

# Césarine Graham (formally Césarine Aylsworth)

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## EDUCATION

**Michigan State University**  
Bachelor of Science, Astrophysics  
Minor in Mathematics

*Expected Graduation:*  
*May 2024*  
*GPA: 3.94*

**Denbigh High School and Aviation Academy**  
Advanced Diploma with Honors Distinction

*Sep 2016 - June 2020*  
*GPA: 4.47*

## WORK EXPERIENCE

**Astrobiology Research Assistant** | Michigan State University

*Aug 2022 - Present*

- Research assistant for Dr. Matthew Schrenk regarding Astrobiology.
- Integrating physics, mathematics, and computer science to model more accurate microbial habitability charts.

**MSU Summer Topology Internship** | Michigan State University

*May 2023 – June 2023*

- Paired with a graduate student mentor to do an independent study project learning about a mathematical topic in the field of topology.
- Presenting mathematical research in various methods and producing review articles that connect Topology to Theoretical Physics

**Mathematics and Physics Teaching Assistant** | Michigan State University

*Aug 2022 – Present*

- Teaching assistant for College Algebra II and Physics I.
- Leading in-class activities, tutoring during office hours, and grading assignments for all sections of College Algebra II and for some Physics I.

**Academic Tutor** | Denbigh High School | Embry-Riddle Aeronautical University

*Oct 2016 - May 2022*

- Mathematics tutor for Pre-Algebra to Calculus II at Denbigh HS
- Physics tutor for Physics I-III at Embry-Riddle Aeronautical University.

## ACADEMIC EXPERIENCE

**Carnegie Mellon University AI Workshop**

*May 2023*

- Learning and engaging in open-end discussion about responsible AI in the field of Natural Sciences.

**Machine Learning with Python edX Certification**

*April 2023*

- Course certification earned online via edX about applied machine learning with foundational and historical context.

**Astronomy on Tap Public Outreach**

*Aug 2022 - Present*

- Interacting with the public and giving talks regarding various science topics during the monthly meetings.

**NASA HUNCH Organization**

*Sep 2018 - Present*

- Member and co-organizer of the HUNCH program at Denbigh's Aviation Academy. The team successfully manufactured storage lockers for the International Space Station (<https://bit.ly/33avSwg>).

## SKILLS

Programming Software: Java, CSS, HTML, MATLAB, Python, some R  
Engineering Software: CATIA, AutoDesk Inventor  
Languages: Spanish (Conversational)

## LEADERSHIP/ VOLUNTEERING

Society for Hydroponic and Aquaponic Systems, Lead Researcher, 2020-2022  
ERAU Honors Program STEAM Derbyshire Camp, 2020-2022  
Air Force Reserve Officer Training Corps, 2020-2022  
Disabled American Veterans, 2016-2020

## AWARDS

MSU Dean's Research Scholar, Spring 2023  
MSU Dean's List: Fall 2022, Spring 2023  
ERAU Dean's List: Fall 2020, Spring 2021, Fall 2021, Spring 2022  
ERAU Presidential Scholarship, Women of Excellence Scholarship: 2020-2022  
Disabled American Veteran's Certificate of Community Service: 2017-2020  
DHS Science Fair City, District, and State First Place: 2016-2020