

CHRISTOPHER CLYNE

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EDUCATION

University of Michigan, Ann Arbor, MI

January 2023 – Present

- M.S.E. in Aerospace Engineering with concentration in autonomous systems and controls, expected Dec. 2023
- Coursework focused on classical and modern control systems, linear systems, GNC, and astrodynamics

University of Michigan, Ann Arbor, MI

August 2019 – April 2022

- B.S.E. in Aerospace Engineering with concentration in space; Minor in Physics; completed Apr. 2023
- Summa Cum Laude, Deans List, James B. Angell Scholar, Tau Beta Pi member, Sigma Gamma Tau Board Member
- Completed Engineering Honors Program including Honors Capstone Project

Judge Memorial Catholic High School, Salt Lake City, UT

August 2015 – May 2019

- Honored as Valedictorian and spoke at graduation; 4.65/5.00 GPA, Academic Top-of-Class awards in Physics, Science, Social Studies, and English; peer tutor in Chemistry; Christ the King Award for dedication to service of God and school

PROJECTS & PROFESSIONAL EXPERIENCE

Development Test Engineering Associate, SpaceX, Hawthorne, CA

August 2022 – December 2022

- Led design, analysis, and project management of a structural test stand for new Falcon 9 satellite deployment assembly to be used in qualification and production testing, critical to timely launch of next gen Starlink satellites
- Designed and executed pressure testing of a Starlink aeroterminal, data integral to secure FAA approval

Stress Analysis Intern, F-35 Fuselage, Lockheed Martin Aeronautics, Fort Worth, TX

May 2022 – August 2022

- Performed damage repair assessments on numerous F-35 parts and prepared repair instructions based on stress analysis
- Wrote code to analyze column buckling data to improve internal empirical modelling

Project Lead, RASC-AL Cryogenic Sample Return Competition, University of Michigan

October 2021 – June 2022

- Led team that designed the Lunar Vacuum-Enabled Sample Solution (LuVESS), a robust technical solution enabling reliable and simple collection of lunar and biological samples for use on the lunar surface, part of the NASA Artemis mission
- Team was selected based on technical proposal as one of fifteen finalists invited to present at the 2022 RASC-AL Forum, where project was selected as Best in Theme for Universal Sample Containment Systems
- Leveraged MBSE principles in preparation of technical reports, requirements definition, and system design and analysis
- Technical writing related to project won third place in the George M. Landes Prize for Technical Communication at UM

Test Engineering Intern, General Atomics Electromagnetics, Huntsville, AL

June 2021 – August 2021

- Researched, designed, enabled creation of a high-pressure air cannon for shock testing of projectile systems and components
- Supported test procedure creation and execution for satellite system environmental testing, RF for projectile tracking
- Assisted setup and pre-shot comms testing for guided projectile out of Navy railgun at White Sands Missile Range

Cosmic Ray Researcher, University of Utah High Energy Astrophysics Institute

April 2020 – February 2021

- Developed, improved particle beam data analysis codes in C++, Python, Bash in Linux env., data processing algorithms
- Created and ran parallel simulation jobs on remote computing cluster to obtain better statistical data, wrote job scheduler
- Maintenance and monitoring of telescope array in Delta, Utah, regular data gathering, analysis meetings and presentations

MASA Rocketry Team, University of Michigan

September 2019 – May 2021

- Design, fabricate, and implement vibration tests of electronic and pressure system components, in-house manufacturing
- Assisted with ground test operations to implement custom, complex pressurized systems; oversaw LOX line cleaning

Research Associate, Climate and Space Science, University of Michigan

September 2019 – April 2020

- Rapidly designed, simulated, fabricated, and tested prototypes of a new versatile solar energy device using SolidWorks
- Improved MATLAB modelling with physics and first principles; built custom charging circuits for transportation applications
- Prepared technical documentation for the process to be used in patent and funding proposals, research poster

SERVICE & ACTIVITIES

Graduate Student Instructor, AE 305 and AE 388, University of Michigan

January 2023 – Present

- Run laboratory sections, hold office hours, coach and grade assignments from student project teams implementing MBSE

Instructional Aide, Aerospace Engineering Systems Lab, University of Michigan

August 2021 – April 2022

- Facilitate, assist groups in engineering and tech comm challenges in hovercraft theory, design, control, and fabrication
- Acknowledged as an outstanding instructor as part of the ENGR 100 Section of the Year Award

FIRST Robotics Hardware Captain (3 years) and Team Captain (1 year)

October 2015 – May 2019

- Founded and led the team for four years, managing team growth, different experience levels, time, and limited resources
- Designed and manufactured an award-winning aspect of the 2019 robot using Fusion 360, First Dean's List Finalist

SKILLS

- *Programming:* C++, MATLAB, Simulink, Python, Bash, Arduino, numerical methods coursework
- *Modelling/Design:* Siemens NX, SolidWorks, CATIA V5, ANSYS, Star CCM, Altium, FLUKA
- *Document Prep:* Microsoft Office, mechanical drafting, LaTeX, Adobe InDesign, Adobe Illustrator
- *Hands-on:* Manual and CNC mill, manual lathe, TIG and MIG welding, soldering, 3D printing, wet lab experience
- *Other:* Eagle Scout, MBSE, Secret Clearance since 2022, outdoor safety, SCUBA certified, church organist