

# QIXUAN (ERIC) CHEN

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## EDUCATION

### University of Michigan

*B.S.E. in Aerospace Engineering, Minor in Computer Science*

GPA: 3.96/4.00 | Major GPA: 4.00/4.00

Expected coursework by summer 2024: Aircraft and Spacecraft Solid Mechanics, Gas Dynamics, Dynamics and Vibrations, Aerospace Laboratory, Data Structures and Algorithms (C++, MATLAB), Technical Communication

**Ann Arbor, MI**

*April 2025*

## PROJECT EXPERIENCE

### Michigan Aeronautical Science Association (MASA)

*Aerodynamics + Recovery Integration and Test (I&T) Engineer*

**Ann Arbor, MI**

*August 2023 - Present*

- Design, test, and build a liquid bipropellant rocket to beat the student liquid rocket altitude record, targeting 50k feet.
- Organized and delivered full recovery assembly drop test System Requirements Review involving 3+ sub-projects, verifying system safety and requirements to formalize stakeholder needs and eliminate further debate on test plan.
- Develop concept of operations and oversee upcoming component tests, communicating results and troubleshooting.
- Training to use MASA's 6DOF simulation software to calculate required drop altitude and radius for safe recovery.
- Take over recovery project management with 80+ students from graduating I&T lead in December 2023, eliciting 50+ requirements, integrating 3 new members, and obtaining certification in 5+ machines for test execution in May 2024.

### Bioastronautics and Life Support Systems (BLiSS) - NASA M2M X-Hab Challenge

*Structures, Materials, and Manufacturing Engineer*

**Ann Arbor, MI**

*January 2023 - April 2023*

- Facilitated manufacturing of an automated cargo-handling module for Gateway to decrease time searching for items.
- Took initiative to complete TIG welding training in under 1 week to become only welding operator on the subteam.
- Interpreted and edited 3 inaccurate technical drawings to weld cargo containers, completing over 40 hours of welding.
- Validated design of module's horizontal trusses using FEA to withstand 6-g of loading at system mass limit of 5 tons.
- Designed and modeled 1-piece, non-moving cable extension device, ensuring reliability during module deployment.

### Hovercraft Design-Build-Fly Competition

*Project Manager + Avionics Lead*

**Ann Arbor, MI**

*January 2023 - April 2023*

- Awarded 1st place, finishing 200% faster and delivering 150% more payload than average out of 12 total teams.
- Developed a detailed 8-item plan for each of 5 team members after major setbacks 80% through the project caused complete redesign of craft and slowdown in progress, helping team finish 6 weeks worth of work with 2 weeks left.
- Integrated vertical rear fin with STAR-CCM+ in just 1 day to correct stability, decreasing average trial time by 30%.
- Built, tested, and implemented Arduino for competition's only bidirectional, front-mounted, thrust vectoring propeller.

## WORK EXPERIENCE

### Massachusetts General Hospital - Neural Systems Group (NSG)

*Biomedical Engineering Lab Intern*

**Boston, MA**

*May 2023 - August 2023*

- Supported development of first cuffless, continuous, long-term blood pressure monitor for clinical and astronaut use.
- 1 of 2 out of 5 total interns able to successfully solder 26 wires to the 5-mm radius, 26-pin cup terminal connector.
- Guided fellow intern through use of OPT101 photodiode by aiding 3-wire remote light measurement implementation.

## LEADERSHIP AND STUDENT INVOLVEMENT

American Institute of Aeronautics and Astronautics - *Outreach Committee*

*September 2023 - Present*

Tau Beta Pi - *Active Electee*

*September 2023 - Present*

Eagle Scout - *Troop 507 Senior Patrol Leader, Patrol Leader*

*January 2016 - May 2022*

## SKILLS

*Software:* Proficient C++, MATLAB | Familiar with STAR-CCM+, CATIA, ANSYS FEA, Siemens NX, Arduino, Excel

*Hardware:* Proficient TIG welding, soldering | Familiar with MIG welding, metalworking, 3D printing, laser cutting

*Language:* Mandarin, French conversational