

Alexander Li

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Self-motivated, detail-oriented mechanical engineering student skilled at verbal and written communication, design and manufacturing, and leadership. Looking for hands-on experience through a summer internship.

PROFESSIONAL EXPERIENCE

MICHIGAN AERONAUTICAL SCIENCE ASSOCIATION

Ann Arbor, MI

Vibration Testing Co-Lead; Assembly, Test, & Launch Operations (ATLO) Engineer

September 2021–Present

- Co-led weekly meetings, created SOPs and P&IDs for upcoming tests, and tested two rocket components on vibration tables to identify critical design/manufacturing errors before flight.
- Fully trained in Wilson Student Project Team Center machining equipment (mill, lathe, drill press, etc).

UNIVERSITY OF MICHIGAN DESIGN & MANUFACTURING II

Ann Arbor, MI

Team Member

Jan. 2023–Present

- Designed and manufactured four-bar linkage using SolidWorks, waterjetting, and lasercutting to reduce linkage weight by ~2x, manufacturing times by >5x (vs. manual milling), and sources of human error.
- Built breadboard + optimized Arduino Zero code with PID control to react to IR sensor inputs and move linkage accordingly with motor encoder, increasing in-game score from 16 to 26/31.
- Wrote two 20 and 40 pg. reports detailing linkage + transmission designs, ADAMS simulation analysis, bill of materials, and assembly manual to communicate and justify our choices.

TAU BETA PI, MICHIGAN GAMMA CHAPTER

Ann Arbor, MI

Campus Outreach Officer

Jan. 2023–Present

- Managed chapter's tutoring services with Google Sheets forms/scripts by linking our members with >50 students based on courses requested and tutor availability to provide high quality 1-on-1 services.
- Led five "The Breakfast Parties" and Pi Day events to promote chapter + give back to the Michigan Engineering community, attracting ~200 students during each event.

UNIVERSITY OF MICHIGAN DESIGN & MANUFACTURING I

Ann Arbor, MI

Team Lead

Sep.–Dec. 2022

- Communicated machine design to 20-person lab section and professors, justifying design choices using FIRST principles/empirical analysis results or necessary design constraints.
- Constructed SolidWorks CAD model for machine containing over 30 components, created engineering drawings and manufacturing plans for each, then machined each part.
- Constructed and updated bill of materials to keep track of part dimensions and material stock needed, reflect team progress with designing or machining, and promote member accountability.

UNIVERSITY OF MICHIGAN

Ann Arbor, MI

Mechanical Engineering BSE (3.952/4.0 Cumulative GPA)

Aug. 2021–Dec. 2024

Honors/Awards: F21, W22, F22 Dean's List, William J. Branstrom Freshman Prize

ADDITIONAL SKILLS

- Proficient in Java, MATLAB, MS Office (Word, Excel, PowerPoint), Android Studio