a 3D printed test bed for camera extension and leveling mechanism and assisting with the documentation of parts, masses, and finances using Excel.

Computational Methods Final Project “Predicting the path and impact of a dynamic projectile using numerical methods”

- Developed MATLAB code in order to accurately model the flight path of a projectile while considering adverse terrain conditions.
- Utilized various numerical methods such as Monte-Carlo simulations, gradient descent methods, linear interpolation methods, and matrix manipulation methods (Gauss-Seidel, Matrix Inverse, etc.)

Academic Journal Article

“Domestication Syndrome in Animals: Evaluating the Trajectory of Domestication Syndrome Research”

- Wrote and published a 7 page, peer-reviewed journal article on domestication syndrome with over 60 sources and presented a conference poster.

Statics and Mechanics Bridge Project

- Designed, Built, and Analyzed an efficient bridge using AutoCAD, element and point of failure analysis, and glue which held over 200 pounds.

Dynamics: Modelling Human Kinetics

- Completed a rudimentary analysis of human kinetic motion and impulse
- Used kinetics, impulse, and momentum equations to analyze human movement on video
- Submitted a report detailing our findings, derived equations, methods, and findings.

Gathering Plant-Care Data: Python Project

- Created a web scraping and data analysis project using bs4 and requests libraries to collect and analyze plant-care data for personal indoor gardens.

Cardboard Canoe Competition

- Placed 2nd out of 33 teams working with a 4 person team using limited resources.

Freshman Impromptu Design Competition

- Placed 2nd out of 150 competitors in spontaneous design competition to build a tower out of 3 popsicle sticks, 2 straws, and 2 rubber bands.

In-Progress Projects and/or Publications

AI Peptide Folding Comparison Research with Dr. Mohan Pereira

- Using ChimeraX software and AlphaFold/ColabFold machine learning models to compare experimental data with machine learning predictions.
- Integrating experimental data provided by Dr. Mohan Pereira and his research colleagues.

Journal Article Web-scraper, Summarizer, and Prioritize (python)

- Built a python application which collects, compiles, analyzes, and summarizes journal articles from a given publisher in my inbox. Uses Gmail API, bs4, scrapy framework, Langchain, Open AI LLMs, and Pinecone.
- Currently two-thirds complete.

Paused or Incomplete Projects and/or Publications

In-Atmosphere Sequential Ion Thruster Research

- Personally initiated research project to analyze/investigate the costs/benefits of the addition of sequential ion-thrusters to an in-atmosphere ion thruster design.
- Currently in R&D phase and working on collecting necessary test-bed components and materials.

ACTIVITIES

Cedarville University

Sophomore class Vice-President 2022-2023

Intramural Sports 2021-Present

Club Rugby 2021-2022

Cedarville High School

Pole vault record holder and state-level competitor, 2021

(Broke the 56-year-old school record and finished 15th in the state)

Male lead in "Meet Me in St. Louis," 2021

Quiz Bowl (interscholastic)

Leading scorer and First Team All-Conference, 2021

Conference MVP, 2020

First Team All-Conference, 2019

Volunteer geometry teaching assistant, 2020-2021

Skills

Biology Skills	Engineering Skills	Organizational Skills
Western Blot	Python	Report Writing
Gel Electrophoresis	Excel	Presentation Creation
Ionic Resin Liquid Chromatography	Data Analysis	Public Speaking
Mass Spectroscopy with GC	Web Scraping	Leadership
Infrared Spectroscopy	LangChain, OpenAI API, Google API, and LLMs (python)	Academic Research
Protein, DNA, and RNA comparison with Gel Electrophoresis	Mathematical Modeling	Critical Thinking
HPLC	MATLAB	Problem Solving
Micropipetting	3 Axis Mill	Project Management
Serial Dilutions	Metal Lathe	Self-Starter
Organic Chemistry Lab Methods	3D printing	Creative
Amino Acid and Peptide Purification with Ion Resin LC	Solidworks, AutoCAD, Fusion 360	Innovator